Living Wage Report

Non-Metropolitan Urban Ethiopia

Ziway Region

Context Provided in the Horticulture Sector

July 2015

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GLOBAL LIVING WAGE COALITION

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FOREWORD

This report for Ethiopia, and the area where its flower farms are concentrated, is part of a series of living wage reports for the Global Living Wage Coalition (GLWC) using our new methodology to estimate living wages in rural and urban areas around the world. These reports not only indicate how much workers need to earn to be able to afford a basic but decent standard of living for themselves and their families, but also describe how this living wage was estimated in a transparent way, so that readers can understand what it means to live on less than a living wage. Reports also measure prevailing wages so that the gap to a living wage can be determined and used as a catalyst for taking the needs of workers into consideration when wages are set in a better way in future.

Ethiopia is the 13th largest country in the world with over 100,000,000 people, and is one of the poorest countries in the world as well, ranking 173 out of 187 countries on the Human Development Index. The fresh cut flower industry is an important source of foreign exchange for Ethiopia, as well as an important creator of jobs in a country where jobs and foreign exchange are scarce. In addition, the flower farms have been responsible for providing valuable community benefits for the Ziway area, since a major flower farm built a new school and a new hospital there.

This report is the third GLWC living wage report to focus on the flower industry in Africa. Earlier reports focused on flower farms around urban Lake Naivasha Kenya and a rural area of Kenya (that has some flower farms). Since Kenya and Ethiopia are the main exporters of fresh cut flowers to Europe, the reports for Lake Naivasha, Kenya and Ziway, Ethiopia provide a fairly comprehensive picture of wages and living conditions of workers in the flower industry in Africa, thereby facilitating possible comprehensive action for this industry that supplies Europe with fresh cut flowers on a daily basis. Fairtrade is to be commended for having the foresight to have commissioned living wage reports for all of the African countries that supply fresh flowers to Europe since it is clearly more difficult to convince flower farms and buyers to raise wages in one country only given the ever present possibility of moving business to a lower cost neighboring country.

It is interesting that most flower farms in both Kenya and Ethiopia are concentrated in a similar type of location and that workers in both countries live in similar types of housing and communities. Most flower farms in both countries are clustered close to a large lake (because of a need for a large and steady supply of water) that is not too far from a major international airport (so that flowers can be quickly airfreighted without wilting to countries in Europe). Unlike many agricultural products, flower farms in both countries provide steady year around employment because production of flowers is reasonably steady throughout the year. Also unlike most agricultural products, flower farm workers live in urban areas that sprung up in

lakeside areas with formerly low population density to accommodate the influx of migrants from often distant rural areas. Unfortunately for workers, these urban areas are basically slums with poor housing and a lack of basic infrastructure, which means that most flower farm workers in both Kenya and Ethiopia live in unacceptable housing – typically one small room in a small row house.

As this report shows, the wages of flower farm workers in Ethiopia are extremely low – similar to the World Bank extreme poverty line wage - and so low that workers and their families cannot afford a basic nutritious diet even if this were their only expense. Not surprisingly, many Ethiopian flower farm workers run out of money for food towards the end of the month and often have to resort to buying food on credit at that time. There is a huge gap between prevailing wages of flower farm workers in Ethiopia and a living wage (2.5-3 times). This large gap is found despite the conservative nature of how the author of this report estimated the living wage and prevailing wage, and despite the fact that she included common cash allowances and the value of common in-kind benefits in her estimate of prevailing wages.
This situation represents a development dilemma. Wages of flower farm workers in Ethiopia are unacceptably low by any measure of decency, not being enough even for nutritious food. At the same time, since Ethiopia is a very poor country, there is almost an unlimited supply of labor willing to work at very low wages and the flower farm industry provides needed jobs and brings in much needed foreign exchange. But fresh cut flowers are not your usual agricultural product. They are airfreighted every day from Ethiopia and sold to people in Europe as a feel good item. European customers would be very upset to learn that the workers who help grow their flowers in Ethiopia live in such poor conditions. We therefore feel that it is incumbent on flower farms, buyers, supermarkets, florists, and standard setting organizations to take action to increase wages towards a living wage for flower farm workers in Ethiopia. There are already some hopeful signs of on-going dialogue between Ethiopian flower farms and Fairtrade about charting ways forward to gradually increase wages. It is our hope that this compelling report and the light it sheds on the needs of workers leads to constructive dialogue, and action and improvement of wages for flower farm workers in Ethiopia, so that they can live in dignity.

Richard Anker and Martha Anker
April, 2017

Under the Aegis of Fairtrade International, Forest Stewardship Council, GoodWeave International, Rainforest Alliance, Social Accountability International, Sustainable Agriculture Network, and UTZ, in partnership with ISEAL Alliance and Richard Anker and Martha Anker

Living Wage Estimates

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INTRODUCTION

The importance of living wage was recognized long before the industrial revolution, but action toward implementation has rarely moved beyond lip service. Lack of agreement on definition and measurement of living wage are some of the reasons why its implementation failed to take root.

However, at the moment, there seems to be a resurgence of interest in living wage: the Global Living Wage Coalition[1] (GLWC) emerged in 2013 to make the rhetoric of understanding and moving toward living wage globally, a reality. The GLWC brings together seven sustainability standards systems, in partnership with the ISEAL Alliance and Richard Anker and Martha Anker. The GLWC pulled together these members and partners under the shared mission to see continuous improvements in workers' wages, in the farms, factories and supply chains participating in their respective certification systems and beyond, and with the long-term goal for workers to be paid a living wage. Each living wage benchmark commissioned by the GLWC is made public to further this aim and to increase the opportunity for collaboration toward payment of a Living Wage.

The GLWC began by working on the aforementioned constraints of widespread agreement on definition and methodology for calculation of living wage, and hence adopted a shared methodology that can be used to estimate location specific living wages in a way that enables and encourages international comparability.

The GLWC reached out to renowned international expert Richard Anker[2], the father of the Anker methodology, and joined together with him and Martha Anker to support their ground-

[1]GLWC Members: Fairtrade International, Forest Stewardship Council, Goodweave International, Rainforest Alliance (RA), Social Accountability International (SAI), Sustainable Agriculture Network (SAN), and UTZ

[2] Richard Anker is an economist retired from International Labour Organization (ILO) and an expert on labor, poverty and development. He has worked extensively on measurement of living wages and decent work and written a comprehensive review of living wages published by ILO (2011). He is currently a senior visiting scholar at the Political Economy Research Institute, University of Massachusetts.

breaking work in the development of this new methodology based on rigorous research (Anker 2005, 2006; 2011) and extensive empirical work in several countries.[3] The methodology blends normative standards with contextual factors to go beyond reproducing intergenerational poverty and to actually provide the information to reduce it.

With the request and support of the GLWC, Anker and Anker blended their expertise together to develop a new manual for estimating living wage. After completing the draft manual, it was introduced to researchers from several countries and Richard and Martha Anker personally trained these researchers in the methodology. Accordingly, the researchers applied it in their respective countries to estimate living wages for selected areas.

This study estimates the living wage of the Ziway area in Ethiopia by using the Anker methodology as delineated in the manual developed by Anker and Anker (2017). Ziway is host to the largest flower farm cluster in the country, hiring around 15,000 people. One of the farms in Ziway town (hereafter, referred to as flower farm-X[4]) has provided important support in undertaking this research, providing farm level data as well as allowing workers to participate in the research in different ways as requested by the researcher.

1. BACKGROUND

"Everyone who works has the right to just and favourable remuneration ensuring for himself (herself) and his/her family an existence worthy of human dignity'' Universal Declaration of Human Rights (1948).

The International Labour Organisation Constitution (1919) as well as an Annex to its Constitution (1944) recognize ILO commitment to the importance of workers earning a living wage, as do many voluntary standards. Living wage concerns the right to receive an adequate wage that enables a worker and her/his family to live at a basic but decent standard without requiring overtime work to achieve this level of decency. As Anker (2011) highlighted, living wage is not a new concept; it has been raised by prominent scholars dating back to the 18th century, such as Adam Smith (1776)[5] and individuals like Pope Leo XIII (1891). Moreover, a plethora of voluntary standards have incorporated living wage as a requirement in their

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Martha Anker is a statistician, retired from World Health Organization (WHO), who has extensive experience with rapid assessment methodologies, and health and gender issues.

[3] For example the work by Anker and Anker (2013; 2013; 2014) in Kenya, Dominican Republic, South Africa, Malawi etc. The reports can be found at http://www.globallivingwage.org.

[4] Not naming the flower farm is for confidentiality and to respect the preference of the GLWC to keep the farm specifics anonymous.

[5] No society can surely be flourishing and happy, of which far greater part of the members are poor and miserable. It is equity besides that they who feed, clothe and lodge the whole body of the people should have such a share of the produce of their own labor as to be themselves well fed, clothed and lodged." (Adam Smith 1776 cited in Anker 2011)

respective certification schemes. A recent ILO review revealed that there is a general consensus on the definition of living wage (R. Anker, *Estimating a Living Wage: A Methodological Review*, ILO 2011) and that similar concepts defining the parameters of a living wage underpin all of these declarations, and voluntary standards: a living wage must be sufficient to satisfy basic needs of a worker and her/his family and to allow basic discretionary spending. In addition, the global agenda of 'decent work' puts extra emphasis on decency and community values.

Drawing on this Anker report, and in consultation with experts, including Richard and Martha Anker, The Global Living Wage Coalition adopted the following common definition for living wage. A living wage is:

The remuneration received for a standard workweek by a worker in a particular place sufficient to afford a decent standard of living for the worker and her or his family. Elements of a decent standard of living include food, water, housing, education, health care, transport, clothing, and other essential needs including provision for unexpected events.

Agreeing on a shared definition of a living wage is an important step, because the GLWC aims to create a shared understanding of living wage based on a single definition and methodology of calculation of living wage, to enable industries and companies to move towards paying a living wage.

Currently, living wage is gaining increasing attention from businesses, governments, NGOs and trade unions as many acknowledge its inevitable role, not only to fight multifaceted poverty, but also to promote competitiveness of business (Berenschot 2012; Oxfam 2014; Miller and Williams 2009; Wage indicator foundation 2013). The Global Living Wage Coalition sees the calculation and release of Living Wage benchmarks as the first step in a long-term process. The GLWC does not believe the benchmarks will or should supplant collective bargaining rights, but will serve as a replicable tool to support social dialogue between workers and employers. For many developing country producers, wages form an important part of the costs of production. As such, it is important to introduce wage requirements in the standards systems of Coalition members only in combination with dialogue and involvement of actors at all levels of the supply chain.

Fairtrade International, a member of The Global Living Wage Coalition, commissioned this report with support from IDH - the Sustainable Trade Initiative. The work of the Global Living Wage Coalition, including activities leading to this benchmark, is further supported by the Ministry of Foreign Affairs of the Netherlands, Directorate-General for International Cooperation (DGIS).

2. LIVING WAGE ESTIMATE

The estimate of a living wage for Ethiopia flower farms for July 2015 in the Ziway area is Birr 3,367 (US$163)/month. This estimate is built with consideration of mandatory deductions from pay of Birr 784 (US$38)/month. The major components of the living wage estimate include monthly cost of food for the local family size of five (two adults and three children) of Birr 66.2/day, amounting to Birr 2,014 (US$97); housing cost of Birr 1,077 (US$52); non-food non-housing cost of Birr 978 (US$47), and a small margin for unforeseen events of Birr 203 (US$10). These calculations are made for 1.653 workers per family, as is typical in the region. All details on the specifics of what these costs cover, and how that equates to a basic but decent standard of living as understood from international norms, are provided in the sections below. It is intended that this report present a transparent look at the inputs into the living wage estimate provided here, so that action on wages may be bolstered by an understanding of what actually goes into a living wage estimate.

3. CONTEXT

3.1 Ethiopia: growth, inflation and wages

For years the high prevalence of poverty overshadowed the positive heritages of the ancient African country of Ethiopia. However, according to the World Bank and the Ethiopian government, this image seems to be changing (World Bank 2015). Although several scholars contest the claim[6], it is maintained that the country exhibited continuous double-digit growth of GDP since 2004/5, which established Ethiopia as the 12th fastest growing economy in the world (Geiger et al 2013). The World Bank report also states that the country achieved remarkable results in reducing the number of people living under the national poverty line, from 44% in 2000 to 30% in 2011 (World Bank 2015). Similar success is reported in expanding the provision and availability of health and education services. Nonetheless, in measurement of multidimensional poverty, Ethiopia still stands as the 14th poorest country in the world (Malik 2013).

The growth of Ethiopia has been threatened by persistent inflation since 2006[7]. Inflation has affected the everyday lives of the majority of Ethiopia's population, as it is heavily driven by food price inflation. According to a World Bank report by Geiger and Goh (2012), inflation reached a climax in August 2008 and again in August 2011, reaching 61.6% (food inflation

[6] For example, detail on questioning the claim of growth and poverty reduction see Devereux and Sharp (2003); Belaye, H. M. (2013); Geda (2016).

[7] Annual average inflation rate, 2007-2012

Year	General	Food	Non-Food
2007- 2008	24.9	34.2	12.3
2008- 2009	38.7	48.6	24.1
2009- 2010	3	-5	18.1
2010- 2011	18	15.8	21.6
2011- 2012	34.3	42.9	22.4

Source: Central Statistics Agency cited in WFP and CSA (2014).

79.2%) and 40.7% (food inflation 50%) respectively. Although food inflation appears to have remained in the single digits since 2013, food prices remain higher than the average price recorded in the five years between 2008-2012 (WFO and CSA 2015).

Studies show that the poorest households are hardest hit by such food price inflation, and among those, urban wage workers whose wages failed to adjust for inflation[8] are particularly strained. According to Headey et al (2012), there were actual negative changes in wages of urban wage workers during high inflation years: -15.50% in 2007-2008 and -15.80% in 2010-2011. Regarding the flower sector of Ethiopia, in many farms, wages are reported to be far too low to cover the costs of basic needs (WWW 2013; Melese 2014[9]).

Wage workers are also subject to outdated tax systems that put tremendous pressure on workers through mandatory deductions that are high when compared to the living standard of the country. The tax rates and bands have not been revised in the past decades to accommodate changes such as growth, purchasing power of the Birr, and currency devaluation. Income tax starts at a very low level of income (i.e. Birr 151) with minimal deductions, whilst a progressive rate is applied starting from 10% (see sub-section 4.3.2 for detail). Furthermore, the absence of a statutory minimum wage in the country leaves wage setting fully at the discretion of employers. Wages have never been part of the collective bargaining agreements (CBA) of flower farms and generally the contents of CBAs are aligned with the labor and pension proclamations of the country except for some detailed descriptions of disciplinary actions.

3.2 Ziway: living condition of flower farm workers

Ethiopia promotes an export-oriented strategy to achieve growth and reduce poverty. Although the country is trying to attract investors in many sectors, the flower industry is one of the most successful industries and the government proudly presents it as one of the '…real success stories…' due to the large employment and foreign exchange generated (PASDEP2005/6-2009/10: 14)[10].

Ziway is one of the areas of Ethiopia that received the largest foreign investment in its flower industry. The small town is located in East Shewa Zone of the Oromia region, around 160 KM

[8] To estimate the change in the wage of urban daily wage workers of Ethiopia, Heady et al (2012) deflated the wage of 2006 by poor person's food CPI 2001-2011 based on CSA's 2011 data and the result showed that change in wage was -15.5% for 2007-2008 and -15.8% and 2010-2011. The work here mainly includes construction and other daily labour; not flower farms. However, jobs in urban area such as construction offer better pay than flower farms (Schaefer and Abebe 2015). This is one of the reasons for high labour turnover in many flower farms.

[9] The report of Melese (2014) in the file of Hivos. In the study 147 workers in six flower farms reported to spend on average Birr 1,154 for some basic needs (food, rent and utilities). Only 1% of the workers (who worked for many years) earned enough net wage to just cover those costs.

[10] Sustainable Development and Poverty Reduction Program (SDPRP) 2002/03-2004/05; Plan for Accelerated and Sustained Development to End Poverty' (PASDEP) 2005/06 – 2009/10)

away from Addis Ababa on the road connecting to Nairobi. It is known for the horticulture industry, fishing and for some tourism. According to the census of 2007, the population of Ziway is estimated to be around 43,660. However, at the moment this number is believed to be much higher thanks to the large influx of migrants from different parts of the country as well as expansion of businesses in the locality.

The emergence of flower farms is the most important cause of changing dynamics in the area, with direct impacts of the industry, such as the attraction of a large number of migrants resulting in sweeping changes. The industry has created jobs for 15,000 people, mostly internal migrants (>75%). This phenomenon has changed overall socio-economic aspects of Ziway town. Some of these resulting shifts directly influence the living costs of workers. Cost of housing, for example, has shifted in part due to the creation of new living areas known as 'chereka sefer' (which literally translates as moon areas or constructed in moon light). Most of the production workers[11] live in those new areas and in other neighborhoods, but with similar housing. Although those houses are in poor condition, workers find them the best alternative available, as they are the only affordable shelter in close proximity to work.

The above brief background information is intended to set the context of the study. The next section discusses how the living wage of Ziway is estimated.

4. HOW A LIVING WAGE IS ESTIMATED

As mentioned earlier, living wage in the Ziway area is estimated based on the Anker Methodology. Anker and Anker (2017) developed a manual that provides a thorough explanation on the rationale of each component of living wage and how it is estimated. This study will provide only a brief introduction on how the estimation is done for each part as depicted in figure 1 below.

To estimate living wage, costs of a basic but decent quality of life in a specific place, must be known. To attain this basic but decent quality of life, one needs to have nutritious low cost food; a basic house and utilities; a fund to cover other basic costs (e.g. health, education); and a little extra money to provide a buffer for emergencies and unexpected events. This should be estimated for a family by taking into consideration the number of full-time workers per couple as well as the average family size. The below diagram depicts the components and determining factors of living wage.

[11] The term production workers refer workers in green houses and pack houses of flower farms that are at the lowest hierarchy of wage but make the majority of the total workforce.

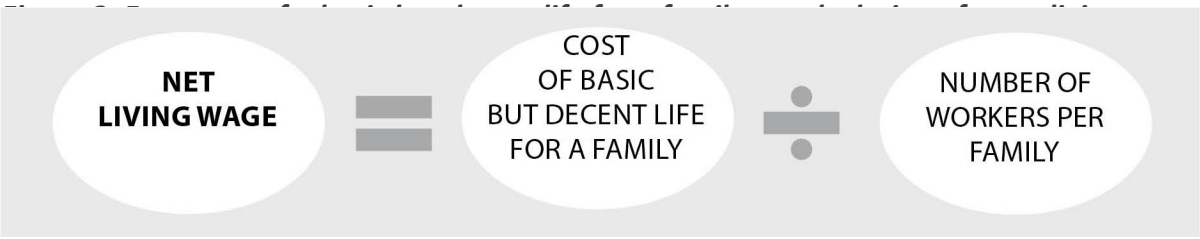
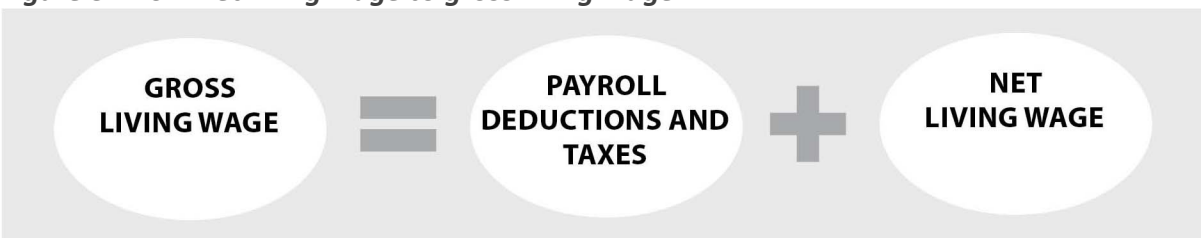


Figure 3: From net living wage to gross living wage



Source: Anker & Anker (2017)

To estimate costs for each component of basic needs such as food, housing, and utilities, the researcher collected primary data in the Ziway area in July 2015. In addition, literature and secondary data were reviewed to understand the trends of the country as well as to draw statistical comparisons. For statistical comparisons, the Ethiopian Households Consumption-Expenditure survey (HCES) 2010/2011 is primarily used. Unless mentioned otherwise, the study always refers to the average of urban and rural third quintile of HCES for comparison. This is done to avoid reproducing the living standard of the poorest households. Also, the average of rural and urban data is used to minimize the biases of rural areas and big cities as Ziway is neither rural nor a big city, but a non-metropolitan urban area.

Considerable efforts were made to collect rich primary data. Initially better understanding of the local context was established through focus group discussions (FGDs) and unstructured interviews with several workers and individuals in and outside the flower farms. FGDs with workers especially helped to note habits and preferences with regard to consumption patterns

(types of food, quantity, quality and frequency), and markets and prices (date and time of shopping).

An estimated cost for basic but decent housing was obtained through visiting various neighborhoods and rented houses, and obtaining costs of housing for those that meet a basic but decent standard. Moreover, for some important expenses such as education, health, and transport, we conducted rapid assessments through interviews with key informants, and collected prices on respective service providers (clinics, pharmacies, school directors, and drivers). Additionally, structured interviews with over 40 workers were conducted to provide a check on these expenses.

As will be explained in each section, I strived to make a very conservative estimation of living costs. Both relative food prices and local food preferences were taken into consideration in choosing food items (e.g. using large amounts of maize as cereal and smaller amounts of teff, even though teff is the preferred cereal).

SECTION 1

COST OF A BASIC BUT DECENT LIFE FOR A WORKER AND THEIR FAMILY

This section will present each component of a basic but decent quality of life as depicted in figure 1 and estimate its cost for the Ziway area. As will be explained in the later sub-section, the estimation is done for a family size of five (5), as is common in the area, with 1.653 full-time workers.

5. FOOD COSTS

5.1 General principles of model diet

A low cost, nutritious, model diet was developed in order to estimate the cost of food. The model diet is developed in accordance with the standards of the World Health Organization (WHO) for nutritional and caloric needs. This includes macronutrients (10-15% of calories from proteins, 15-30% calories from fats, and 55-75% calories from carbohydrates) and micronutrients. The attempt has also been made to keep the model diet consistent with local food preferences. The model diet contains 2,279 calories per person; assuming that flower farm workers have vigorous physical activity while other members of the family have a moderate level of physical activity.

Food cost per person per day for a family of five (two adults and three children)
= Birr 13.24 or US$ 0.64

5.2 Model diet

In constructing the model diet, we began with the national poverty line diet and adjusted it where necessary, to adhere to the basic nutritional standards of the WHO. The poverty line diet in Ethiopia is very poor in nutrition and lacks high quality protein and includes insufficient quantities of fruits and vegetables that are essential sources of macro and micronutrients. The bundle of food used to estimate the poverty line is based on 1995/96 data and derived from observed consumption patterns of the poor. Studies show that the current diet of the poor in Ethiopia is very unhealthy (WFP and CSA 2014). 66% of households in the poorest wealth (asset) index quintile get over 75% of their daily calories from starchy foods and 53% of those households have low diet diversity (<=3). This is reflected in a high level of malnutrition in the country[12]. Therefore, adjusting the poverty line diet is necessary to avoid reproducing poverty

[12] Around 29% of women are malnourished and over 40% of children suffer from chronic undernourishment (CSA and ICF (2012; CSA 2014, USAID: http://www.usaid.gov/ethiopia/nutrition)

and to ensure that an estimation of living wage for workers includes enough money for workers to afford a low cost, but nutritious diet.

The model diet adjustment was carefully executed based on empirical studies such as WFP and CSA (2014) that reported consumption patterns of certain food items by people in different wealth groups. The wealthiest quintile eats meat, on average, 2.1 days a week, while the poorest may only consume meat 0.5 days a week. This situation is taken into consideration and 1 day a week fish (much cheaper than beef and commonly consumed in Ziway) has been included in our model diet.

Regarding milk[13], there is evidence (WFP and CSA 2014) that milk consumption is not necessarily linked with monetary poverty in Ethiopia, but rather, with ownership of livestock. For instance, households that rely on livestock for their livelihood have a high consumption level of milk (5 times a week) while other households consume milk, on average, between 0.6 to 1.8 times per week (ibid). Due to this variation, I made an extra effort during fieldwork to understand the milk market and typical experience in the Ziway area as well as the consumption pattern of workers.

Following consumption trends and costs (relatively low), a large amount of starchy vegetables is included in our model diet, but this amount is lower than the extremely high amount in the poverty line diet.

A 10% margin to allow a certain level of variety in the diet was added to the cost of a model diet; an additional 3% was added for minimal wastage and spoilage; and 1.8% was added for spices and condiments, which is the median amount reported in the household consumption expenditure survey (HCES) of 2011 (CSA 2011).

This results in a model diet that costs Birr 13.24 (US$ 0.64) per person per day for a family of five (three children and two adults) with 2,279 calories per person on average. Considerations on overall caloric requirements were made for level of activity as well as differences in caloric needs between children and adults.

The researcher compared the cost of the Anker Methodology model diet to cost of the urban poverty line diet found in earlier studies (Dercon and Tadesse, 1999; Tadesse, 1999;

[13] Although Ethiopia has the largest quantity of livestock in Africa, milk consumption in the country is quite low compared to many African countries. This is accounted for by several socio-economic factors such as low productivity and quality of milk, lack of proper market outlets, religious fasting and so on. However, there is an ongoing effort to overcome those challenges for milk consumption through Ethiopia's National Nutrition Program. The data of the mid 1990s shows that 42% of the total produced milk is converted to butter (CSA 2001 cited in Netherlands-African Business Council (NABC), Factsheet dairy sector Ethiopia). According to the same source, more than 82% of milk produced from cows is consumed or processed into butter at the farm level (Geert Westenbrink, Dairy Forum Dec. 2010, Addis Ababa).

Gebremedihin and Whelan, 2005; Alem 2011)[14]. The urban poverty line diet is estimated to cost Birr 12.94 or US$0.63, which is very close to the cost of our living wage model diet. Similar comparison was made with the diet of FAO's (Food and Agriculture Organization) food balance sheet[15], which at Birr 13.64 or US$ 0.66, carries a higher cost than both the model diet used here and the poverty line diets. All of these comparisons indicate that the living wage model diet is inexpensive while providing proper nutrition. Annex 1 contains a comparison of the living wage model diet with other diets in Ethiopia (in edible grams per person per day).

Table 1: Model diet and food cost per person per day using food prices collected from Ziway markets where workers shop

Food items	Edible grams	Cost per kg	Cost	Comments (Diet is for average person in family of 5. Portions for adults are bigger than for children)
Maize	376	5.48	2.06	Over 57% of the total calorie comes from maize. Although maize is not the most preferred cereal, it is the least expensive.
Teff	70	13.39	0.94	Teff is the most preferred cereal by workers but due to its price, only a small amount is included in the model diet. Teff is required to make injera (traditional Ethiopian bread) that is eaten in most meals. 70 grams per person per day allows for 8 pieces of injera per day for a family of five if mixed with 60% maize meal to reduce food costs.
Potatoes	200	4.86	1.30	It is the cheapest and also preferred root.
Split Peas	15	29.76	0.45	Split pea is preferred for *Shiro*[1] over split horse beans, but due to the price difference, more horse beans are included.
Split Horse Beans	25	24.72	0.62	
Milk	132	13.67	1.80	One cup for ages 0-14; ½ cup for ages 15-18 of milk per day for children and 1/8 cup for adults

[14] The urban poverty diet is drawn from the consumption pattern of the food items most frequently consumed by households in the lower 50 percent of the per capita consumption expenditure (Alem 2011:11).
[15] It is estimated based on availability of food in a country for human consumption.

Food items	Edible grams	Cost per kg	Cost	Comments (Diet is for average person in family of 5. Portions for adults are bigger than for children)
Chicken Eggs	7	68.97	0.56	One egg per week
Fish	12	42.37	0.86	12 grams of fish per day (it is estimated to be 1 portion of fish per week). Even though the majority of workers (migrants) do not have a dominant habit of eating fish (they prefer beef); the model diet includes fish, since it is much cheaper than beef in Ziway.
Vegetable 1	63	6.44	0.66	189 grams of vegetable per day are required to gain the necessary nutrition. Kale was the least expensive green leafy vegetable.
Vegetable 2	63	3.48	0.27	Cabbage was the least expensive vegetable.
Vegetable 3	63	6.21	0.43	Tomatoes were the least expensive non-green leafy vegetable.
Mango	63	5.79	0.51	Mango was the least expensive fruit.
Palm Oil	14	39.67	0.56	14 grams or around 1 tablespoon of cooking oil per day
White Sugar	12	23.35	0.28	12 grams or 3 teaspoons of sugar per day
Coffee	3	79.1	0.25	Two cups of coffee per day per adult
Total			Br 11.54 or US$.056	

Food items	Edible grams	Cost per kg	Cost	Comments (Diet is for average person in family of 5. Portions for adults are bigger than for children)
Total with 14% miscellaneous food costs [d]			**Br13.24 or US$0.64**	10% for variety, 3% for waste & spoilage, 1.8% for salt, spices and condiments

Source: The Authors

5.3 Food prices

To estimate the cost of the model diet, a price survey was conducted at all markets that were pointed out by workers as commonly used. With guidance of workers, the bi-weekly big open market, the daily open market, and several kiosks in different neighborhoods were visited. Moreover, butcheries and lakeside sellers were visited.

Image 1: Main Market in Ziway

Source: The Author

The average price of each food item from each market was calculated to arrive at the average price per gram of each food item in the diet. This method helped in choosing the least expensive yet nutritious and culturally acceptable food items.

When selecting food items from the cereal group, selecting the cheapest items such as maize and sorghum is contrary to the preference of the workers. In general teff is the most favored cereal in Ethiopia especially in urban and semi-urban areas (Demeke and Di Marcantonio 2013).

According to Berhane et al (2011) HICES 2004/05 shows that per capita, urban dwellers receive 601.70 calories from teff consumption daily in the form of Injera, while in rural areas, teff only accounts for 196.69 daily calories. Consumption of maize and sorghum in urban areas is very limited whereas it tends to be predominant in rural areas. This is often due to economic conditions of the rural people rather than preference (FEG Consulting, 2010). A study by FAO also argues that the income elasticity of teff is the highest among cereals and greater than one (1) in both urban and rural Ethiopia (Demeke and Di Marcantonio 2013). This is not only due to cultural preference, but also teff's nutritional values (ibid). According to FAO, two thirds of the daily protein intake of the Ethiopian diet comes from teff[16].

Similarly, evidence from FGD with workers indicated that; eating maize was a sign of poverty, so workers appeared uncomfortable to report maize as their main cereal. As workers in flower farm-X came from different parts of Ethiopia, they reflected a diverse degree of preference for certain cereals, but teff is favored by all. Some workers especially from the southern region of Ethiopia[17] tend to use more maize for homemade bread, which is a cheaper alternative to injera. However, the workers of farm-X came from different parts of the country and as the director of the farm indicated, the farm consciously makes an effort to reflect the reality of the country (in terms of multi-ethnicity) in the farm, by hiring from five major ethnic groups. Hence the model diet should mirror this reality.

Despite these facts on the popularity of teff, it is kept minimal in the model diet, constituting only 16% of the cereal group due to its high price. As a more affordable alternative, maize is made a major food item of the cereal group in the model diet.[18]

The other dilemma presented by the construction of the model diet is related to choosing between fish and beef for inclusion. Ziway is one of a few areas in Ethiopia where fish is regularly consumed, thanks to Ziway and other rift valley lakes. However, flower farm workers come from different regions where beef is more common than fish. In Ziway, fish is considerably cheaper than beef so a compromise has been made for this diet, including fish as part of the model diet instead of beef.

[16] http://www.fao.org/traditional-crops/teff/en/ accessed September 17 2015. Besides, teff is rich with iron, calcium and other nutrients (Demeke and Di Marcantonio 2013).

[17] According to the study of World Food Program (2014), the southern national and nationalities of people (SNNP) have the poorest quality of diet. The people eat unvaried food with very high level of starch and often the amount is inadequate to keep the household above poverty.

[18] It is assumed that a family of five (5) needs eight (8) injera per day for lunch and dinner. Based on the researcher's experiment, one injera approximately requires 109.8 grams of flour or 8 injera requires 879grams of flour. So in the model diet for a family of five, 176 grams of flour is required to make an injera. To reduce the amount; here injera is assumed to be made up of 40% teff and 60% maize flour which gives 70 grams of teff per person per day.

During FGD most workers underlined their effort to buy ½ liter of milk per week to consume it with coffee. In their words '…it is almost a must to revive from such heavy workweek… '. One cup of milk a day is included in the model diet for children since it is believed necessary given its irreplaceable nutritional content for the healthy growth of children. Although milk is also important for the well-being of adults, a very small amount of milk (1/8 cup) is included in the model diet to use with coffee.

During FGD workers highlighted that the best way of getting trusted quality milk is to obtain it from individual/households who rear cattle (livestock). Milk is often difficult to access unless someone enters into a relatively long-term contract (>= one month). The other common but poorer quality market outlet for milk is kiosks.

As mentioned earlier, preferences in consumption of meat are not necessarily reflected in the model diet. Fish is in fact widely consumed in Ziway, but beef is preferred by workers both from Ziway and elsewhere (internal migrants). However, beef is four and a half times more expensive than fish. For this reason, the model diet includes 12 grams of fish a day or one meal of fish per week for a family of five.

Oil and sugar were found to be the least available food items in the market. Due to inflation in Ethiopia, the availability of oil and sugar has been even more unpredictable than other food groups. Technically the government distributes oil and sugar at subsidized prices, yet in practice small numbers of people have access to these essential goods at subsidized rates. As a result, shopkeepers estimated some of the collected prices, as products were not available. It is interesting to note that at the moment flower farm-X is considering providing these products to workers at a subsidized price using a Fairtrade premium provided to the farm.

Inflation in Ethiopia greatly influences food prices (Hirvonen et al 2015), but it is not the only factor to consider. Seasonality is also a possible factor in the price of the model diet. As this study collected food prices only for the month of July 2015, it needs to be verified whether the price is representative for the annual average price. Literature and secondary data were reviewed to address this potential variability. According to Hirvonen et al (2015) who analyzed the monthly food price change in Ethiopia (2001-2011), food price is lower (-0.9 to -2.3 %) than the annual average during and right after harvest season (November-March)[19] and higher in the rest of the months (0.2 to 2.3%). In July the food price for urban and rural areas increases by 1.7% and 0.5% respectively. From this trend, the annual net change appears to be minimal. Moreover, the authors argue that religious festivals and Orthodox Christian fasting seasons are known to influence price, as well as which foods are consumed.

In addition to the national challenges faced relative to food prices associated with seasonality and inflation, flower farm workers in Ziway are subject to unreasonably high market prices.

[19] September is the first month in Ethiopian calendar

During focus group discussions and informal conversations, workers with different job positions explained that the price of food increases every month in the week they receive their salary. They also reported that prices of some food items increased due to the national election in May 2015 and have not decreased since.

Apart from inflation, the workers tend to pay higher prices for food due to the common practice of purchasing on credit (price plus interest). It is reported that workers often run out of food stock in two and half weeks, so they tend to depend on prepared cereal (pasta, breads) that are purchased from kiosks on credit basis.

6. COST OF HOUSING FOR WORKERS IN NON-METROPOLITAN URBAN ZIWAY AREA

To estimate costs for basic durable housing and utilities, several houses were visited, and semi-structured interviews were conducted with several workers in various employment positions, as well as with a few landlords. As Ethiopia is undertaking a huge housing project to improve slum settling, secondary data was reviewed to gain insights on minimum standards of low cost houses.

Cost for basic house and utilities for a family of five (two adults and three children)
= Birr 1,077 or US$ 52 per month

Housing costs constitute a substantial share of household expenditure. According to HCES 2010/11, the average (rural and urban) housing costs were over 29% of the total expenditure made by third quintile households. According to World Bank's recent report (2015), the share of spending on rent increased from 22% in 2005 to 25% in 2011.

Image 2: Worker Housing in Ziway

Source: The Author

6.1 Standard for Basic Acceptable Housing

This study considered housing decent and yet basic based on some minimum criteria that ensure the health and safety of the dwellers. Those criteria are consistent with international (Anker and Anker 2017) and national standards (UN-HABITAT 2010) as highlighted in the subsequent discussion.

The basic housing standard for a family size of five as identified in this study is as follows:

- Wall, roof and floor are constructed from durable materials such as cement or stone for walls; cement or corrugated iron sheet for roof; cement for floors.
- Sufficient number of windows for ventilation and adequate light
- Electricity (in towns and cities)
- Piped water in close proximity to the house
- Kitchen area separate from sleeping areas
- About 30-35 square meters of floor space
- Pit latrine in good condition in close proximity to house and used by at most 15 persons
- Safe outside environment

Intending to enable poor people access to improved housing, Ethiopia has undertaken a pro-poor housing program (Integrated Housing Development Programs (IHDP)) and is building thousands of condominium houses with diverse sizes of housing units (see table 1 below). The houses are constructed from durable materials and each unit is fully serviced with a shower, flush toilet, basin and separate kitchen. The construction is fully subsidized by the government but in the long run, it is expected that costs will be fully recovered. This desire to eventually recover costs creates a scenario wherein targeted beneficiaries are expected to have a certain level of monthly income to benefit from the program, as indicated in the table below.

Table 2. Standard of pro-poor houses Ethiopian in IHDP[20]

House units	Floor area m^2	Monthly income of targeted beneficiaries in Birr
Studio	<20	300
1 bed room	20-30	600
2 bed rooms	30-45	1200
3 bed-rooms	>45	1800

Source: UN-HABITAT 2010

According to the national standard in IHDP, the workers in flower farms who earn a monthly income above Birr 600 are entitled to own at least a one-bedroom house with 20-30m^2 (UN-HABITAT 2010).

6.2 Rent for Basic Acceptable Housing

The expansion of flower farms in Ziway has led to the emergence of new resident areas and more houses. The production workers live in those new areas as well as the old areas that are close to their workplace. However, regardless of their location, houses occupied by production workers present a similar standard and conditions. Most are single room homes (16 square meters or less) and constructed from mud and wood materials. The overall sanitation looks poor with undesirable toilet and cooking space. Although there is garbage collection service in the town, production workers cannot afford to pay the monthly fee necessary to benefit from this service. As a result, garbage is often burned near the home or discarded on the ground around the community.

With these prevailing housing conditions in Ziway, finding basic but decent housing and estimating its costs required visiting of houses occupied by workers in higher paid positions. Hence, the researcher visited several locations and houses where workers in different job

[20] The construction cost of a condominium housing unit on the private market is estimated to be ETB 2,000/ m^2 (USD 154/m^2) The target cost on some of the IHDP projects was ETB 800/m^2 (USD 61/m^2) and the actual figure achieved was ETB 886/m^2 (USD 68/m^2) (UN-HABITAT: 18).

positions live. Overall production workers live in poor houses as described above. Houses of some supervisors and line managers appear better as they are from durable materials, but the size tends to be very small (<=16m2) and services like kitchen and toilet are sometimes below acceptable standards. Those houses are often located relatively far from flower farms so the dwellers use bicycles to go to work. Table 3 describes the houses that we visited. We found some one room housing units built from acceptable materials, but too small and relatively far away, that cost Birr 470 per month, and concluded that two rooms of this type would be acceptable and cost Birr 940 per month. This is a very conservative estimate of housing costs as the least expensive 2 room unit we saw was Birr 1,150.

Table 3. Characteristics of houses visited and associated rents

Tenant's Employment Information	Acceptable standard?	Rent in Birr	Size in sq. meters & # of rooms	Comments
Green house worker (3 HH members)	no	270	4x4, 1 room	Poor quality (mud wall & floor, no proper foundation). Birr 100r/m for firewood. Several houses of this kind were visited so this can be taken as a standard house for most production workers. Workers in such houses cannot afford garbage collection service.
Pack house (3 HH members)	no	400	5x3.5, 2 rooms	Poor quality (mud wall, bad toilet). Birr 120br/m for firewood. No garbage collection fee
Manager (1 HH members)	no	285	3x4, 1 room	Too small, no proper kitchen No garbage collection fee
Manager (1 HH member)	no	470	4x4, 1 room	Durable and acceptable standard (from cement) but too small. Relatively far area (20 min by cycle) where houses are cheaper. No garbage collection fee.
Manager (1 HH member)	no	470	4x4, 1 room	Too small living space and kitchen. Otherwise durable and acceptable quality.

Tenant's Employment Information	Acceptable standard?	Rent in Birr	Size in sq. meters & # of rooms	Comments
Neighbour of a manager (1 HH member)	no	500	3x4, 1 room	Acceptable standard but too small. Here the tenant gets additional services
Manager (3 HH members)	no	700	5x5, 1 room	Mud wall; poor toilet
Manager (1 member)	yes	1,150	8x4, 2 rooms	Acceptable standard, outside pit toilet but no functioning kitchen as the tenant doesn't cook but the house has two windows for ventilation and large space in the compound for outside cooking.
Neighbor of a manager (2 HH members)	yes	1,320	10x5, 4 rooms	Acceptable standard, inside flush toilet, inside and outside pit toilet (shared) and shared outside kitchen (too small though). There is inside kitchen space for electric stoves.
Manager (5 members)	yes	1,300-1,500	10x4 3 rooms	The house is owned; but there are other rented rooms in the compound. So the price is estimated market price by the landlord excluding utilities. Additional Birr 650/m is paid for utilities.
Manager (3)	yes	2,130	14x5, 5 rooms	Acceptable standard, outside pit and flush toilet; kitchen both inside and outside The house has two windows for ventilation and large space in the compound for outside cooking.

6.3 Utilities and other housing costs

All visited houses in this study had access to electricity and potable water and those utilities are often included in the rent. Tenants who live in independent houses (workers in higher job positions) do not benefit from the provision of these utilities as included in rent. Where utilities are included in the rent, electric cooking stoves are not permitted. As a result, these tenants incur high costs (around Birr 160/month) for firewood/cooking fuel. In some houses, water consumption is also limited to one jerry can (25 liters) per day and beyond that costs Birr 0.50 for each additional jerry can. The total utility cost was estimated to be Birr 137 per month.

7. NON-FOOD AND NON-HOUSING (NFNH) COSTS

Non-food and non-housing costs (NFNH) were estimated using a variant of Engel's law which states that the percentage of household expenditure spent for food decreases as household income increases (Anker and Anker 2017).

NFNH cost for a family of five (two adults and three children) = Birr 978 or US$ 47 per month

This study obtained the ratio of NFNH expenditure to food expenditure from the HCES of 2010/2011 with a value for the ratio of 0.47. In order to reduce biases of big cities and rural areas, the average value of rural and urban was taken. Taking the value of the third quintile in HCES also minimized the trend toward poorest consumption. This (0.47) NFNH expenditure to food expenditure ratio is relatively low. For example, Anker and Anker (2014) used 0.87 for Lake Naivasha, Kenya and 0.40 for rural Kenya. It is also lower than the NFNH ratio of the national CPI of 2011, which is 0.58. (The NFNH ratio of the National CPI is not used in our living wage estimate as it overestimates NFNH value for typical workers due to its ability to be greatly influenced by rich people's spending.)

Some adjustments are included in this study to values obtained through HCES to eliminate expenses that are unnecessary for basic quality of life. These include expenses for tobacco and narcotics. Also the role of 'meal away or meal at restaurant' in influencing the ratio has been taken into consideration. As a result, the NFNH to food ratio fell from 0.47 to 0.43, which makes the cost of NFNH Birr 978 per month.

8. POST CHECKS OF NON-FOOD AND NON-HOUSING COSTS

It is important to assure that funds included in the non-food non-housing category cover the prevailing costs of health and education, as essential universal human rights. Transport must also be adequately covered as it constitutes a significant share of household expenses; even more than health and education (e.g. in the case of Ethiopia). To this end, rapid assessment tactics were implemented in the field with regard to expenses of health, education and transport; and necessary adjustments were made to preliminary NFNH costs whenever it is

found that HCES data either over or understated these costs. It was found necessary after these post checks to increase the preliminary NFNH expense by Birr 109.

8.1 Health care post check

Health cost for a family of five (two adults and three children) = Birr 40.44 or US$ 1.9 per month

Ethiopia has exhibited substantial improvement in expanding access to health services. From 2006 to 2013 health coverage increased by 159%, which has led to a decrease in mortality rates and an increase in immunization (World Bank 2015; CSA and ICF 2012). Still, per capita health care expenditure remains low compared to the average of other African countries (WHO 2010 cited in EMH2014). According to HSUES 2010/11[21] (EMH 2014), of the 14% of individuals who reported illness during the last four weeks, 64.25% (urban) and 62.21% (rural) sought health care services. Various reasons were given for not seeking medical assistance with an illness, with lack of money reported by the majority (40.7%) followed by consideration of the illness as not severe enough to warrant medical assistance (24.82%). The report also shows that a larger number of urban dwellers visit private health care service providers (34.5%) than do people in rural areas (18.23%).

Technically, Ethiopia provides free health care for the poor. However, empirical studies showed that inefficiencies and complicated bureaucratic procedures required to access free health care services prevent many from doing so (Barnett and Tefera 2010). Similarly, workers of flower farm-X mentioned that although health care costs are less in government centers, the quality of the service is low and waiting time is long. Those complaints might explain the very low share of fee waiver beneficiaries (4.73%) among the total individuals who used outpatient services, whereas, 59% of them paid out of pocket (EMH 2014). According to the same source, in year 2011/2012 per capita out of pocket (OOP) expenditure on health care was Birr 132 (US$7.49).

Workers of flower farm-X are provided with health care services at a relatively good hospital, yet also sometimes choose private clinics due to dissatisfaction with the provided service. Workers interviewed reported casual diagnosis and prescription of drugs without proper medical examination. Key informants (among them doctors and managers) explained that the biggest challenge the hospital faces in treating flower farm workers is determining whether workers are really sick or simply feigning illness to obtain sick leave. Some doctors believe that workers often come to the hospital with ‘hysteria’ so they tend to give them a painkiller to keep them calm. However, another key informant reported that the so-called 'hysteria' is observed usually in the last 1-2 weeks of the month and is often related to hunger. Workers tend to run out of money before the next payday, and as such, eat less at the end of a pay period, leaving them too weak to work properly. The result is that the workers often faint at the workplace, and this fainting is referred to as ‘hysteria’.

[21] Household Health Service Utilization and Expenditure Survey EFY 2003 (2010/11).

This study made an estimation of health care expenses based on common illnesses of the Ziway area[22] that were identified based on a key informant interview (hospital director). Two to five private and government clinics and pharmacies in Ziway were visited to collect prices for doctor's consultation, laboratory tests, and medicines related to these common illnesses. The average cost of each component was estimated based on the lowest price available. At private health care providers, the consultation fee (card fee) is estimated to be Birr 10 and is estimated at Birr 7 in public clinics. For laboratory tests, the cost averages Birr 29 in private facilities and Birr 12.7 in public laboratories. For medicine, the average lowest price is Birr 14.5 in private pharmacies and Birr 12.4 in public. Given the above statistical evidence and the views of workers, this study assumed that workers and their families split their use of services between private (50%) and public (50%) facilities. It was assumed that lab tests are included during every other visit and that medicine is purchased only from public pharmacies. Based on these assumptions the cost of health care services is estimated to be Birr 32.05 per person per visit per month. According to the government record (EMH2014); in reported illnesses within four weeks (14%), it is presumed that a person who lives in an urban area of Ethiopia seeks health care service 1.7 times a year. Therefore the cost of health care for a family of five is estimated to be Birr 269.22 per year or Birr 22.44 per month. This estimate is close to the preliminary NFNH estimate so no adjustment to the original value was made.

8.2 Education post check

Ethiopia has made progress in reducing illiteracy levels and improving access to education. According to World Bank reports (2015; 2015), the population in Ethiopia without education has fallen from 70% in 2000 to 50% in 2011. In the same period, the net attendance rate for primary education (7–12 years of age) has grown from 30.2% to 62.2%. Amongst other things, this achievement was accounted for by abolishing schooling fees. Yet, a large number of children (7-18 years), including 40% of boys and 37% girls, are still not in school (Ibid), and enrollment for secondary education remains very low (about five percent of the total enrollment, which is 64%). Despite these facts on those actually receiving an education in Ethiopia, as a core principle of living wage, a living standard considered at a basic level of decency should allow children to obtain up to a secondary education.

Education cost per three children for a family of five
= Birr 46.50 or US$ 2.25per month

According to HCES 2010/11, Ethiopian household expenditure on education is low. Education constitutes 0.66% (urban) and 0.04% (rural) of the median household expenditure. Still, households carry substantial costs (direct and indirect) of education that often lead to

[22] The common illnesses in Ziway area are waterborne diseases, respiratory infections, and gastritis. Typical and common illnesses of Ethiopia are malaria, child vaccination, reproductive health services, Tuberculosis (TB), respiratory diseases, and gastric diseases (EFMH 2014).

increased drop-outs (World Bank 2015 and UNICEF 2009; UNESCO[23]). Those studies argued that abolishing school fees could reach its goal only if it is carefully planned, considering direct (e.g. school materials) and indirect costs (opportunity costs e.g. children's help in generating income). Due to a lack of careful planning and limited resources, many African countries, including Ethiopia, have failed to sustain the initial boom of school enrollment or to alleviate the burden of parents in sending children to school (Ibid; UNESCO).

Interviews with workers in flower farms confirmed the fact that parents incur substantial costs to send their children to school. The burden of school costs on a family was also reflected in one unexpected event during the fieldwork. In this case, a human resources office helped to select workers who pay for the education of their children. These workers voiced their desperation at the HR office by mentioning that they expected help from the farm so that their children would not need to drop-out of school in the coming year.

Since schools are closed in July, the study found it difficult to find key informants from public schools from whom to obtain estimated expenses. The cost for private and charity schools were found to be relatively high, so interviewing purposefully selected workers assisted in completing the estimation. These workers reported to spend Birr 225-505 per year for elementary and Birr 665-1255 per year for secondary education. Their typical expenses are for materials (exercise books, pen), uniform and contribution to school. Additional costs are reported for secondary education such as books, printing, photocopy, and exam fees. It is worth noting that workers who reported lower expenses often didn't buy uniforms (re-used uniforms from neighbors or relatives) and/or school bags (used plastic bags). The cost for primary and secondary education is roughly estimated for the purpose of this study by raising the lowest band by 50%, which produces a cost of Birr 337.50 for elementary education and Birr 997.50 for secondary education per year. These results are multiplied by number of years at primary (8) and secondary (4); and divided by the 18 years of childhood. This gives Birr 371.67 per year per child. Due to the assumption of three children per family, this estimation is equivalent to Birr 93 per month, which indicates much higher costs of education than reported in HCES 2010/11 (i.e. Birr 17). But given that the COICOP international classification of household expenditures used by Ethiopia incudes many education costs in other expenditure groups (for example, costs of uniform can be in clothing expenditure and books in culture), it was decided to reduce this Birr 93 by half to Birr 46.50 and accordingly, the preliminary estimate in NFNH increased by Birr 29.5.

Although nursery education is a growing trend in the country, people at the level of flower farm workers often hire a nanny at home or leave their children with relatives. However, it was not

[23] This is the web link for the document but the date is not given. Accessed on August 17, 2015 http://unesdoc.unesco.org/images/0018/001825/182523e.pdf

possible to estimate the cost of a nanny in this project, so it has not been included in the cost of education.

8.3 Transport post check

HCES 2010/11 shows that the median urban and rural households spend Birr 416 and 249 respectively on transport per year. Whereas, a World Bank report (2015) showed that in small towns of Ethiopia households spend Birr 56 per month on transportation, and in rural and large towns, the report showed households spend Birr 30 and 113 on transportation respectively.

Transport cost for a family of five (two adults and three children) = Birr 155 or US$ 7.50 per month

In Ziway, poorer people often commute by foot, inclusive of flower farm workers. Market days and family visits in the same town or elsewhere present an exception. However, some of the workers raised security issues during commuting back from work to home after over-time work, which often requires them to work until 10 to 11 p.m. At that time there is very limited transport service in the town, and costs are higher than the transport allowance workers receive. This study found it difficult to estimate accurately the frequency of overtime work as different trends are reported, but I observed that security is a serious concern, especially for female workers. Workers do receive added pay when they work overtime.

Horse cart and bajaj (three wheel car) are the main means of transportation for the people who do not own a bicycle or private vehicle. Horse carts are cheaper than bajaj costing Birr six (6) to 12 per round trip. However, the price can increase on market days (2 days a week). As the discussion with workers and drivers indicated, there is no different price rate for children; any price differential depends on the personal judgment of the driver (whether a child takes space or not) and the current market condition.

This study therefore assumed that one adult goes to market once a week and pays for loads (double price) once a month (6x3 plus 12x1), which amounts to a cost of Birr 30 per month.

Workers who have family in Ziway visit their family from one to four times a month and spend Birr 12 per round trip per person. Whereas workers whose family are elsewhere often travel one to two times a year spending from Birr 50 to 400 per round trip per person. However, as indicated by the HR office of farm-X, a large number of workers come from the southern region of the country, around Woliyta area, which is about 220km away from Ziway. According to interviews with workers, public transport to Woliyta area costs around Birr 200 per round trip per person. It is assumed that a worker and his/her family visit their family in their home area once per year.

Several assumptions were made to keep the transport estimation as conservative as possible (see table 3 below) leading to an estimation of Birr 155 per month for a family of five. Likewise with other costs, the cost of transport is also understated in the preliminary NFNH estimate, which includes a cost of transport of Birr 76 per month. NFNH is therefore raised in this estimate by Birr 79.

Table 4. Monthly costs of transport for a worker with a family size of five

Reason for travel	# trips pm per		Cost per RT	Cost pm	Remarks
	Adults	children			
Commute to/from work	0	0	6	0	Assume workers walk all the time
Market /Bank	4	0	6	30	Assume only 1 adult to shop and/or bank one time per week. Extra Birr 6 to transport loads from milling house to home
Church/mosque/ Recreation	4	3	6	42	Assume 2 trips per month per adult and 1 per month per child
Visit home area & family	0.0833	0.0833	200	83	Assume visit family once per year
Total				155	

9. PROVISION FOR UNEXPECTED EVENTS TO ENSURE SUSTAINABILITY

Unforeseen or unexpected events are one of the major reasons for millions being in chronic poverty according to the Chronic Poverty Research Centre (2009). In Ethiopia, increases in food price are reported to be the dominant shock effecting workers, followed by illness of family members (Headey et al 2012; World Bank 2015). Near-poor families easily descend into poverty due to these or other shocks as they lack coping mechanisms such as insurance or social security. These families rely heavily on borrowing, selling assets, using personal savings, and social ties (Ibid;). For example, during fieldwork, workers reported that increases in food price are not just a 'shock' any longer, but a day to day struggle. During the last weeks of the month, food intake decreases both in quantity and quality. In addition to burdensome food costs, workers described to me the pressure of an

Fund for sustainability per month for a family of five (two adults and three children)
= Birr 203 or US$ 10 per month

endless debt cycle as they are forced to shop on credit from nearby kiosks and to then pay the kiosks once they obtain funds, with interest.

Therefore if one wants to alleviate or prevent poverty, it is critical to assure that households can have some discretionary income for emergencies. Given the situation in Ethiopia, a conservative margin of 5% is applied, as has been used in the Anker Methodology in other countries.

SECTION II

LIVING WAGE FOR WORKERS

10. FAMILY SIZE NEEDING TO BE SUPPORTED BY LIVING WAGE

To determine an appropriate family size for a living wage for the Ziway area, we used data from national statistical sources (CSA and ICF 2012; MOFED 2013). We estimated possible reference family size in two different ways to help determine this. First, we estimated average household size for households with 2+ persons (since single person households definitely do not include children) for the Ziway area. This was around 5 persons. Second, we looked at the typical number of children born per woman (total fertility rate) and reduced this by typical child mortality (under 5 mortality rate) to get an estimate of the number of surviving children per woman. The average of this mortality adjusted total fertility rate for rural areas and urban areas was 3.34, which implied a family size of around 5.3 (i.e. 2 adults plus 3.3 children). We used an average of values for rural areas and urban areas because workers in the Ziway area generally come from rural areas with relatively higher fertility but they are now living in an urban area where fertility rates are lower. These two ways of looking at family size both imply that an appropriate family size for a living wage is around 5.

11. NUMBER OF FULL-TIME WORKERS IN FAMILY PROVIDING SUPPORT

When calculating the number of full time workers in a family, this study focuses on empirical facts and refrains from the conventional assumption of other methods used to estimate living wage. Many studies tend to pursue the traditional view of a single 'bread winner' or take two full-time workers in a family (Anker 2011). However, Anker and Anker (2017) suggest a technique that takes into consideration the reality on the ground.

Number of full time workers in a family = 1.653

Global data show that the labor force participation rate (LFPR) of youth (age of 15-24) is lower (48.5%) than the rate of adults aged 25 and above, which is 68.8%. Inclusion of youth and adults above 60 years of age in a count of workers per family can lead to underestimation of LFPR, as many youth are in school, and hence may not have joined the labor market, while older adults have often already left the labor market due to retirement. Therefore this study uses LFPR of the prime working age (i.e. 25-59) as more appropriate to estimate the number of full-time equivalent workers per couple.

We estimated the number of full-time workers per couple by using rates for the urban Oromia region for ages 25-59 to the extent this was possible. LFPR was 0.87 and unemployment rate

was 0.10.[24] For part-time employment we used the national urban part-time employment rate of 0.33,[25] since age disaggregated data were not available for Oromia region. Using these values indicated that persons 25-59 have 0.653 of full-time work on average. This implies 1.653 full-time workers per couple after assuming that one person in our reference family is a full-time worker on a farm such as a flower farm.[26] This estimation of 1.653 full-time workers per couple was used to calculate the living wage of Ziway.

12. TAKE HOME PAY – ACCOUNTING FOR MANDATORY DEDUCTIONS AND TAXES

Employees in Ethiopia have to pay mandatory tax and pension deductions in accordance with labor and pension proclamations. Employees who earn above Birr 150 per month are subject to pay tax at progressive rates starting at 10% and increasing to a maximum of 35%[27] with some deductions allowed. The pension fund is administered by the state, and both the employee (5-7%) and employer (7-11%) must make contributions. These deductions for income tax and pension fund contributions are taken into consideration when calculating gross living wage to ensure sufficient take home pay for the net living wage.

[24] According to the report of MOLSA (2013), female unemployment rate in Ethiopia is generally higher than for males in four different years (1994, 1999, 2005 and 2007). Unemployment rates were much higher in urban areas than rural areas. The difference was the same in 2013, when the national unemployment rates of males and females were recorded at 2.7 and 6.5 respectively. In urban areas, the rate was 10.5 for males and 23 for females, while in rural areas the unemployment rate was 1.1 for males and 2.9 for females.

[25] There is no agreed or official definition for part-time employment in Ethiopia, so we estimated the part-time employment rate by taking 30 working hours as a cut-off, which gives a part-time employment rate of 0.41. In Ethiopia, formal jobs are almost always full-time and informal jobs are often determined by the labor market or by individuals themselves. Note that, according to the labor laws of Ethiopia, the maximum number of working hours per week is 48 hours but the average number of working hours of a workers age 25-59 for urban and rural areas stands at 40 and 32 hours respectively (CSA 2014). 30 hours per week seemed like a reasonable cut-off for estimating part-time rate.

[26] An alternative – and very similar – estimate of full-time workers in the reference family is found using data from the average of rural and urban values from the labor force survey of 2013 (CSA 2014) which provides disaggregated data (by age and sex) for rural and urban areas. This study indicated that the average of values for rural and urban areas was: (i) LFPR (0.88); (ii) unemployment rate (0.09); and (iii) part-time employment rate (0.41). When used in our formula, they indicate 1.637 full-time workers per couple.

[27]

Wage range(Birr)	Tax rate	deductions (Birr)
<=150	0	0
151-650	10%	15
651-1400	15%	47.50
1401-2350	20%	117.50
2351-3550	25%	235
3551-5000	30%	412.50
>5000	35%	662.50

Workers who maintain membership in a labor union must also pay 1% of their salary as a membership fee to the union. This deduction is not considered here as it is not mandatory and is contributed on a voluntary basis.

SECTION III

ESTIMATING GAPS BETWEEN LIVING WAGE AND PREVAILING WAGES

13. PREVAILING WAGES IN INDUSTRY OF FOCUS AND OTHER INDICATORS

This study provides a general description about the experience of wage setting in the industry and presents wage levels of flower farms as documented in the available body of literature. Wage levels of one large farm are presented in order to draw comparison with the estimated living wage.

In Ethiopia there is no statutory minimum wage, but it is intended that in the face of this absent policy, wages should be negotiated between the worker and employer. The researcher's previous experiences in the industry revealed that wages are not part of collective bargaining agreements (CBA). Overall, CBA's tend to have the same structure with a few firm specific differences. The content in general focuses on reinforcing the labor law and pension proclamation[28].

This absence of wages in industry CBAs is partly due to a limited capacity of workers to negotiate their own terms of employment. Union leaders in Ethiopia that represent flower farms are largely dependent on the ability of the national federation to train them on negotiation and building a CBA agreement. The federation itself also struggles to exert the necessary strength to negotiate wages, creating a scenario by which workers are not able to successfully negotiate a salary as part of the common CBA. Adding to this difficulty is the political sphere, as national politics often exert influence on the union movement. Consequently, in setting wages, many flower farms appear to make a reference to a minimum wage that is applicable to a certain segment of public servants: around Birr 600 (US$29) per month. This salary scale is new (from July 2014), as the government was forced to increase wages to curb the enormous pressure caused by on-going inflation. Despite a significant increase (46%), the government admitted that the raise is not believed to be sufficient for still rising living costs. The Ethiopian Government promised to minimize the gap through subsidized provisions[29].

[28] Ethiopia has ratified 22 ILO conventions including all of the eight fundamental ones. The labor law of Ethiopia has considerable overlap with labor standards of the ILO. Some of these shared areas are: paid leave (annual, maternity, sick, emergency), and medical coverage for work related accidents. Apart from that, the law details conditions under which temporary contracts are permitted and how a worker who has undertaken the same job for more than 45 days or been rehired for the same function must be classified. The law treats a worker in this case as a permanent employee, entitled to job benefits, severance pay, and a pension contribution by the employer and employee as required in the pension proclamation. Furthermore the law regulates working hours, overtime, and associated payments, which almost all farms claim to as a basis for remuneration.

[29] http://ethiopiavid.com/ethiopia-government-announces-33-46-salary-increment-civil-servants/ or http://www.2merkato.com/news/alerts/3167-ethiopia-government-announced-civil-servants-salary-adjustment

With regard to wage levels in the flower farm industry, the initial basic wage in most flower farms has been between Birr 400 and 600 (Melese 2014; Bardout 2012; Hanan 2011). Another study with larger samples showed that in 2013 the average monthly wage at flower farms was Birr 760 (Schaefer and Abebe 2015). This suggests that the average wage in the industry is close to the average wage of the overall agriculture sector in Ethiopia reported at Birr 697 per month (CSA 2014). However, these estimates may not necessarily incorporate the value of in-kind benefits.

Like in many flower farms, wages in flower farm-X differ depending on the number of years of employment with the farm. According to flower farm X's HR representatives, the wage scale for production workers is fixed, and so are the in-kind benefits and allowances. The only variation in wage occurs due to the number of years that a worker has been in service to the farm.

Table 5. Monthly wages of production workers at flower farm-X

Year of beginning employment	Basic wage plus cash allowances and in-kind benefits of production workers (1)= (2)+(3)+(4)	Basic wage of production workers (2)	Cash allowance (CA) (3)	In-kind (cash value) (4)
2006	1,233	841	207	185
2009	1,163	777	201	185
2012	1,103	723	195	185
2014	1,058	682	191	185

Notes: in-kind benefit (Birr 185) is for health, education and meals. Cash allowances include transport (Birr 90), holiday bonus (Birr 33) and attendance bonus (10% of basic wage).

13.1 Basic wage, cash allowances and bonuses, and overtime pay

In the sample flower farm visited, all workers receive several cash allowances. They are provided a cash allowance of Birr 90 per month for transport. Workers also receive a holiday bonus four times a year of Birr 100 (which works out to be Birr 33 per month on a prorated basis). There is also an attendance bonus for all, amounting to 10% of the wage, but one can lose this bonus if she/he is absent twice a month without permission. Nonetheless, it is reported that around 95% of workers receive the monthly attendance bonus.
Productivity bonuses (piece rate) are provided for certain types of workers such as pack house workers who constitute only around 30% of total farm workers in this case. Green house

workers that constitute about 60% of the labor force are not entitled to productivity bonuses. As such, productivity bonuses are excluded from our analysis.

13.2 In-kind benefits as partial payment of living wage

Many companies such as flower farms, provide in-kind benefits to workers. However, not all those provisions can be considered as partial payment of living wage for several reasons, as discussed in Anker and Anker (2017). Appropriateness and fairness of those provisions have to be reviewed carefully before considering them as partial payment of living wage. For example, one of the conditions could be whether the majority of workers enjoy those benefits and allowances. In this regard, the following in-kind benefits are considered as part of living wage payment:

- Health: Birr 65 per month in-kind benefit (for a worker and her/his family)[30]
- Education: Birr 37 per month in-kind benefit[31]
- Meal: Birr 83 per month in-kind benefit[32]

It is important to discuss the typical in-kind benefits provided by farm-X in the broader context of the farm's activities related to corporate social responsibility (CSR), which not only constitutes benefits to workers, but also to the community of Ziway as discussed below and indicated in Annex 2.

13.2.1 Farm school and hospital

According to information obtained from farm X and as confirmed on our field visit, farm X established a school and hospital around 2005 immediately upon its arrival to Ziway. Those service centers are relatively high quality and saw an ongoing expansion in each subsequent year. The school, which started as kindergarten (KG) with 200 children, now reaches high school level with a total of 4,500 students. Farm X reported that the school provides the necessary education materials (stationary and text books) free of charge to all students. Furthermore, KG

[30] This is estimated by using reported medical cost of the facility according to company x of Birr 8,598,507 in 2015. So the calculation for monthly health cost is: Total annual cost (Birr 8,598,507) divided by total number of workers (11,000) divided by 12 months (8,598,507.04÷11,000= 782. Then 782÷12=65.14). Note that this overestimates the cost of medical care per worker because this facility also provides medical care for the entire Ziway community.

[31] Farm x said that 80% of children of workers attend their free school. If we assume that school for three children costs Birr 46.5 (as estimated in the education post check), then the replacement cost of the in-kind benefit of free education would be Birr 37 (46.5 ×0.8). This is undoubtedly an overestimate, because many workers are migrants whose children live away from them in their home village.

[32] Provision of lunch for children is for some grades. We multiplied the model diet food cost per person per day (Birr 13.24) by 0.4 assuming that the lunch is 40% of food costs per day. Since children typically require around 70% of the number of calories of the average person in the family, these assumptions indicate that the replacement value of a school meal for children is Birr 3.71 (i.e. 13.24 × 0.4 × 0.7 = 3.71). If there are 180 school days in the year, this means that the replacement value per month of school meals is Birr 55.6. If we further assume that half the children of workers receive a free lunch at school, this results in a monthly replacement value of Birr 83.

level and children age 4-10 are provided with a nutritious lunch. The farm reported that 50% of the total students (i.e. 2250) are children of workers in the farm while the other half is from the community. It is also reported by farm X that around 80% of workers' children benefit from the education service. Unfortunately, this study did not take a statistically representative sample to verify this claim, but during interviews with workers (around 30) difficulty in accessing the service was reported due to limited availability of space at the school.[33] The farm X school was considered to be an in-kind benefit worth Birr 37 per month.[34].Health care was considered as an in-kind benefit. The Hospital provided by the farm is the principal provider of health care to workers. It is reported to be the only fully-fledged hospital within a 100km radius of the area. It provides treatments and emergency care including major and minor surgery that are not available in any other private hospital or clinic within the area. The hospital provides service to the surrounding community at subsidized prices. However, workers have free access to the services without limit on cost. In addition, a worker can get (if deemed necessary) referral service to other hospitals in Addis Ababa to get further treatment with full costs covered by the farm. The farm reported that the families of the workers also have free health care services provided at the hospital, though this could not be confirmed during fieldwork. Although Fairtrade premium was financing much of the current costs of healthcare, it was felt that this benefit should be included as an in-kind benefit because so much of the infrastructure had been paid for by the farm in previous years – but this is somewhat controversial. The study relied on the data provided by the farm to estimate health care in-kind benefits.

13.2.2 CSR community related activities

Annex 2 includes excerpts from Fairtrade auditor reports concerning the CSR efforts of farm X.

14. LIVING WAGE IN CONTEXT AND COMPARED TO OTHER WAGES

14.1 Living Wage in Context

This section sets the estimated living wage and the prevailing wages in context by comparing them with national and international economic benchmarks such as poverty line wages and food poverty line wages.

[33] As the school is considered to be of high quality in the area, it is quite packed all the time and once enrolled no one seems to leave the school. Once accepted, children can continue in the school regardless of whether their parents continue to be employed by the farm. According to workers, children age four have a better chance to enroll in the school than older children due to limited space. Older children have to apply in a lottery system to get admission. This means that workers who take up employment that have children older than four have a difficult time obtaining admission of their children to the farm's school.

[34] Note that for many years the farm has been financing its hospital as well as its school alone. However recently, it also used Fairtrade premium money to provide these services. For example, for the past six months (January-June 2015), 42% of education and 94% of health care services were financed by the Fairtrade premium. Note that in the Anker methodology, benefits paid for by Fairtrade premiums are usually not considered as in-kind benefits, since the company does not provide them.

According to the government of Ethiopia, the national food and poverty lines for 2010/11 are determined to be respectively Birr 1,985 and Birr 3,781 per year per person (MOFED 2013). This amount was updated for inflation by using annual average rate for the year 2012-2014 and using average rate of for seven months (January to July)[35] for 2015. The result shows that the food poverty line stood at Birr 3,241 per person per year while the poverty line reached Birr 5,923. When these poverty lines are converted to wages for a family size of five with 1.653 workers, they become per month Birr 817 and Birr 1,493 respectively.

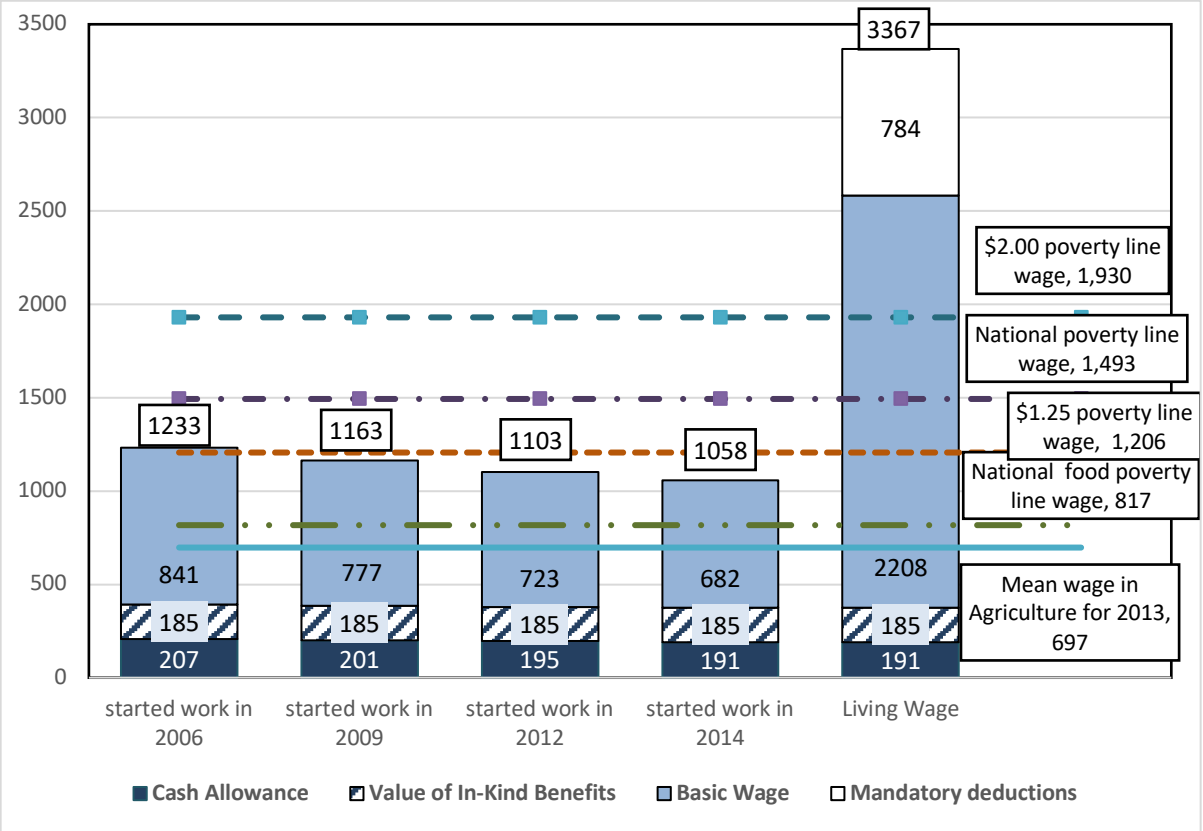
The World Bank poverty lines of $1.25PPP and $2PPP a day are used as international benchmarks[36]. Using a family size of five with 1.653 full-time workers, the international poverty line wage is estimated to be Birr 1,206 for $1.25 PPP and Birr 1,930 for $2PPP.

The estimated living wage is clearly much higher than the other wage comparators. Part of the reason for this is the large amount of mandatory taxes workers in Ethiopia must pay. These mandatory deductions are not taken into consideration in other wages included in the wage ladder. Another important reason why the estimated living wage is much higher is that it is based on living costs for an urban area while there are no separate rural and urban estimates of the national poverty line for Ethiopia or the international poverty lines. Evidence presented in this paper indicates that it is not that the estimated living wage is too high, but that prevailing wages on flower farms as well as other wage comparators are appallingly low. Many flower farm workers live in mud and stick houses and run out of money to pay for food before the end of month. This poverty is evident in the fact that 40% of children less than age five in Ethiopia were stunted in 2014. It is important to note that for most workers, prevailing wages are even lower than the international extreme poverty line and our net living wage is only 60 US cents per hour.

[35] The data were obtained from the website of the World Bank and the Central Statistics Agency (CSA) of Ethiopia. Last accessed on September 17, 2015.

[36] As of October 2015, the World Bank revised its poverty lines of $1.25PPP and $2PPP a day in 2005 PPP to $1.90PPP and $3.10PPP a day in 2011 PPP respectively. The old poverty lines are used here, because the primary data for this study were collected just before these revisions. The new and old World Bank poverty lines are fairly similar in Birr. The new World Bank poverty line wages for July 2015 would have been Birr 1,376 and Birr 2,245.

14.2 Wage ladder



Notes: All values are in Birr. The mandatory deduction on living wage should be taken only as indicative. The exact amount could be a little bit higher or lower than Birr 784, which is the amount used in this calculation.

15. CONCLUSIONS

This paper has estimated living wages for the Ziway area in Ethiopia, with particular focus on workers of flower farms. The study applied the Anker methodology, which is ground breaking work that has been developed based on rigorous research and extensive empirical work.

To do the estimation, primary data on local living costs were collected in Ziway where there is a cluster of flower farms. In addition to the collection of primary data (on local food prices, food preferences, housing costs, education costs, health care costs, transportation costs as well as on prevailing wages and in-kind benefits), extensive review of literature and secondary data have been done in order to make as accurate a living wage estimate as possible. This study has often used the average of urban and rural third quintile for secondary data to avoid reproducing the living standard of the poorest households (also, to minimize the biases of rural

areas and big cities as Ziway is neither rural nor a big city). Based on that secondary analysis, the living wage estimate was done for a family size of five, with 1.653 full-time workers per couple.

As discussed throughout this report, this study made an effort to keep the living wage estimate as conservative as possible but without compromising basic decency as declared by universal human rights and reinforced by many voluntary standards. Yet, the estimated living wage is none-the-less much higher than the prevailing wages.

The gross living wage is estimated to be Birr 3,367 per month taking into consideration taxes and other mandatory deductions from pay and Birr 2,584 per month is the take home pay needed for decency. These net living wages are only US $125 per month, US $4.8 per day, and US $0.60 per hour. The detailed calculation of each component of living wage is presented in table 6 below. One important reason why our living wage estimates are this high, is that workers of the flower farm must live in urban areas that are relatively expensive. This is necessitated by the locations of flower farms themselves.

This Anker Methodology gross living wage estimate is 2.5-3.0 times higher than the prevailing wages paid by flower farms, which are estimated to be between Birr 1,058 and Birr 1,233 ($51 and $60) per month including common cash allowances and values for in-kind benefits. Prevailing wages on flower farms are similar to the World Bank extreme poverty line wage and less than our estimate of the cost of a basic model diet that meets minimum international nutritional requirements, despite this diet including injera made with only 40% teff. Our model diet also consists of only 1 egg every week, 1 meat meal or fish per week (fish is taken as it is much cheaper alternative than other meat), and 1/8 cup of milk per day for adults to add to coffee, which is the national drink of Ethiopia. The research found that many workers live in houses made of mud and sticks and many workers indicated that they often run out of money for food after 2 ½ to 3 weeks into the month and so often have to borrow to be able to afford food before their next pay check. In order to explain part of this, one needs to understand the context of Ethiopia with regard to inflation, wage trend and wage settings. Ethiopia is one of the poorest countries in the world, standing at 173rd out of 187 countries according to the Human Development Index of 2012. However, in the past decade, the country claimed continuous growth in GDP along with a large inflow of foreign direct investment. This is particularly evident in the flower industry where an extraordinary boom was recorded that made the country, in less than two decades, the second largest exporter of flowers to the EU market. The industry has been praised for generating large employment (over 50,000 jobs) and much needed foreign exchange in this poverty struck country. Nevertheless, despite the GDP growth and the large employment of flower farms, workers are not enjoying reasonable wages, let alone a living wage, partly due to persistent inflation in the country. As inflation is mainly driven by food price increases, poorer people, such as low skill wage workers, are among the hardest hit.

To some extent, low wages in flower farms can be attributed to the poor capacity of workers to negotiate for better pay, the presence of unions that lack the power to operate effectively, and the absence of a statutory minimum wage, coupled with a lack of political will to empower workers and to create vibrant unions. As a result, the prevailing high power imbalance constrains workers from engaging in real bargaining with their employer, especially given that average wage in agriculture is only Birr 667 ($32).

Our estimated gross living wages (Birr 3,367) is much higher than the national as well as the international poverty line wages. Our gross living wage is 2.3 times higher than the national poverty line wage (Birr 1,493); 2.8 times higher than the extreme poverty line wage of the World Bank (Birr 1,206); and 1.7 times higher than the World Bank poverty line wage (Birr 1,930).

Despite the commendable CSR activities of the flower farm we visited towards the wider community and to the workers (see Annex 2), the prevailing wage is too low to enable workers and their families to live anywhere near a basic but decent life. Without a significant increase in wages, there is no way for most flower farm workers to escape from the poverty trap. There is an obvious need to raise wages – keeping in mind that payment of a living wage may not be possible for some time given the concurrent need to protect the viability of the flower farm industry in Ethiopia and the essential employment it creates - the current very low wages and very poor living conditions of flower farm workers are much too low to be considered acceptable. The entire flower value chain needs to get involved in improving wages.

Table 6. Calculation of living wage for rural Ethiopia, July 2015

Expenses and living wage (exchange rate US $1 = 20.679 Birr as of August 2015)	Birr	USD	Remark
PART I. FAMILY EXPENSES			
Food cost per month for reference family (1)	2,014	97	Less expensive foods used based on local market survey
Food cost per person per day	13.24	0.64	
Housing cost per month (2)	1,077	52	Around 32m^2, basic but decent
Rent per month	940	45	
Utilities per month	137	7	
Non-food non-housing cost per month (3)	978	47	See the text for steps followed
Preliminary NFNH	869	42	

Health care post check	0	0	
Education post check	30	1.5	
Transportation Post Check	79	4	
Emergencies and unforeseen events per month (4)	203	10	
Total household costs per month for basic but decent living standard for family of 5 (5) [5=1+2+3+4]	4,272	207	
PART II. LIVING WAGE PER MONTH			
Net living wage per month, net take home pay (6) [6=5/1.653 full time workers per family]	2,584	125	
Income tax (7a)	561	27	Mandatory deductions are approximate.
Pension Deductions (7b)	223	11	
Gross living wage per month (8) [8=6+7] (1.653 full time workers per family)	3,367	163	
PART III: CASH (BASIC) LIVING WAGE IN INDUSTRY CONSIDERING VALUE OF TYPICAL IN-KIND BENEFITS, CASH ALLOWANCES, AND BONUSES IN FLOWER FARMS			
Value of common in-kind benefits (9A)	185	9	Approximate values
Value of common cash allowances (9B)	199	10	Varies slightly by seniority
Net cash basic living wage assuming workers receive typical in-kind benefits and cash allowances (10=6-9A-9B)	2,200	106	
Gross cash basic living wage assuming workers receive typical in-kind benefits and cash allowances (11=8-9A-9B)	2,984	144	

Table 7. Key values and assumptions for a living wage estimate

KEY VALUES AND ASSUMPTIONS	Comments
Location (& industry if relevant)	Non-Metropolitan Urban Ethiopia with Focus on the Ziway Flower Farm Cluster
Exchange rate of local currency to USD	US $1 = 20.679 Birr (as of August 2015)
Number of hours in normal workweek	48 hours

KEY VALUES AND ASSUMPTIONS	Comments
Number of workers per couple	1.653
Reference family size	5
Number of children in reference family	3
Preliminary ratio of Non-Food Non Housing to Food Costs	0.43

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ANNEXES

ANNEX 1. COMPARISON OF LIVING WAGE MODEL DIET WITH OTHER DIETS IN ETHIOPIA

Table AI. Comparison of the model diet with other diets in Ethiopia (in edible grams per person per day)

Food group	FAO food balance sheet	National poverty line	Urban poverty line	Model diet used to estimate living wage in Ziway
Cereals	421	470	431	446
Bread	0	18	0	0
Roots/tubers	170	270	37	200
Pulses	44	51	114	40
Milk	124	10	40	132
Chicken eggs	1	10	10	7
Meat/Fish	24	4	0	12
Vegetables	38	111	54	189
Fruits	14	3	60	63
Palm oil	9	3	9	14
White sugar	18	12	27	12
Coffee	2	14	10	3
Other	48	0	0	0
Calories total	2279	2279	2279	2279
% of calories from protein	10.57%	10.34%	14.02%	11.03%
Daily Cost (Birr)	13.64	9.97	11.28	11.54

Notes: For the purpose of comparability, the total calories of each diet in table are adjusted so they have the calories required for a family of five (two adults and three children) which is 2279 calories per person. Some of the diets contain several food items in each food group (e.g. the FAO food balance sheet diet and urban poverty diet) but the national poverty line diet includes only food groups but not specific food items. So to compare my living wage model diet to the two poverty line diets, I used the least expensive food item for each food group for the poverty line diets except for the cereal group. For the urban poverty line diet, teff accounted for 48% of cereals, and maize (the least expensive cereal) accounted for only 20% of the total cereal group. Other cereals accounted for the rest. For the urban poverty line diet in this table, I did not change the share of teff, but used maize (the least expensive cereal) to represent all other cereals. As a result, despite the absence of meat or fish in the urban poverty diet, the share of calories from protein is higher than other diets (14%). Partly due to the influence of teff, which is exceptionally rich in proteins and other micronutrients as compared to other cereals (Demeke and Di Marcantonio 2013), the model diet used to estimate my living wage appears to have a bit higher protein for the

development level of Ethiopia. Otherwise, my living wage model diet kept the share of proteins from animal products to a minimum.

ANNEX 2. CSR EFFORTS OF FARM X ACCORDING TO FAIRTRADE AUDITORS' REPORT (AUGUST, 2015)

The following are excerpts from a report of Fairtrade auditors: Note that in this living wage report values for the education and health care provided by company X to workers and their families are included in the estimate of prevailing wage on flower farms.

Farm X has put in place a number of Corporate Social Responsibility (CSR) measures. These include:

"A very impressive school catering for free education for approximately 3,000 children drawn from the workers and the surrounding community. The school has a work force of 162 staffs, which include well trained and qualified teachers."

"A state of the art modern hospital providing free medical services to all the workers and subsidized rates to the community. The hospital has a worker force of 143 staffs comprising of 7 doctors (including one surgeon and one gynaecologist), 4 clinical officers, 32 nurses, 1 dentist, 1 physiotherapist,1 radiologist, 2 radiographers, 2 anaesthetists, 2 laboratory technologists, 7 laboratory technicians, 1 pharmacist and 6 druggists . The hospital offers free medical services to (farm X) workers."

"Modern a stadium and a football team fully sponsored by the company."

As part of community support activities, Farm X has:

"Built a modern 'court house' and a police post for the regional government in Ziway"

"Donated ETB 25million towards the Blue Nile dam government project"

"Donated and assisted in upgrading the supply of drinking water system to Ziway town and its environs."

"Recreation club accessible to the "(farm X) family" (i.e. the Directors, management and employees of (farm X) Ethiopia)"

"Support to the less fortunate in the society. "

"Support to the orphaned Children in Blen farm."

"Quality, free feeding program for the children under 10 years in farm X school"

"Free medical service at (farm X) hospital for malnourished children, HIV and TB patients"
"Free service at (farm X) hospital for both antenatal and postnatal care."

ANNEX 3. ETHIOPIA LIVING WAGE BENCHMARK UPDATE TO JULY 2016

The net living wage (i.e. required take home pay for decency) for Ziway, Ethiopia (a non-metropolitan urban area) was Birr 2,584 ($125) for July 2015. The gross living wage (i.e. pay required for decency) for July 2015, that takes into consideration mandatory deductions from pay (pension) and income tax, was Birr 3,367 ($163).[37]

To update the net living wage to July 2016, we increased our net living wage for July 2015 by the national inflation rate between July 2015 and July 2016 (5.95 %) so that the net living wage would retain its purchasing power. This resulted in a net living wage for July 2016 of Birr 2,738 ($124). The reason why the dollar value of the net living wage was virtually unchanged between 2015 and 2016 ($124 in 2015 compared to $125 in 2016) is because the Birr to US dollar exchange rate fell more than the inflation increased during this period.

To update the gross living wage to July 2016, we took into consideration inflation since July 2015 and the new tax rate schedule.[38] This resulted in a gross living wage for July 2016 of Birr 3,272 ($148). This is less than the gross living wage for July 2015 (Birr 3,367 in 2015 compared to Birr 3,272 in 2016). The reason why the gross living wage in Birr was lower in July 2016 than in July 2015, despite inflation, is because of a change in the income tax rate schedule, which resulted in a big reduction in the amount of income tax that a worker earning a living wage would have to pay. The gross living wage in US dollars fell from $163 in 2015 to $148 in 2016.

[37] Pension rate deduction was 7%. Income tax rates for July 2015 were as follows:

Wage range (Birr)	Tax rate	Deductions (Birr)
<=150	0	0
151-650	10%	15
651-1400	15%	47.50
1401-2350	20%	117.50
2351-3550	25%	235
3551-5000	30%	412.50
>5000	35%	662.50

[38] Pension rate deduction was 7%. Income tax rates for July 2016 were as follows:

Wage range(Birr)	Tax rate	Deductions (Birr)
0-600	0	0
601-1,650	10%	60
1,651-3,200	15%	142.50
3,201-5,250	20%	302.50
5,251-7,800	25%	565
7,801-10,900	30%	955
>10,900	35%	1,500