

Report

Living Wage for Rural Dominican Republic with Focus on Banana Growing Area of the North¹

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BACKGROUND

This paper estimates a living wage for rural Dominican Republic with a focus on the banana growing region in the Northern part of the country. It uses a new methodology developed by the authors that builds and improves on their earlier work on living wages published by ILO (see Anker, 2006 and Anker, 2011). This new methodology has been used so far to estimate a living wage for urban areas in 9 countries for a multi-national corporation as well as for rural areas of Western Cape Province South Africa for Fairtrade International (Fairtrade). The present report for Dominican Republic was supported by Fairtrade and Social Accountability (SAI) as part of their memorandum with GoodWeave. They were joined later by three other organizations and members of the ISEAL Network of standard setters (Forest Stewardship Council, Sustainable Agriculture Network/Rainforest Alliance, and UTZ Certified). In their common declaration for a “Shared Approach to Living Wage” these organizations have committed to “adopt a common definition of living wage and apply a common methodology to estimating living wage levels ... with long term goal and shared mission of these six organizations to see improvements in workers’ conditions, including wage levels, in the farms, factories and supply chains ... by seeking support from brands, buyers, and retailers to make wage growth possible at the primary production level possible and ... working together with the relevant stakeholders.”

LIVING WAGE ESTIMATE

Our estimate of a living wage for October 2013 is RD\$13,869 per month for rural Dominican Republic taking into consideration the mandatory 13th month bonus and social security tax. Our estimate is RD\$11,966 for cash wage required for a living wage when workers receive free decent transport to work as well as free breakfast 6 days per week and lunch 5 days a week, because these in-kind benefits reduce the need for cash income for a decent living standard for a worker and her/his family.

INTRODUCTION TO LIVING WAGE

The idea of a living wage is that workers and their family should not have to live in poverty. But a living wage should do more than simply keep workers and their families out of poverty. It should also allow them to participate in social and cultural life. In other words, wages should be sufficient to ensure that workers and their families are able to afford a decent basic life style considered acceptable by society at its current level of economic development. Workers should receive a living wage in normal work hours without having to work overtime. Living wage is defined as follows by Fairtrade International, Social Accountability International (SAI) and 4 other ISEAL members:

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

The idea of a living wage is not new. Nor is it a radical idea. Adam Smith (1776) wrote that “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 labour as to be themselves well fed, clothed and lodged.” Pope Leo XIII (1891) in a Papal encyclical stated that “Remuneration must be enough to support the wage earner in reasonable and frugal comfort. If through necessity, or fear of worse evil, the workman accepts harder conditions because an employer or contractor will give no better, he is the victim of fraud and injustice.” American President Franklin D. Roosevelt (1933) wrote that “Liberty requires opportunity to make a living – a living decent according to the standard of the time, a living which gives men not only enough to live on but something to live for.” International Labor Organization Constitution (1919) states that “peace and harmony in the world requires an adequate living wage”, and United Nations’ Universal Declaration of Human Rights (1948) states that “everyone who works has the right to just and favorable remuneration ensuring for himself and his family an existence worthy of human dignity.” See Anker (2011) for how other organizations, international organizations, NGOs, governments and others describe living wage.

HOW LIVING WAGE WAS ESTIMATED FOR RURAL DOMINICAN REPUBLIC

The flow chart at end of this report indicates how a living wage was estimated for rural Dominican Republic. We started by estimating cost of a basic but decent living standard for rural Dominican Republic (first left hand box). This was done by summing up separate estimates of the cost for a low cost nutritious diet, basic acceptable decent housing, and all other needs at a decent level (first three right hand boxes). A small margin above this total cost of a basic but decent life style was then added to help provide for unforeseen events such as illnesses and accidents to help ensure that common unforeseen events do not easily throw workers into poverty. This new total cost of a basic but decent quality life, that up to now was mostly expressed in per capita terms, was then scaled up to arrive at cost for a typical family size in the area and defrayed over a typical number of full-time equivalent workers per household in the area.

It is important to point out that considerable thought and effort was put into making our living wage estimate. This included visits to workers’ houses; visits to markets where workers shop for food; discussions with farm workers, small farm owners, cooperative officials and plantation managers and owners; discussions with various key informants such as municipal officials, trade union members, university professors, architects and others. This also included many papers, reports and statistics from researchers, government and international agencies.

Special tabulations of 2007 income and expenditure data for rural Dominican Republic by Professor Joel Arboleda were valuable. The end result of this effort is we believe a solid and believable estimate of a living wage for rural Dominican Republic. It is hoped that this report will contribute to ongoing stakeholder dialogue and stakeholder and Fairtrade dialogue. A bibliography and a list of key informants are included at the end of this report.

HAITIAN WORKERS AND LIVING WAGE

A majority of workers on banana and sugar plantations/farms in Dominican Republic are from Haiti. Indeed, Haitians workers dominate in these sectors (Ergon, 2012; Max Havelaar, 2009) although percentage of Haitian workers varies by plantation and farm. The importance of Haitian workers raises important issues as regards estimation of a living wage for rural Dominican Republic and banana and sugar sectors.

Haitian workers do not often bring their family to Dominican Republic because they are not allowed to. For this reason, they typically send a substantial proportion of their wages to Haiti to support family members back in Haiti. This means that most Haitian migrants are very concerned with living costs and living conditions in Haiti. Given this situation, it might seem logical to estimate a living wage for rural Dominican Republic and banana and sugar sectors partly based on living costs and living standards in Haiti. We do not feel that this would be correct as explained below. We feel that a living wage for Dominican Republic should be based on living costs and living standards required for decency in the Dominican Republic.

First of all, there has to be one living wage for all workers in rural Dominican Republic. There cannot be one living wage for Dominican workers (who would support a family in Dominican Republic based on Dominican standards and costs) and another living wage for Haitian workers (who would support a family in Haiti based on Haitian costs and standards). Separate living wages for Dominicans and Haitians might lead to discrimination based on ethnicity - - and in the end might lead to a race to the bottom toward the lower living wage. Secondly, we feel that all workers in Dominican Republic (regardless of whether they are Haitian or Dominican) should be able to afford a living standard considered decent for the Dominican Republic. Estimating a living wage based mainly on standards considered acceptable in Haiti - - that are probably lower than in Dominican Republic because Haiti is much poorer - - would probably mean that Dominican workers would be not be able to earn what constitutes a living wage in their own country.

The decision to base a living wage for rural Dominican Republic exclusively on Dominican Republic conditions and costs is generalizable to other countries, and would mean that it would not be appropriate for a living wage for agriculture in any county (say United States for example) to be based on living standards and living costs in another country (say Mexico in this example). This has worldwide implications for standard setting organizations, because many countries have immigrant workers in agriculture.

LIVING WAGE AND SMALL HOLDER FARMERS IN BANANA SECTOR

Living wage is relevant for hired labor and is intended to help ensure that full-time employees are not among the working poor and can afford a decent living standard. The living wage concept is not directly relevant to small farm holders, as they are not hired labor. However small farm holders are an important and sizable group, as there are an estimated 1,200 small banana farms in the Dominican Republic (Ergon, 2012) compared to the 2,005 hired workers on the 15 Fairtrade banana plantations in Dominican Republic in September 2013.

It is widely believed that many small farmers are not well off. According to Marike de Pena Executive Director of Banelino (large small farmer association), small farmer owners earn around Euro100 per month which is equivalent to around RD\$5,700 per month (Arte le monde television, 2013). Although this is an only a rough estimate from one informed person, it does illustrate that banana farm owners in Dominican Republic often have low incomes.

Although the living wage concept is not relevant for small farm owners because they do not receive a wage, what is relevant for small farmer owners is what some refer to as a “living income”. That is, small farmers need to receive enough income from sales to be able to afford the same decent living standard used to estimate a living wage. Since farm production involves many expenses, this means that small farmer owners need to have sufficient income from sales to cover operating expenses as well as to allow for a decent living standard for their family. It is also appropriate to take into consideration the value of a farm’s land and equipment when they are owned. In addition, it is important to keep in mind that farm income increases with farm size *ceteris paribus* and banana price per box. All of this means that estimating the sales required by small farmers to ensure that they achieve a living income is very complicated. This becomes even more difficult to estimate in Dominican Republic because most small farmers do not keep good records of costs. For the above reasons, this report estimates a living wage and not a living income. How to estimate a living income deserves serious thought and further work in the future. This could include working with small holders, cooperatives, experts, and the value chain on ways to estimate the living income required, document gaps with current income, and develop ways to achieve a living income such as increasing productivity of small farms and increasing prices small holders receive for their produce.

That this report focusses on estimation of a living wage should not be taken to imply in any sense that the need of small holders to earn a living income is unimportant or that it is not of concern for this report, quite the contrary. It is important that small holders also receive a living income. At the same time, it is important to keep in mind that there may be a farm size below which a living income might not be realistic and that the definition of small farms varies by country and crop.²

² Small holder is defined as less than 2 hectares according to World Bank (World Bank, 2003).

FOOD COST

Food costs were estimated to be RD\$81.26 per person per day for a family of 2 adults and 2 children. This was estimated using a model diet and local food prices.

MODEL DIET USED

The model diet used to estimate food cost meets World Health Organization standards for nutritional needs for calories, macro nutrients (10-15% of calories from proteins, 15-30% calories from fats, and 50-75% calories from carbohydrates) and micro nutrients. It is also consistent with Dominican Republic food preferences. The model diet contains 2307 calories based on the assumption that a banana or sugar worker engages in heavy physical activity and other family members have moderate physical activity. This model diet is consistent with 5 other diets for Dominican Republic: government 2008 poverty line diet (ONE, 2012); Pan American Health Organization recommendations for food and nutrition (PAHO, 2011); World Bank 1992 poverty line diet (World Bank, 2001); Food and Agriculture Organization food availability data (FAO, 2013); and 2008 Worker Rights Consortium model diet (WRC, 2008).

Our model diet is shown in Table 1. It includes:

- lots of cereals and starches (approximately one-half pound of rice and 1 roll of bread per day)
- 1 piece of yucca per day
- 1 plantain per day
- 1 meat meal per day
- 4 eggs per week
- 1 cup of milk per day for children and ½ cup of milk per day for adults to add to coffee
- 1 fruit per day
- 175 grams of vegetables per day
- 7 teaspoons of sugar per day
- 3 tablespoons of cooking oil per day
- 2 cups of coffee for adults per day

This is a very basic diet for an upper middle income country such as Dominican Republic. For example, only 11% of calories come from proteins, and this is low for a middle income country such as the Dominican Republic (see Anker, 2006). At same time, it is worth noting that while quantities of vegetables, fruits and milk are somewhat on the lower side for a middle income country, they are considerably higher than quantities that workers in Dominican Republic now typically consume because of low wages. For example according to FAO food availability data, Dominicans purchase only 79 grams of vegetables per day on average.

FOOD PRICES

To estimate the cost of our model diet, we collected food prices from places where workers typically shop. In this way, we are able to help ensure that cost of our model diet would reflect the actual prices that workers pay for different food items. We visited 9 colmados (small neighborhood stores) in banana growing area in the North and talked to 2 street sellers and visited 1 supermarket and 1 open air fresh food market in a nearby city. In sugar growing area in the East, we visited 6 colmados and talked to one street seller in bateyes as well as visited 1 supermarket and 1 open air fresh food market in a nearby small city. All of these sites were places workers typically shop for food and were determined through interviews with workers.

Information on food prices were collected from each seller we visited for a range of foods that workers tend to buy for the different quantities and qualities available from the seller. For each shop visited, we determined the lowest price per pound for each type of food in our model diet. We then calculated the median of the lowest price observed in each shop or market for each food item. The idea behind these calculations was to mimic the way in which cost conscious workers typically shop who usually buy brands and qualities of foods that are relatively low in cost per pound, including promotions and seasonal foods.

Several aspects of how we estimated food prices are worth noting as they reduced food prices and therefore cost of our model diet. For example, we assumed that workers buy the least expensive rice available in a store. This was often criollo or broken rice even though Dominicans strongly prefer what is referred to as selecto rice that is generally around 10% more expensive. We assumed that workers would have sufficient income if they earned a living wage to be able to buy larger quantities of coffee, rice, cooking oil, powdered milk and coffee than they do at present. At present, workers typically buy small quantities in local colmados because of a lack of money. This is important, because price per pound for many items is relatively high when purchased in small quantities. For example, we found that Santo Domingo coffee costs around RD\$170 for a one pound bag compared to around RD\$240 per pound for the 125 gram packets typically available in local colmados.

We assumed that workers would no longer need to buy on credit if they earned a living wage. This is important, because almost all of the workers we spoke to in both the banana area in the North and the sugar area in the East bought from colmados because they provided credit. And colmados charge a very high fee for credit. In sugar bateyes, workers indicated that they typically pay 10% at the end of every one or two weeks for the credit that they received .

To allow for some variety for our model diet (as it would not be reasonable to expect that workers are always able to find and eat only the lowest cost foods every day), ten percent is added to the cost of our model diet. This 10% allows for some variety and flexibility so that workers can for example sometimes eat a larger portion of meat, or sometimes eat a more expensive meat, or sometimes eat pasta instead of rice, or sometimes eat more expensive fruits or vegetables, or sometimes eat a more expensive variety of rice. Also, 3 percent is added for minimal wastage and spoilage. And, 5 percent is added for salt, spices and condiments such as chicken or beef broth that is common in Dominican Republic. These are all conservative assumptions. Note that in keeping with the concept of a nutritious low cost diet, our model diet does not include soft drinks, candy or cakes.

Readers should be aware that food prices tend to be relatively high in island states compared to other countries probably because of the need to rely more heavily on imports (see Anker, 2011a). Dominican Republic does not appear to be an exception.

NEED TO PURCHASE BOTTLED DRINKING WATER IN DOMINICAN REPUBLIC

Water quality in Dominican Republic is very poor. According to World Bank (2006) for Dominican Republic, “water quality is now estimated below UNDP potable water standards”. Although “only” 35% of rural households drank bottled water according to 2007 DHS, this percentage has been increasing over time. Indeed, all of the workers we spoke to bought bottled drinking water in 5 gallon jugs from a local colmado or had it delivered.

According to Institute of Medicine of the National Academies (2004), a household of 4 persons (parents and 2 children) on average needs 2.1 liters of water per day (father needs 3.0 liters of water, mother needs 2.2 liters, and children need about 1.6 liters on average). These figures for adequate intake of water are based on data from the United States. But “there is no single daily total water requirement for a person” since “water need varies markedly depending primarily on physical activity and climate but also based on diet”. Since family members drink water away from home at work and at school, we reduced quantity of drinking water needing to be purchased for home consumption to 6 cups per day. This implied a need for 1440 ml of bottled water per person per day and so we included this quantity in our model diet.

HOUSING COSTS

Housing costs were estimated by summing cost of: (i) rent for a basic acceptable dwelling; and (ii) utility costs, other housing costs, and routine maintenance. Costs were determined by visiting houses of workers, speaking to workers about their housing conditions and costs, and speaking to local municipalities and architects about cost of constructing a new house. Of the 15 houses visited, 13 were in the banana growing area in the North of the country and 2 were in sugar bateyes in the East of the country.

We estimated that **basic acceptable housing in rural Dominican Republic is RD\$3,650 per month consisting of approximately RD\$2,000 for rent, RD\$700 for electricity, RD\$850 for LPG cooking fuel, RD\$50 for water, and a token RD\$50 for minor repairs/maintenance.** Cost of bottled drinking water (which almost everyone we spoke to purchases because of the poor quality of water in Dominican Republic) is taken into account in our estimate of food costs.

Before determining local housing costs, standards were set for basic acceptable housing for a family of 4 persons in rural Dominican Republic. This standard was based on: maximum number of persons per room to avoid being considered overcrowded housing according to UN-HABITAT (2007) and United Kingdom from 1930s; minimum number of square meters of living space used for government supported housing of low income families in India and for accommodation of workers on large farms in South Africa; and need for electricity, protection from

elements in terms of floor, walls and ceiling, water, and sanitary facilities that both meet what we feel are minimum decency standards for 21st century for a middle income country such as Dominican Republic as well as are consistent with current housing conditions in Dominican Republic.

Our housing standard is:

- non-slum building in reasonable condition;
- cement or tile floor in reasonable condition;
- cement walls or wood walls with cement base in Northern part of the country and cement walls in Eastern part of the island which is more exposed to hurricanes where wood walls cannot withstand a hurricane;
- durable roof of zinc or cement without leaks (or very easy to repair) that in the East would have to be especially well attached because of exposure to hurricanes;
- sufficient number of windows for adequate ventilation;
- electricity;
- piped water inside house or in close proximity to house;
- flush toilet inside house or improved ventilated pit latrine in good condition in close proximity to house.
- at least 3 rooms (living room, bedroom, kitchen)³
- at least 30 square meters of floor space.⁴

Data from Demographic and Health Survey (2007) for rural Dominican Republic confirm appropriateness of our standards for rural Dominican Republic. 90% of rural dwellings have electricity; 30% have an indoor private toilet while 45% have a private latrine; 73% have a private water tap (28% inside home and 45% outside home); 50% of rural houses have cement walls, 82% have zinc/corrugated iron roof, and 91% have cement or ceramic floor. Rural dwellings typically have around 3 rooms (mean of 3 rooms and median and mode of 3 rooms) with around 2 rooms used for sleeping (mean of 2.1 and median and mode of 2).

³ According to UN-HABITAT (2007) and United Kingdom government standard in force since 1930s, housing requires at least 2 potential sleeping rooms (e.g. at least one bedroom and 1 living room) for a 4 person household to avoid being considered as overcrowded.

⁴ Thirty square meters of living space is approximately the minimum acceptable living space for the Maharashtra Housing Development Association (MHDA) in India for government supported housing for low income families. This is also the standard on size in South African law for minimum acceptable housing for workers on large farms. Our feeling is that a standard on dwelling size for Dominican Republic should be at least as high as minimum standards for low income households in India and large farms in South Africa.

RENT FOR ACCEPTABLE HOUSING

To help determine housing costs in rural areas of Dominican Republic, such as for workers on banana and sugar farms/plantations, we spoke with many workers, collected detailed information on the homes of 20 workers and visited homes of 15 workers (13 in the Northern part of the country and 2 in the Eastern part of the country) who we thought were renting acceptable housing that met our housing standard. Information on these homes is indicated in Table 2.

The lowest rent we found for an acceptable house was RD\$1,500. Although we found two houses with this rent, there were extenuating circumstances that helped explain why rent for these houses was a bargain. In one case, the house was rented from the godmother of the worker's child and rent had not changed for 5 years. In the other case, rent had not changed for 4 years and we were told by the landlord's son that the rent was expected to be increased soon. The next least expensive acceptable house we visited rented for RD\$2,500 in Mao city.

As is evident from Table 2 and above discussion, RD\$1,500 is low rent for an acceptable house. For example, we saw three unacceptable houses that rented for RD\$1,500 as well as another unacceptable house that rented for RD\$2,000.

Given the special nature of the rent for the two least expensive acceptable houses we saw (that rented for RD\$1,500), we made an ad hoc judgment to set a rent for acceptable housing at RD\$2,000. This was a judgment call. We purposely wanted to be conservative in our estimate of rental cost in part because we visited a limited number of worker houses and in part because we want to ensure that our living wage estimate represents the cost of a basic living standard and cannot be criticized as being overly generous. RD\$2,000 is 36 percent higher than RD\$1,500 which is slightly more than the approximately 30% inflation that Dominican Republic has experienced in the past five years (remember that rent for the two acceptable houses visited that rented for RD\$1,500 had remained unchanged for 4-5 years). RD\$2,000 is also lower than the next least costly rented house we saw that rented for RD\$2,500 although this house was in Mao city where rents are higher than in rural areas. Finally, it is important to point out that the two least costly rentals for RD\$1,500 that we saw were small as both were only around 370 square feet (35 square meters) in size.

Several aspects of the housing we visited are worth noting. First, we were not able to find any acceptable rented dwellings in or near the four sugar bateyes that we visited. We did visit the only two rented dwellings in or near these four sugar bateyes that key informants told us met our housing standards, but both turned out to be unacceptable. Neither had a latrine and tenants had to use their neighbor's latrine. Both consisted of one room in poor condition of around 24 square meters. Second, availability of water and electricity is a common problem in the Dominican Republic. Electricity was only available 18 hours per day on average for the workers we spoke to and only for 4-5 hours a day for some workers. Water was only available 5 days per week on average. Third, rooms were very small. Bedrooms, for example, were often only marginally larger than the bed in them. The desire for separate rooms (including often use of a curtain to create the feeling of separate rooms) indicates that there is a strong cultural norm for privacy and separate bedrooms for parents and children in Dominican

Republic. Fourth, we did not see any multistory housing or any attached townhouses that contained more than one room.

UTILITY COSTS

Utility costs were estimated using information on these costs provided by 20 workers who work on plantations. Electricity cost was estimated as RD\$700 per month. Water cost was estimated as RD\$50 per month based on cost per person. Cooking gas cost was estimated as RD\$833 per month based on cost per person. RD\$50 was assumed for minor repairs and maintenance. These utility costs totaled RD\$1,634 that we rounded to RD\$1,650 per month. This represents around 7 percent of our estimated living costs for a living wage which is reasonable.

COST OF BUILDING A BASIC HOUSE

Because we were unable to find any acceptable rented houses in sugar bateyes in the East and it was difficult to find acceptable rented housing in banana growing area in the North, we talked with an architectural engineer, city planner and Fairtrade officials about the cost of constructing a new house. Our idea was to see if we could get an idea of the cost of acceptable housing by looking at construction costs and extrapolating from this to cost of renting or owning a house. Although most workers would not be able to afford to build a new house even if they were making a living wage, landlords who rent houses usually need to cover costs with the rent they receive. This calculation is expected to provide an upper bound on rental costs.

To estimate mortgage costs for a new house, in San Pedro de Macoris we spoke to the Universidad Central del Este's chief architectural engineer and a municipal officer in charge of housing construction projects in San Pedro de Macoris. We were also told the cost of constructing inexpensive housing on banana plantations using the Fairtrade premium.

Cost of building independent basic houses on Fairtrade plantations was said to be RD\$235,000 on one plantation and RD\$260,000 on another plantation. The architectural engineer from the University estimated construction costs for a very small acceptable house (30-40 square meters) to be between RD\$240,000 and RD\$320,000. Based on this information, we decided to use RD\$250,000 as an estimate of the construction cost for an inexpensive and basic new house at an acceptable level in the North. This house would have a cement base and floor, wood walls, zinc roof and indoor flush toilet. This is similar to construction costs on Fairtrade plantations and just above the architectural engineer's lowest estimate for cost of smallest house at the acceptable level in the North. This cost is for construction only.

Our key informants estimated that a small house required between 128 and 150 square meters of land, and land in rural areas cost between RD\$500 and RD\$800 price per square meter. This meant that land cost would be at least RD\$64,000. Adding building costs to land cost yields a total cost of at least approximately RD\$310,000 (and probably more as this estimate is based on conservative assumptions and estimates) to build a small but decent house in a rural area in the North. But this cost is for a new house with indoor plumbing and our housing standard allows for outdoor water pipe and improved clean latrine. Also, it would be reasonable for a living

wage for workers to live in 10-15 year old houses in good condition. Assuming that indoor plumbing adds RD\$60,000 to house construction as indicated by the architect and city planner we spoke to and that the value of a 10-15 year old house is 30 percent less than a newly constructed house as regards construction costs, yields a value of around RD\$200,000 (i.e. approximately $.7 \times (250,000 - 60,000) + 64,000$).

To get an idea of monthly carrying cost for such a basic house, we used the following assumptions. Mortgage rate would be 12% (which is relatively low for the Dominican Republic as we were told that they are between 12% and 18%), and costs for maintenance, repairs and depreciation were 2 percent of the house value excluding value of land. Based on these assumptions, carrying cost would be RD\$2,235 per month (i.e. $.02 \times 135,000 + .12 \times 200,000$ for one year) and RD\$ 2,392 if mortgage rate was 13 percent.

Based on the above assumptions and calculations, a small basic 10-15 year old house would be expected to rent for around at least RD\$2,300 per month, and probably more. This crude calculation ballpark estimate of cost for decent housing shows that our estimate of RD\$2,000 per month for rent for a decent house is reasonable although probably on the conservative side.

NON-FOOD AND NON-HOUSING COSTS

The total for all non-food and non-housing costs is estimated at RD\$8,732 per month. This covers clothing and footwear; household furniture, contents and appliances; health care; education; transportation; communications; recreation and culture; eating away from home; and miscellaneous goods and services such as insurance, bank services, funerals and personal care.

Non-food and non-housing costs were estimated using a variant of Engel's law (which states that percentage of household expenditure spent for food decreases as household income increases) and household expenditure statistics for rural areas from the 2007 income and expenditure survey. For this, we needed the ratio of non-food and non-housing expenditures to food expenditures. We estimated this based on expenditure pattern of rural households with 2 or more persons at the 40th percentile of the rural income distribution.⁵ We used data for households with 2 or more persons, because living wage is a family concept and expenditure pattern of single person households are not relevant here. The 40th percentile of the rural income distribution was used, because we felt that this is a relevant reference group for a living wage since the rural poverty rate is around 40% according to government.

⁵ We were fortunate to be able to obtain special tabulations from the 2007 household income and expenditure survey for rural households by household income from Professor Joel Arboleda from Universidad Central del Este. Published tables on household expenditure are only available for Dominican Republic as a whole from National Statistical Office (ONE) or for CPI expenditure weights from Central Bank (ONE, 2007; Banco Centrale, 2011). These special tabulations were important, because household expenditure patterns are different in rural and urban areas in Dominican Republic. Professor Arboleda also provided tabulations where single person households were excluded because their behavior is not relevant for living wage that is a family concept. It is worth noting that the nonfood and non-housing to food ratio would have been 1.77 for rural households with two or more members at the same part of the income distribution according to the special tabulations if Engel's law had been used blindly as is typically done.

The observed ratio of non-food and non-housing costs to food costs for our reference group of rural households with 2 or more persons at the 40th percentile was 0.863. Note that before calculating this ratio we: (i) excluded funds for tobacco because tobacco was not felt necessary for decency, and (ii) excluded additional cost of owning a private vehicle compared to using “public” transport because we felt that it is reasonable to expect workers to use “public” transportation for a living wage; and (iii) took into consideration that meals away from home reduce the need to prepare food at home.⁶

After estimating all non-food and non-housing costs using the above 0.863 ratio, we looked at below whether funds included for health care and education are sufficient because these are considered rights in almost all countries.⁷ We also looked at transportation costs, because this is a major expense for workers. Based on these in-depth examinations, we slightly adjusted our estimate of non-food and non-housing costs (see following sections).

HEALTH CARE COSTS

Public health care in Dominican Republic is generally felt to be of reasonable quality according to most people we spoke to, although it has significant problems. “Public hospitals are often ill equipped and lack basic supplies and medicines” and “deficiencies in coverage and quality of health services and inefficient spending and weak administrative structure hinder further progress in health outcomes” according to a 2006 World Bank report. Despite these problems, most health care visits in rural areas are to public clinics and hospitals according to DHS (2007) with 20.7% of health care visits to private clinics in rural areas. Note that although public clinics are free, people often have expenses such as for medicines and lab tests.

To get an idea of extent to which the approximately RD\$1,294 per month implicitly included in our living wage for health care is sufficient, we estimated possible health care costs to families based on information on medical costs. According to 2007 DHS, average cost per medical visit in rural areas was RD\$1,184 (and so around RD\$1,693 per visit in October 2013 pesos taking into consideration inflation since 2007 using CPI data from ILO and Central Bank). This implies RD\$1,411 per month for medical costs for a family of 4 if each person visits a medical facility 2.5 times per year as indicated by DHS (i.e. RD\$1,693 per visit * 2.5 visits per year * 4 persons in family / 12 months in year) - - which is fairly similar to the RD\$1,294 implicitly included in our living wage for health care. Therefore, no adjustment was made for health care costs.

EDUCATION COSTS

⁶ We assumed that 50% of the cost of meals away from home in national household expenditure data is for the food in these meals and 50% is for services such as food preparation, cooking, serving and cleaning. This assumption is based on unpublished analysis by the authors of contents of meals in Dominican Republic in Free Zones and in Pica Pollo restaurants as well as analysis of meals in India, China and United States.

⁷ For example, living wage laws in the United States often set one living wage when medical insurance is provided by an employer and a second higher living wage when medical insurance is not provided by an employer (Anker, 2011).

Enrolment rates are high in Dominican Republic for primary school (89.5% in rural areas) but not for secondary school (35.6% for rural areas) according to DHS (2007). But repeater rates are high and completion rates lag. According to World Bank (2006), “Dominican Republic’s education system is simultaneously an overachiever in enrolment and an underperformer in attendance ... where things fall apart is turning this attendance record into years of schooling,” and, “Main shortcoming of Dominican Republic education system is low educational attainment: significant overage, repetition and dropout rates curtail school completion.” Despite major problems with public schools, almost all children from low and middle income families attend a public school rather than a private school in rural Dominican Republic according to 2007 DHS (92.7% for primary school and 89.0% for secondary school for rural areas). Therefore, it is reasonable to expect children of workers to attend public school and not private school for a living wage.

Amount implicitly included for education in our living wage is small (RD\$95 per month for a family that implies RD\$570 per year per child when two children attend school). This amount is so small partly because government statistics on household education expenditure include only school fees (with school uniform costs included under clothing; transport costs to school included under transport; books and supplies included under recreation and culture; and school meals included under restaurants) and partly because rural Dominican households currently spend so little on educational services such as school fees (only 1.0% for all rural household expenditure according to the ONE’s 2007 income and expenditure survey). Dominicans sometimes have to buy school uniforms and school books and supplies. Rural Dominicans also often need to spend for transportation, especially for secondary school, since secondary schools are typically located in towns and cities.

Because this very small implicit amount of funds for education in our living wage is partly due to the way that Dominican statistics are tabulated and partly due to relatively low secondary school enrolment rates at present, we made an ad hoc decision to increase funds for education by RD\$200 per month and so by RD\$1,200 (USD\$28) per child per year or around USD\$2 per month.

TRANSPORTATION COSTS

Transportation costs are very high in Dominican Republic. Households at 40th percentile of the income distribution in rural Dominican Republic spend 8.6% of all their expenditures for transportation according to the special tabulation of ONE’s 2007 income and expenditure survey that we used to estimate non-food and non-housing costs for our living wage. This implies that RD\$1,215 per month is implicitly included in our living wage for transportation if no adjustments are made.

To see if the RD\$1,215 per month per family now implicitly included in our living wage for transport is reasonable, we estimated what we feel might be considered as reasonable transport costs for workers earning a living wage. For this, we considered the following types of transportation costs: commuting to work; going to nearby town for shopping and other needs; going to nearby town to seek medical care; going to nearby town for recreation or other reasons; and visiting family at major holiday periods.

We estimated, using very conservative assumptions, transportation costs per month around RD\$858 without considering commute costs or cost for children to attend secondary school. This included RD\$125 per month on a prorated basis for medical visits assuming 2.5 visits per year as observed in 2007 DHS; RD\$100 per month for 1 person per family to be able to go to town for business or shopping once per month (remember that we assume that almost all food shopping is done close to home in local colmados); RD\$400 per month to enable everyone in family to go to town for recreation or any other purpose once per month; and RD\$350 per month on a prorated basis to enable one visit to family once per year on a major holiday.

This total of RD\$858 calculated above is not very different from the RD\$1,215 implicitly included in our living wage for transport given that commute costs and cost of children going to secondary school are not considered. Commute costs for workers in rural areas are quite variable. Those working on plantations and farms often walk to work or are provided with free transportation. On the other hand, many other rural workers (e.g. spouse or partner of plantation worker) are not provided with free transport and so face high commute costs because transport in rural areas is expensive. The same is true about variability and cost for transport to school. While primary school tends to be within walking distance, secondary schools are not in rural areas. Given this situation in rural Dominican Republic, we did not change the RD\$1,215 implicitly included in our living wage for transport. This amount is clearly not excessive.

Because transport costs are high in Dominican Republic, we looked into owning and operating a motorbike as a possible alternative to using “public” transport. In many countries, owning a motorbike is a viable alternative to using public transport for workers earning a living wage. To estimate cost of owning and operating a motorbike, we visited motorbike showrooms and talked to motorbike drivers about cost of owning and operating a motorbike. Based on this information, we estimated the cost of owning and operating a motorbike in Dominican Republic. We estimated that it would cost somewhere around RD\$1,800-2,000 per month to commute to work on a farm or plantation using one’s own motorbike. More than half of this cost is for petrol as petrol is very expensive in Dominican Republic (around RD\$240 per liter or around USD\$5.5 per gallon). This estimated cost is too high in our opinion to expect motorbike ownership to be possible on a living wage (especially as above calculations do not consider transport expenses for other family members or other transport costs for our worker). On the other hand, it was clear from discussions with workers and Fairtrade staff that workers often feel that owning a motorbike is important for dignity and personal freedom. This is not surprising, because of how workers are packed into open back farm vehicles for the free transport to work provided by plantations (plantations reported an average of 38 workers per truck) as well as because the high cost of local transport makes it difficult to afford to go anywhere on evenings, weekends or days off.

Finally, note that when plantations or farms provide free transport to work, they are allowed “credit” for this as partial payment of our living wage but only when this is decent and safe (see section below on in-kind benefits).

FAMILY SIZE NEEDING TO BE SUPPORTED BY LIVING WAGE

Living wage is a family concept. This is clearly shown by the comprehensive ILO review of living wages (Anker, 2011). It is, therefore, necessary to determine an appropriate family size for rural Dominican Republic that workers would typically need to support on their wage.

We used 4 persons (two adults with 2 children) as our family size based on information for rural Dominican Republic on: (i) number of children rural women are typically having in Dominican Republic at present (i.e. total fertility rate),⁸ and (ii) average household size in rural Dominican Republic at present.

Total fertility rate (TFR) in Dominican Republic is around 2.4 births according to 2007 Demographic and Health Survey (DHS) and recent estimates from CIA (2013) factsheet, World Bank World Indicators (2013) and United Nations. TFR is higher in rural areas than in urban areas by about 0.5 births according to DHS (2007). TFR has, however, been falling in recent years and so is probably somewhere around 2.5 births in rural Dominican Republic in 2013.

Average household size however was slightly under 4 persons for rural households with 2 or more members (i.e. households that might possibly include children). Average (mean) household size in rural areas was 3.7 persons according to 2007 DHS and 3.5 persons according to 2010 Dominican Republic Household Census. Average household size in rural areas increases to 3.9 persons when single person households (that are not relevant for the family-based living wage concept) and households with 8+ persons (that are likely to include additional adult earners) are excluded according to 2007 DHS and 2010 Household Census. Therefore, both sources indicate an average household size slightly below 4 persons.

NUMBER OF FULL-TIME WORKERS PER COUPLE PROVIDING SUPPORT

As living wage is a family concept, it is appropriate to expect more than one adult in a family to work to provide financial support through work.

To determine a reasonable estimate of the number of full-time workers per couple to use to estimate a living wage for rural Dominican Republic, we gathered data on age specific labor force participation rates, unemployment rates, and part-time employment rates from ILO (2013) websites and government publications (Perez, 2012). Dominican Republic has relatively high labor force participation rates (that are slightly lower in rural areas than in urban areas), low part-time employment rates, and a relatively high unemployment rate (that is lower in rural areas than in urban areas). Taking all of this information into account, we estimated 1.67 full-time workers per family is appropriate for rural Dominican Republic.

⁸ Total fertility rate is a synthetic estimate of the average number of births a woman today is likely to have over her life. It is the sum of current age specific fertility rates of women ages 15-49 (i.e. child-bearing ages).

GUARANTEED BONUS: CHRISTMAS 13TH MONTH BONUS

Christmas (13th month) bonus is mandatory in law in Dominican Republic. It increases annual pay for workers, since it is paid on a prorated basis to all workers even if they leave before Christmas. This means that the pay workers need to receive to achieve a living wage each month is reduced because of the mandatory 13th month bonus. For this reason, we decreased our estimate of a living wage per month by 7.7% (i.e. 1/13th) for workers who are guaranteed Christmas bonus. Overtime pay is not considered here, because one principle of a living wage is that it should be earned during normal working hours.

MANDATORY DEDUCTIONS FROM PAY AND NEED FOR SUFFICIENT TAKE HOME PAY TO SUPPORT A DECENT LIFE STYLE: UIF MANDATORY DEDUCTION

Mandatory taxes that are deducted from pay need to be taken into consideration because workers need to be receive sufficient take home pay to be able to afford a decent life. Voluntary deductions from pay are not considered here, because they are in a sense a form of voluntary expenditure. UIF (social security, pension, disability, and medical) tax is mandatory for workers in Dominican Republic except for undocumented workers. Workers need to contribute 5.91% of pay. For this reason, the UIF tax that workers would pay on a living wage is taken into consideration, so that workers would have sufficient take home pay.⁹

IN-KIND BENEFITS AS PARTIAL PAYMENT OF LIVING WAGE

In-kind benefits provided by farmers can reduce the amount of cash income that workers require to ensure they receive a living wage. For this reason, it is reasonable to take it into consideration the value of some free in-kind benefits when determining if workers receive a living wage. At the same time, it is necessary to be careful in valuing in-kind benefits as partial payment of a living wage so that this is not abused or result in a dependency wage.

To help determine, which free in-kind benefits it is reasonable to consider as partial payment of living wage as well the value of such benefits, ILO conventions and national practices from around the world were used. ILO Conventions 95 and 99 (ILOLEX, 2013) allow for in-kind benefits to be considered partial payment of wages if they “are either customary or desirable because of the nature of the work”, and if they are “appropriate for the

⁹ Note that unlike UIF, income tax is not paid at the level of our living wage estimate.

personal use and benefit of the worker and his family.” And, “The value attributed to such allowances [should be] fair and reasonable.”

To be considered as partial payment of living wage in this report, in-kind benefits needed to be: (i) regular (so workers could count on receiving benefit); (ii) considered of value by workers; (iii) customary in that a reasonable percentage of plantations/farms provide the benefit and workers receive it; and (iv) worth at least around RD\$2,000 per year per worker for practical purposes and to avoid becoming petty. To be considered as partial payment of living wage, minimum standards of decency as regards the benefit also had to be met.

To estimate the value for in-kind benefits as partial payment of living wage, the following general guidelines were used. Value for any particular in-kind benefit could not: (i) exceed the plantation’s/farm’s cost in order to prevent farmers from “profiting” on providing in-kind benefits; (ii) exceed replacement cost to workers if they had to provide or purchase this on their own; (iii) value for any particular type of free in-kind benefit could not exceed 15% of living wage; and (iv) total value for all in-kind benefits could not exceed 30% of living wage. Limits were placed on value of in-kind benefits as partial payment of living wage so that cash payment of living wage remains high and workers maintain the option to choose how to spend most of their wages. The principles of choice and self-determination are important. Note that it is common for national minimum wage law to set such limits.

VALUE OF FREE HOUSING AS PARTIAL PAYMENT OF LIVING WAGE

It is not common or customary for banana farms or plantations in Dominican Republic to provide free accommodation even though it is common in sugar plantations for temporary workers. However, the houses provided to temporary workers by sugar plantations are rarely up to decent standards. Therefore, this type of in-kind benefit is not considered in this report.

VALUE OF FREE TRANSPORT TO COMMUTE TO FARM/PLANTATION AS PARTIAL PAYMENT OF LIVING WAGE

It is common and customary for farms and plantations in Dominican Republic to provide free transportation to work. Farm vehicles pick up workers from fixed points generally near to where workers typically live. This service has real value to workers and so a fair and reasonable value for it is appropriate for farmers who provide this service to take as partial payment of the living wage. At the same time, the plantation/farmer gets a benefit by providing transport because it helps ensure that workers arrive on time.

To estimate a fair and reasonable “credit” for free transport to farm/plantation provided to workers, we started by estimating the typical cost of this service to farmers. We estimated this cost at around RD\$250 per month (or around RD\$10 per day) per worker.¹⁰

Next, we considered how much workers would have to pay for transport to work if they had to purchase it themselves. It would typically cost perhaps more than RD\$60 round trip per day if workers did not walk or use their own motorbike.

Given the above calculations and considerations, we decided to allow a “credit” of RD\$250 per worker per month (or around RD\$10 per day) for free transport to work as partial payment of living wage - - when this transport is safe and decent. In this situation, free transport would represent a bargain for workers while recognizing this service has a cost to plantations/farms. It is important to emphasize that this “credit” would only be allowed for plantations and farms that provided transport that is considered to be safe and decent. This means that most of the free transport to work provided by plantations/farms at present would not be considered as partial payment of living wage, because almost all farm transport at present requires many workers to stand packed together in open bed trucks that bounce around on deeply rutted dirt roads and afford no protection from the elements.

VALUE OF FREE LUNCH AND BREAKFAST AS PARTIAL PAYMENT OF LIVING WAGE

It is common for plantations and farms in Dominican Republic to provide meals to workers. There is, however, considerable variation as regards provision of meals. Some plantations provide breakfast and lunch, and some provide only lunch. Some plantations provide meals 6 days per week, some provide meals 5 days per week and some provide meals once per week or not at all. Some charge workers for meals, and some don't.

Since meals are of value to workers, it is reasonable to allow farmers/plantations that provide meals a fair and reasonable value for these meals as partial payment of living wage. The issue is not whether it is appropriate to consider meals as partial payment of a living wage, but how to arrive at an appropriate fair and reasonable value for meals when determining if workers receive a living wage.

To estimate a fair and reasonable value for breakfast and lunch as partial payment (i.e. “credit”) of a living wage, we looked at (i) cost to farmers of providing meals; (ii) and replacement cost of meals prepared at home. Note

¹⁰ We use the following assumptions: (i) typical distance is 5 kilometers one way based on what we were told is typical; (ii) petrol consumption is 10 kilometers per gallon based on what we were told and figures from U.S. National Academies (2010) data for farm vehicles; (iii) petrol cost is RD\$211.70 per gallon for diesel as observed during week of 14 October 2013; (iv) 38 farm workers are transported per vehicle which is the average reported by Fairtrade plantations; (v) transport is provided 26 workdays per month (i.e. 6 days per week); (vi) USD0.10 (or RD\$2.71 per kilometer) is cost for wear and tear such as for tires and oil; and (viii) driver receives a living wage and it takes 45 minutes for one round trip. Fixed costs (such as depreciation of vehicle, insurance, and license fees) were not considered, because vehicles used to transport workers are farm vehicles that are mainly used for general farm work. We rounded our estimated cost to plantations/farms to RD\$250.

that we did not consider cost of equivalent meals in local street markets, since they are not widely available in rural areas that we visited.

We collected information from all Fairtrade banana plantations on the cost of providing breakfast and lunch. It is customary for banana plantations to provide meals.¹¹ All Fairtrade plantations provide lunch sometime during the week. And, 12 of 15 Fairtrade plantations provide breakfast sometime during the week. Plantations provide lunch 4.6 days per week on average (5 plantations provide lunch 6 times per week, 2 plantations provide lunch 5 times per week, and 4 plantations provide lunch 4 times per week). Plantations provide breakfast 4.4 days per week on average (5 plantations provide breakfast 6 times per week, no plantation provides breakfast 5 times per week, and 4 plantations provide breakfast 4 times per week).

The cost to plantations of providing breakfast and lunch was difficult to estimate in part because plantations do not keep adequate records on this. In addition, several plantations reported food costs that were either implausibly high (e.g. RD\$205, RD\$235 and RD\$383 for breakfast plus lunch) or implausibly low (e.g. RD\$27 and RD\$29 for breakfast plus lunch). Only a few plantations were able to separate the cost of breakfast from the cost of lunch. For the 12 plantations that indicated cost of breakfast and lunch together, median reported cost was RD\$120 per day. This implies cost of somewhere around RD\$47 for breakfast and RD\$73 for lunch if we separate out the RD\$120 for both meals using the ratio between cost of lunch and breakfast reported by the two plantations that indicated cost of breakfast and lunch separately. These median costs are consistent with the cost of RD\$100 for lunches in Free Zone cafeterias in Santo Domingo, which is a negotiated price by the Free Zone for meals provided by a caterer; these meals always include in copious quantities meat or fish, salad, and vegetables. Note that while most plantations do not charge workers for meals, two plantations charge workers for meals on a subsidized basis. One plantation charges RD\$10 for breakfast and RD\$15 for lunch, and another plantation charges RD\$15 for breakfast and RD\$25 for lunch.

We also estimated the cost of meals prepared at home that would be avoided because of meals provided by a plantation. We estimated that cost of breakfast and lunch prepared at home for a farm or plantation worker are around RD\$28 and RD\$50 respectively. We estimated this using the following assumptions: (i) three meals in a day for family of 4 persons costs RD\$325 based on cost of our model diet; (ii) adult worker on a banana or sugar farm/plantation doing heavy physical activity requires 3,150 calories which is 34% of average daily calories required for a family of 4 persons since adults require more calories than children and heavy activity requires more calories than moderate activity; and (iii) distribution of the cost of one day's meals at home is 25% for breakfast, 45% for lunch (as main meal) and 30% for dinner.¹²

¹¹ Typical lunches in one plantation we visited included meat twice per week (reported to cost RD\$50) while in another plantation we visited lunches included meat or fish 5 times per week with pasta used as a meat substitute one day per week (reported to cost RD\$80) since Dominicans widely consider pasta as a meat substitute.

¹² For example, cost of a lunch avoided at home for plantation workers is $RD\$50 = (.34) \times RD\$325 \times (.45)$.

Taking into consideration the above estimates, we decided to use RD\$28 for breakfast and RD\$50 for lunch as fair and reasonable values for meals as partial payment of living wage. These amounts should seem reasonable to workers since this is cost of meals avoided at home (especially since meals on plantations tend to be relatively copious and include more expensive foods than typical meals prepared at home). Although this is around one-third less than the reported cost to farms/plantations of providing meals, there are important advantages and reasons why employers provide meals to workers regardless of whether or not they get “credit” for this as partial payment of living wage. This includes ensuring that workers have sufficient nutrition to be able to perform the hard work expected of them and ensuring that workers stay on the farm and are on time for work.

The above calculations mean that provision of a free breakfast 6 days per week and lunch 5 days per week would imply a RD\$1,653 per month “credit” as partial payment of living wage. This “credit” would be RD\$992 per month if only lunch were provided 5 days per week, and RD\$198 per month if lunch were provided once per week.

It is important to note that when a plantation or farm charges workers for meals, even on a co-pay or subsidized basis, the amount that workers pay would need to be subtracted from the meals “credit” indicated above. For example if the “credit” for lunch were RD\$50 and workers paid RD\$20 for lunch, the plantation/farm in this example would be allowed a “credit” of RD\$30 for lunch toward payment of a living wage.

HEALTH INSURANCE AND HELP IN OBTAINING VISAS FOR HAITIAN WORKERS

Some plantations and small farms help Haitian immigrants to get a visa. Some also provide Haitians with health insurance. These benefits are of considerable value to some workers and are of considerable cost for some plantations and small farmers. We, however, do not consider these benefits as appropriate to consider as partial payment of living wage. First, they benefit only some workers. Second, health insurance for undocumented Haitian workers substitutes in a sense for employers’ contribution to social security tax that they do not have to pay for many Haitian workers. We feel, however, that more thought needs to be given to whether provision of free private health care insurance to workers who pay social security tax and are eligible for public health care should be considered as partial payment of living wage.

PROVISION OF FREE DRINKING WATER

All plantations provide bottled drinking water to workers. Although this represents a cost to plantations and is of value to workers, we do not consider this as partial payment of living wage. Drinking water is a necessary for work and so similar to provision of tools and protective materials. In any case it is required by Dominican Republic law to provide potable drinking water.¹³

¹³ Regulation of Occupational Health and Safety (1966), 1.16, page 23 states “There shall be provided to workers, in sufficient quantity, potable water or any other sanitary drink. It shall be indicated on the water source whether or not the water is potable, wherever doubt may exist.” This covers all workers.

<http://www.set.gov.do/documentospdf/dghsi/Reglamento522-06.pdf>.

COMPARING OUR LIVING WAGE ESTIMATES TO MINIMUM WAGES, PREVAILING WAGES AND OTHER WAGE ESTIMATES: WAGE LADDER

It is useful to compare our living wage estimates to other wage indicators to get an idea of extent to which our living wage is relatively high or low. This is done in a wage ladder in Figure 3.

Our living wage is more than twice the minimum wage (RD\$5,577) for agriculture and prevailing wage on Fairtrade banana plantations (RD\$5,944)¹⁴. The wage implied by the World Bank's \$1.25 and \$2 a day poverty lines (RD\$2,318 and RD\$3,708 respectively) are even lower than current minimum and prevailing wages in agriculture.

Wages in agriculture are relatively low. Minimum wage is RD\$11,292 for large enterprises in all non-specified sectors (and RD\$6,880 for small enterprises in non-specified sectors).¹⁵ Wage implied by the government's recently revised poverty line is around RD\$9,774 adjusting for inflation to October 2013. And, the President of Dominican Republic recently referred to RD\$10,000 as a misery wage (Dominican Today, 2013). While these wages are lower than our living wage, they are not much lower especially when free in-kind benefits are provided. And one should keep in mind that all these non-agriculture wages represent low living standards -- being minimum wage, misery wage, and poverty wage.

Average wage for private sector employees is higher than our living wage at around RD\$15,451 according to ILO (2013).¹⁶ Much higher is the living wage estimated by Worker Rights Consortium for Villa Altagracia factory at around RD\$23,813 adjusted for inflation to October 2013 (WRC, 2008).

Before completing this section on wage comparisons, it is important to point out that real wages in Dominican Republic have fallen in recent years. The value of minimum wages adjusted for inflation fell by around 7% between 2000 and 2010 and the real value of actual wages fell by around 20% between 2000 and 2010 (ILO, 2013). This occurred even though labor productivity rose by around 39% between 2000 and 2010 (see Figure 2 at end of this report drawn from ILO 2013 report). This disconnect between growth in labor productivity and growth in real wages with the accompanying decrease in wage share must be influencing how workers view

¹⁴ The prevailing monthly wage on Fairtrade banana plantations was obtained from a questionnaire filled in by all Fairtrade plantations. A weighted average of the most typical wage paid by each plantation was used. The number of workers employed by each plantation was used as the weight, so that larger plantations had greater weight than smaller plantations.

¹⁵ There are many minimum wages in Dominican Republic. Minimum wage varies by: sector (such as for agriculture, hotels, casinos and restaurants, farms, free zones, private security, nonprofits), location, and size of company (measured by capital).

¹⁶ Given that the fall in real wages in Dominican Republic has slackened and possibly ended in recent years (see Figure 2), we increased average wages reported in ILO (2013) by inflation to October 2013 for purposes of comparison based on inflation data from Central Bank and ILO.

current wage levels. It also increases the gap between prevailing wages and minimum wages compared to living wage.

CONCLUSIONS

Our living wage estimate for rural Dominican Republic of the take home pay necessary is RD\$13,869 per month. This is before considering the value of in-kind benefits such as transport and meals that are commonly provided by plantations and farms. Our living wage estimate for rural Dominican Republic is RD\$11,966 for plantations and farms that provide decent free transport as well as free breakfast 6 days per week and free lunch 5 days per week.¹⁷ It is important to note, however, that “credit” for free transport requires this to be safe and decent and that the amount of “credit” for breakfast and lunch is reduced when workers pay for their lunch even if on a subsidized basis.

These living wage estimates are much higher than the statutory minimum wage in agriculture (RD\$5,577) and the prevailing wage on Fairtrade plantations (RD\$5,944). While this might appear to indicate that our living wage is too high and so overly generous, this is far from reality.

Our living wage estimates are not much higher than what the President of Dominican Republic recently referred to as a misery wage (RD\$10,000), the wage implied by government’s poverty line for rural Dominican Republic (RD\$9,774), and the minimum wage for large enterprises in non-specified sectors (RD\$11,292). Furthermore, our living wage estimates are below average wage in the private sector (RD\$15,451) and well below the living wage for Dominican Republic estimated by Worker Rights Consortium (RD\$23,813).

Considerable thought and effort was put into making our living wage estimates. They are based on solid methodology; numerous national and international data sources; visits to workers’ homes and places where workers typically shop for food; discussions with workers, small farm owners, cooperative officials, plantation managers and owners; discussions with various key informants such as municipal officials, trade union members, university professors, and others. This also included reviews of many papers, reports and statistics from researchers, government and international agencies.

As indicated in this report, conservative assumptions were used to estimate our living wage. This means that our living wage is a conservative estimate and not overly generous. It is difficult to see where we have

¹⁷ Note that many public primary schools provide breakfast or lunch depending on which half day children attend school. If government follows through on plans to extend primary school to a full day from current half day and provide free breakfast and lunch, this would reduce our living wage estimate by around RD\$300 per month because it would save families the cost of preparing some meals at home. There is currently a full day pilot program “Tanda Extendida” where children are given both breakfast and lunch in some schools.

overestimated living costs required to ensure a modicum of decency for workers. Our low cost nutritious model diet is basic for an upper middle income country such as Dominican Republic. For example, our model diet includes a relatively low percentage of calories from proteins for an upper middle income country such as Dominican Republic (Anker, 2006) and is much lower in cost than the diet recommended by Pan American Health association (PAHO, 2011). Also, we assume that workers buy less expensive food items (e.g. normal rice rather than selecto rice; brown sugar rather than white sugar; chicken and salami rather than beef or another meat or fish; and least expensive vegetables and fruits). The fact of the matter is that most rural workers at present can only afford to eat an unhealthy diet that relies heavily on rice, plantains, beans, vegetable oil and roots and tubers. Secondly, the standard we set for acceptable housing is basic for an upper middle income country such as Dominican Republic as acceptable housing units can be as small as around 370 square feet (i.e. 30-35 square meters) and be without indoor water or toilet. At the same time, our housing standard is much better than what most rural workers currently live in. Thirdly, we assume that families cannot afford to own a motorbike on a living wage and therefore have to rely on public transport as well as the free transport to work provided by plantations and farms. This assumption is used even though workers strongly prefer to be independent as regards transport because of the isolation of rural life due to high “public” transport costs and the nature of the free transport provided by plantations and farms where around 38 workers on average have to stand in packed open bed farm vehicles exposed to the elements while bouncing around on deeply rutted dirt roads.

Finally, it is important that our living wage estimates are viewed in the context of present day rural Dominican Republic where life is difficult for workers. Wages are especially low in agriculture compared to other sectors. Wages have fallen in the past decade in Dominican Republic. Food prices and transport prices are very high and public services are often lacking as for example electricity and water are only intermittently available and state provided transport is not generally available.

ABOUT THE AUTHORS

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FIGURE 1. FLOW CHART ON HOW TO ESTIMATE A LIVING WAGE

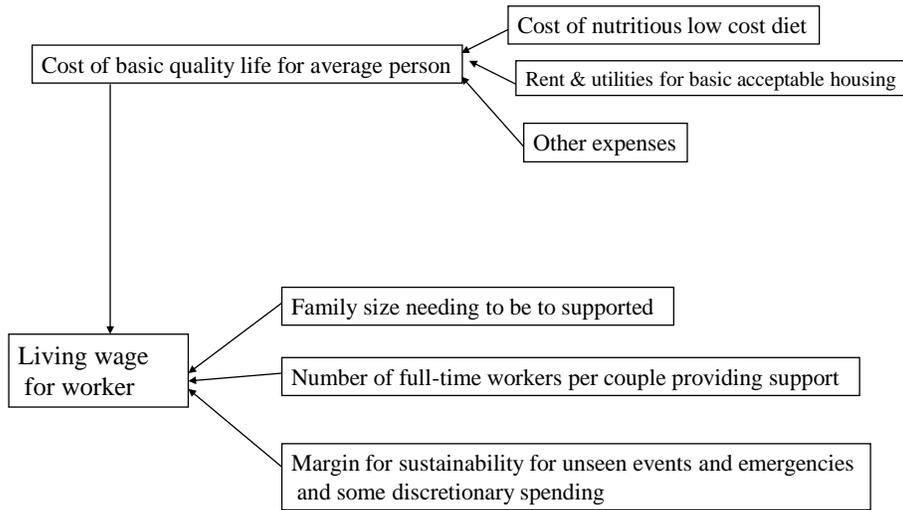
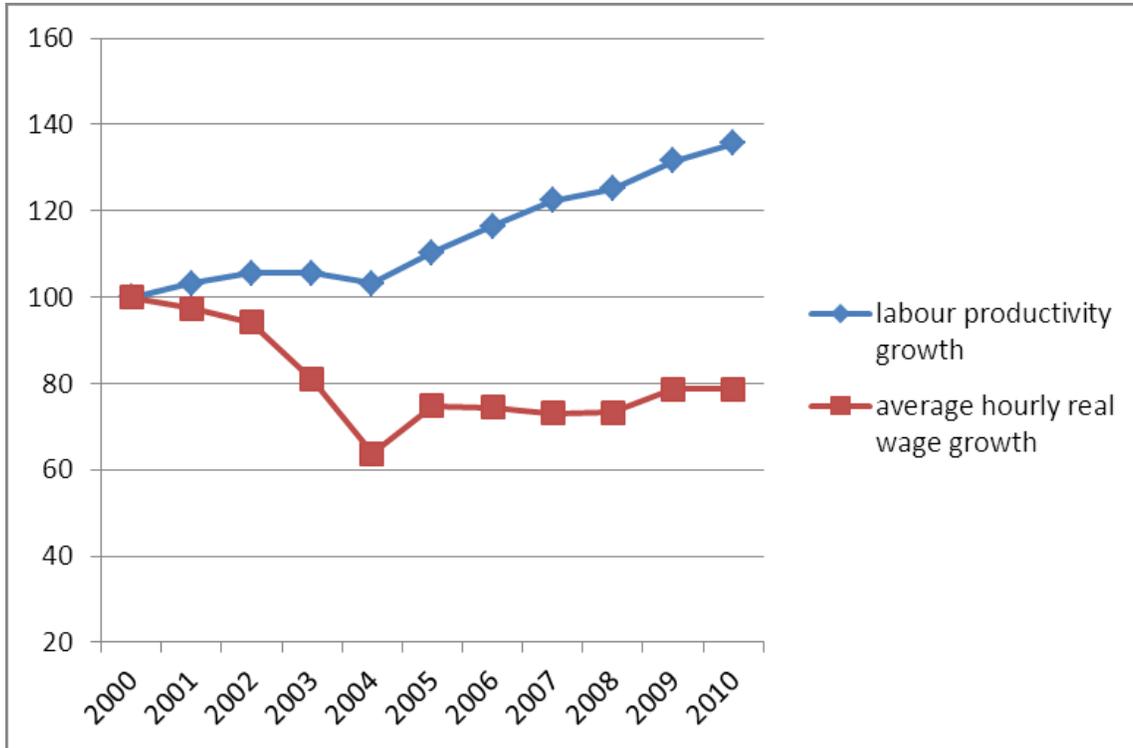
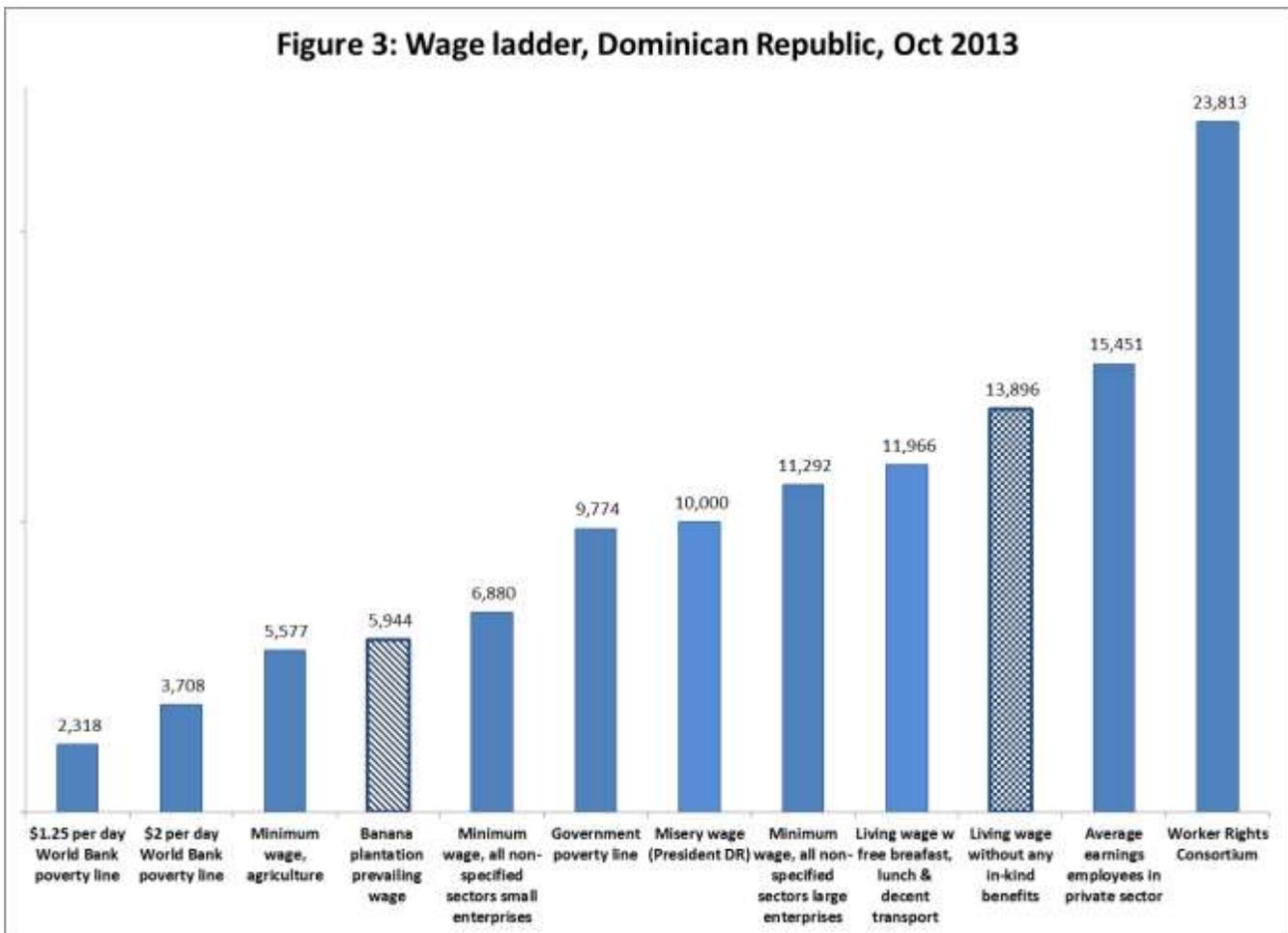


FIGURE 2. DOMINICAN REPUBLIC, REAL AVERAGE HOURLY WAGES AND LABOR PRODUCTIVITY, 2000-2010 (INDEX 2000=100)



Source: ILO 2013.

Figure 3: Wage ladder, Dominican Republic, Oct 2013



Notes: Minimum wage in agriculture was calculated by multiplying RD\$234 per day in minimum wage law by 23.83 workdays per month based on assumption of 5.5 workdays per week.

Wages implied by \$1.25 and \$2 a day World Bank poverty lines were estimated using latest PPP (for 2012 from World Bank indicators database) and current exchange rate to USD as well as same assumptions for family size (4) and number of fulltime equivalent workers per couple (1.67) used to estimate our living wage.

Wages from earlier years were increased by inflation to October 2013 using Central Bank and ILO estimates of inflation. This was done for government poverty line, average wage in private sector, and Worker Rights Consortium living wage. WRC living wage uses a family size of 3 persons with 1 fulltime earner. Banana plantation prevailing wage was based on a questionnaire filled in by Fairtrade plantations. A weighted average of the most typical wages paid by each plantation was used.

TABLE 1. MODEL DIET AND ESTIMATED FOOD COST PER PERSON PER DAY FOR RURAL DOMINICAN REPUBLIC, OCTOBER 2013 USING FOOD PRICES IN LOCAL PLACES WHERE WORKERS SHOP

Food items ^c	Grams purchased ^a	Grams edible	Cost per kg RD\$ ^e	Cost RD\$ ^f	Comments
Rice	233	233	41	9.47	Price for least expensive variety available. 10% less than selecto rice. (Approximately ½ pound pd).
Bread	50	50	100	5.00	Price for pan sobado or agua. (1 roll pd) ^h
Roots and tubers	60	50	25	1.48	Price for yucca. Least expensive root and tuber. (1 small piece per family pd).
Plantains	184	118	31	5.69	Price for average of guineo verde, platano verde & plantano maduro. (1 piece pd).
Beans	56	56	88	4.93	Price for average of black and pintas bean prices. (2 oz pd).
Milk	181	181	45	8.07	Price for powdered. Less expensive than fresh or UHT. (1 cup kids pd; 1/2 cup adults pd).
Egg	36 (4 pw)	32	79	2.89	4 eggs pw.
Chicken	89 (5 meals pw)	61	107	9.53	1 meat/fish meal pd. Price for fresh chicken. Frozen chicken not available.
Salami	24 (2 meals pw)	24	143	3.47	Chicken & salami least expensive meat/fish. Salami like luncheon meat.
Vegetable 1	65	52	20	1.31	275 edible grams vegies & fruits pd. Cabbage least expensive vegie.
Vegetable 2	58	52	38	2.16	Tomato second least expensive vegie.
Vegetable 3	59	52	41	2.43	Carrot third least expensive vegie

Fruit	184	118	31	5.72	Guineo maduro (banana). Least expensive fruit. (1 banana pd).
Cooking oil	30	30	87	2.61	Soybean oil. Least expensive oil. Price for 128 oz. (3 tbsp pd).
Coffee	1	1	374	0.37	Price for ½ or 1 pound quantity. (2 cups pd for adults).
Sugar	40	40	44	1.76	Price for brown sugar. Less expensive than white. (10 tsp pd).
Drinking water	1440	1440	1.4	1.98	Price for 5 gallon jug. (6 cups pd).
Total of above				68.87 (\$1.58)	
Total with 18% miscellaneous food costs^d				81.26 (\$1.87)	

Notes: pd indicates per day. pw indicates per week. ^a Edible (consumed) quantity differs from purchased quantity for foods with inedible parts such as fruits and vegetables with inedible skin or stem; chicken with inedible skin and bones; egg with inedible shell; and fish with inedible bones, head, scales and tail. Percentages inedible are drawn from United States Department of Agriculture (USDA) web site (www.ndb.nal.usda.gov/ndb/foods). ^b Number of calories, proteins and fats are estimated using USDA reported values per 100 grams for each food item. ^c Specific food items used to cost model diet for each major food group are foods that are low cost with acceptable quality. ^d Additional miscellaneous food costs are assumed to increase food cost by 18 percent. This consists of (i) 5% for miscellaneous foods not listed in my model diet such as salt, spices, chicken stock cubes and condiments (with soft drinks and sweets excluded); (ii) plus 10% to allow for some variety (e.g. beef or fish sometimes; larger portion of chicken sometimes; more expensive rice sometimes; more expensive vegetables and fruits sometimes; etc.); (iii) plus 3% for minimal waste and spoilage. Assumed 5% for salt, spices and condiments is slightly below 5.7% included in government's 2008 poverty line diet. The 10% for variety is less than 14.6% in 2008 poverty line diet based on consumption of households at 30-50th percentile of the income distribution. Assumed 3% for spoilage and waste is a conservative value. ^e Cost per pound is based on prices observed in local places where workers shop. Almost all foods are priced per pound in markets. Median of observed prices from appropriate sellers was used. ^f Cost for each food item is calculated by multiplying quantity purchased by cost per kg. ^h Most sellers had only pan sobado. ^j In addition to having a sufficient number of calories (2307), our model diet meets WHO recommendations for proteins (10-15 percent of all calories), fats (15-30 percent of all calories) and carbohydrates (less than 75 percent of all calories). Calories in the model diet are 11.0 percent from proteins, 22.2 percent from fats and oils and 66.8 percent from carbohydrates.

TABLE 2. COST OF RENTED HOUSING VISITED IN RURAL DOMINICAN REPUBLIC IN BANANA AND SUGAR PLANTATION AREAS IN NORTH AND EAST

Acceptable standard?	Rent pm in RD\$	Size & rooms	Comments
No	650	293 sq ft LR, 2 BR, K	Unsafe neighborhood. Poor condition, holes in walls and roof. Poor latrine with wooden platform and seat.
No	800	224 sq ft 1 Room	Only 1 room. No latrine nearby. Had to use neighbor's latrine. Poor ventilation as only 1 window. In sugar batey.
No	1000	446 sq ft LR, 2 BR, K	Unsafe neighborhood. Outside latrine in very poor condition despite indoor water. Steals electricity.
No	1000	224 sq ft 1 Room	Only 1 room in poor condition with cracked cement walls, broken cement floor, and leaky zinc roof. No latrine nearby (uses neighbor's latrine). In sugar batey
No	1200	150 sq ft LR, 2 BR	Tiny rooms. 14 sq mt. No kitchen – cooks outside with charcoal. Shares pit toilet in very poor condition. No electricity.
No	1300	256 sq ft LR, 3 BR, K	Cement base in poor condition. Latrine in poor condition. Kitchen roof in poor condition. Small size as 256 sq ft total living space.
No	1500 (same for 8 years)	391 sq ft LR 2BR, K	Latrine in terrible condition. Damaged roof. Broken cement floor. Rent unchanged for 8 years. In Mao city.
No	1500	420 sq ft LR, 3 BR, K	Roof leaks. Broken cement base and floor. Water 2 days per week..
No	1500	410 sq ft LR 2 BR, K	Part of house had thatched roof. Roof leaked. Poor latrine. Wood walls in poor condition.
Yes	1500 (same for 4 years. To be raised)	365 sq ft (34 sq mt); LR 2 BR, K	House in fair to good condition. Inside flush toilet. Rent unchanged for 4 years, but rent likely to be increased soon.
Yes	1500 (same for 5 years. Daughter's)	372 sq ft LR, 2 BR, K	Cement house in good condition. Outside latrine in good condition. Outside water nearby. Rent unchanged for 5 years. Landlord is daughter's godmother.

	godmother)		
No	2000	299 sq ft LR, 2 BR, K, Bath	Impassible road & open culvert/sewer in front of house. Latrine 30 feet from house poor condition & shared with 4 families. Garbage behind house. In Mao.
Yes	3000	437 sq ft LR, 2 BR, K	Very good condition. Indoor water and toilet. Wood walls, cement base, zinc roof. In Mao city.
Yes	4000 (newly rented)	370 sq ft LR 2 BR, K	Very good condition. Indoor water and toilet. Wood walls, cement base, zinc roof. In Mao city. Rented recently.
Yes	Owned	603 sq ft (56 sq mt)	Wood walls and zinc roof in very good condition. Indoor water. Outside latrine.

Notes: LR indicates living room. BR indicates bedroom. K indicates kitchen. All housing units were in banana growing area in northern part of country except for the two units indicated above in batayes in sugar growing areas in Eastern part of country. Before visiting workers' houses, we spoke with workers who rented about their home to help identify rented houses that meet our standards of acceptability. This means that the rented houses in this table are among the better houses rented by workers that we spoke to.

All dwellings in this table were independent houses. Water was always outside home unless indicated. All houses had outside latrines unless otherwise indicated.

Most houses had wood walls with wood slats that were poorly joined. As a result, there were often visible holes between slats.

Expenses and calculations	COST in RD\$
Food cost per person per day	81.26
1. Food cost per month for family of 4	9,887
Rent per month	2,000

Utilities and repairs per month	1,650
2. Housing cost per month	3,650
3. Non-food & Non-housing cost per month	8,732
TOTAL COST per month for decent living standard for family of 4	22,269
Emergencies and unforeseen events (5%)	1,113
TOTAL COST per month for decent living standard for family of 4	23,382
LW per month (1.67 workers in family)	14,121^c
Monthly prorated value of Christmas bonus	1,086
Social security 5.91% mandatory deduction	835
LW per month with prorated 13th month bonus and mandatory deductions	13,869 (USD 319)^b
Value per month of free breakfast 6 days per week as partial payment of LW	661 ^c
Value per month of free lunch 5 days per week as partial payment of LW	992 ^c
Value per month of free decent transportation as partial payment of LW	250 ^d
LW per month with above free in-kind benefits considered	11,966 (USD275)^b

Notes: LW indicates living wage.

^a Exchange rate used was 43.5 to USD as observed when this report was completed.

^b Amount of “credit” as partial payment of living wage that plantations/farms would be able take for meals would be reduced by amount that workers are asked to copay or pay for meals. This is important to take into consideration, because workers on plantations often have to pay something for meals.

^c There are plans in Dominican Republic to change school day from half day to full day and provide free breakfast and lunch. If fully implemented, this would reduce the living wage since this would reduce number of meals that would need to be prepared at home. We estimated that this would reduce food costs by around RD\$480 per month and therefore our living wage by around RD\$300 per month.

^d Transport needs to be safe and decent to be considered as partial payment of living wage. This is important, because most of the transport currently provided is neither safe nor decent.

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