Living Income and Living Wage Report

Rural areas and small towns of coffee-growing regions in central Colombia (December 2021)

By: Lykke E. Andersen and Natasha Nina Andersen

Photo by Lykke E. Andersen

Anker Research Institute

GLOBAL LIVING WAGE COALITION

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Abstract: This report estimates the family living income and the living wage for the coffee-growing regions of Antioquia and Huila, Colombia for December 2021. Living costs were found to be sufficiently similar across these regions for one estimate to be valid for both. The living income expenses for a family of four is COP 2,527,125, while the gross living wage is COP 1,783,685 (USD 453) per month.

Keywords: Living costs, living wages, living income, coffee, Colombia, Anker methodology.

JEL classification codes: J30, J50, J80.

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TABLE OF CONTENTS

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[1] https://www.verite.org/.
[2] https://www.rgccoffee.com/.
[3] https://coocafisa.com/.
[4] https://www.rgccoffee.com/las-rosas.html

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[5] https://sa-intl.org/

INTRODUCTION

1. DEFINITION OF A LIVING WAGE

The living wage concept refers to a remuneration that would allow a typical worker family to afford a basic lifestyle considered decent by society at its current level of development. According to the Anker methodology (Anker and Anker, 2017), decency includes access to a basic yet nutritious diet in line with local preferences and possibilities; access to housing that complies with both national and international minimum standards; education for children through secondary school; access to adequate healthcare when needed; clothing, transportation, communication, household furnishings, recreation, and other essentials; as well as something extra for emergencies. Finally, the living wage should be sufficient to allow the family to live together, rather than some members having to migrate and live apart to complement family incomes. The idea of a living wage is neither new, nor radical. In 1919, the Constitution of the International Labor Organization stated that "Peace and harmony in the world requires provision of an adequate living wage," and the 1948 United Nations' Universal Declaration of Human Rights stated that "Everyone who works has the right to just and favorable remuneration ensuring for himself and his family an existence worthy of human dignity."[6] The definition of a living wage by the Global Living Wage Coalition used in this study, is the following:

> "*Remuneration received for a standard work week 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, healthcare, transport, clothing, and other essential needs, including provision for unexpected events.*" (Global Living Wage Coalition, 2016, cited in Anker and Anker, 2017).

[6] See Anker and Anker (2017) for more examples of how historical figures, international bodies, NGOs, governments, and others define a living wage.

This consensual understanding of a living wage by the Global Living Wage Coalition comes in hand with an endorsed methodology for estimating living wages, developed by two international specialists, Richard Anker and Martha Anker, and referred to as the Anker Methodology.

2. HOW TO ESTIMATE A LIVING WAGE

This study applies the methodology developed by Richard Anker and Martha Anker, presented in their book *Living Wages Around the World: Manual for Measurement,* published in 2017. The Anker methodology has gained widespread acceptance among diverse stakeholders globally and has been used to estimate living wages in a wide variety of settings, such as banana growers in Ecuador, manufacturing industries in China, tea plantations in Sri Lanka, and football producers in Pakistan.[7] The main principles of the Anker Methodology are listed below:

- Transparency. The methodology clearly sets out the principles and assumptions behind the living wage estimate. This enables stakeholders and others to understand the standards and methods used to estimate the living wage benchmarks and what exactly workers and their families would be able to afford on a living wage. Plus, it helps clarify in what ways it differs from the national minimum wage and the national poverty line.
- Normative basis. The methodology estimates the living wage based on normative standards for nutritious food, healthy housing, adequate healthcare, and education for children through secondary school.
- Time and place-specific estimates. Since the costs of living, and the expected standards of living vary not only over time, but also across space between and within countries, the Anker methodology calls for time and place-specific living wage estimates.
- International comparability. The living wage estimates are comparable between countries, as they are all based on the same principles.
- Practical and modest cost. The methodology uses a judicious mix of secondary data analysis and primary data collection and analysis, which results in reliable estimates at a modest cost.

[7] All living wage reports are freely available at the website of the GLWC here: https://www.globallivingwage.org/.

- Comparison with prevailing wages. The methodology also includes principles and guidelines for measuring prevailing wages, so that it is possible to compare them with the living wage estimate. All forms of remuneration including in kind benefits are considered.
- Living wage reports are more than just a number. They also paint a picture of what it means to live on less than a living wage, and what the living standards would be for workers who would earn a living wage. This type of reporting facilitates effective dialogue with stakeholders and others and helps improve conditions for those who carry out the hardest part of the work in the value chain.

The main steps of the Anker methodology used to estimate the living wage are the following:

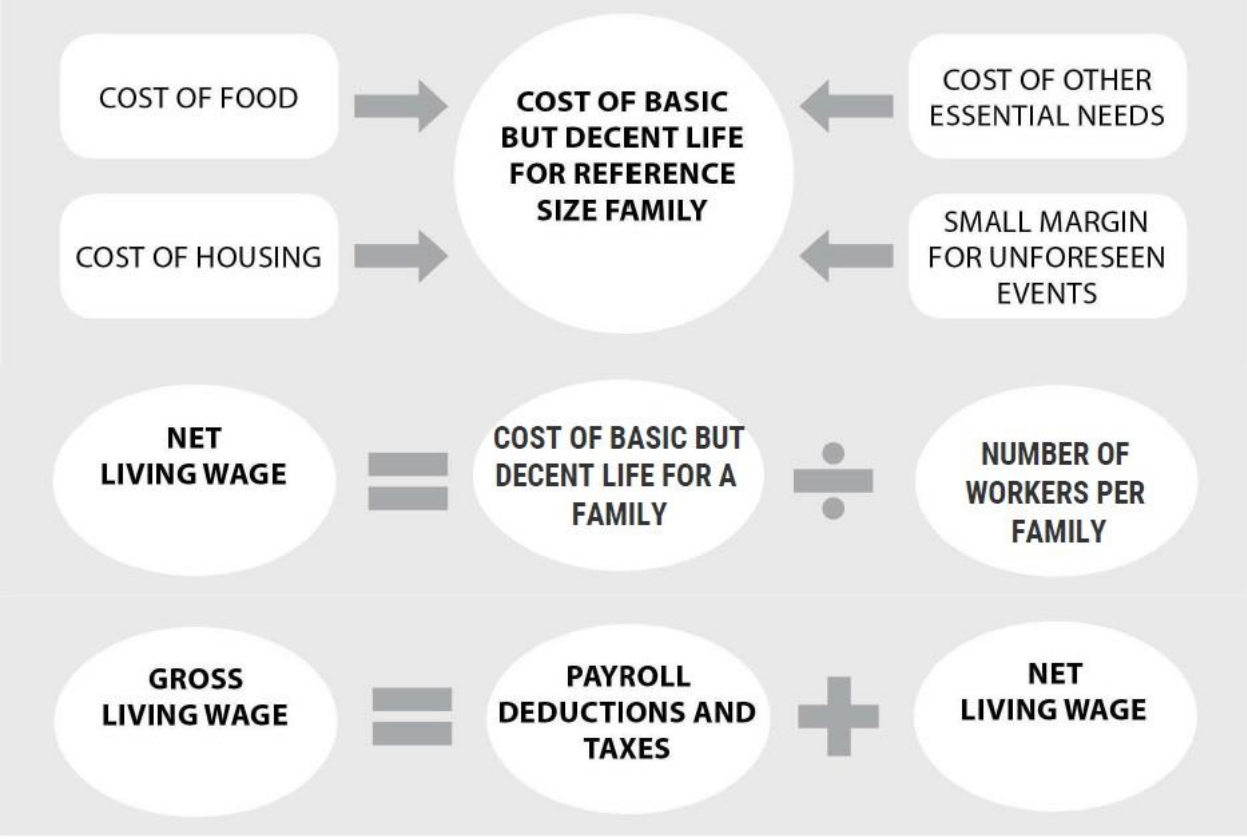
- Determine the size and composition of a reference family in the region of interest. This is done using official information from the latest household survey (*Encuesta Nacional de Calidad de Vida*, ECV for its acronym in Spanish) carried out in 2021 by Colombia's National Statistical Institute (DANE, for its acronym in Spanish).
- Estimate the cost of a basic but nutritious diet for the reference family. Since food is an important expenditure for workers, this step receives considerable attention. It involves two main steps: 1) develop a model diet that complies with World Health Organization recommendations concerning nutrition, but which is adapted to local preferences and possibilities, and 2) estimate the costs of this diet using data collected by the researchers during November and December 2021 for all the major food items at shopping locations frequented by coffee farmers in the study areas.
- Estimate the costs of decent housing for the reference family. Since housing is usually the second biggest expenditure item for families in developing countries, this step is also a priority. A local healthy housing standard is set that meets minimum international standards and local norms. The rental value for such decent healthy housing was estimated using the 2021 ECV survey data, which fortunately was well-suited for the purpose.
- Estimate the costs of all other essential needs and unforeseen events. The remaining non-food and non-housing expenditures are estimated as a mark-up over food costs using the very detailed household expenditure survey (*Encuesta Nacional de Presupuestos de los*

Hogares, ENPH for its acronym in Spanish) 2016 – 2017, which DANE carries out every 10 years in order to update the expenditure shares in the Consumer Price Index (CPI).

- Determine the number of full-time equivalent workers per family. This is a number between one and two, depending on local employment conditions. The number was estimated using 2019 ECV household survey data, which reflects pre- and post-pandemic conditions better than the 2021 survey.
- Estimate the Gross Living Wage, considering mandatory payroll deductions, and income taxes.

The figure below represents the steps involved in estimating a living wage:

Figure 1. Components of a living wage estimate



Source: Anker and Anker (2017).

The subsequent parts of this report provide the details of these estimations for coffee-growing regions in the departments of Antioquia and Huila, Colombia.

3. LIVING INCOME AND LIVING WAGE ESTIMATES

The living income for families in the coffee-growing regions for December 2021 was estimated at COP 2,527,125 per month for Antioquia and COP 2,471,795 per month for Huila. The gross living wage (aka living wage) was found to be COP 1,783,685 per month for Antioquia and COP 1,744,632 per month for Huila. Since the difference between the two living wages is small (2.2%), it is recommended to use the same value for all coffee-growing regions in central Colombia. To make sure all coffee producers and workers are able to afford a decent living standard, the slightly higher value of Antioquia was chosen. **Thus, the monthly living wage for the coffee-growing regions of central Colombia was found to be COP 1,783,685 (USD 453)[8] in December 2021.** This is 53% higher than Colombia's gross minimum wage (COP 1,166,401 in 2021, including *cesantía*, prima and transport subsidy).

According to the Colombia's 2019 ECV household survey, 86% of all coffee workers in Colombia live in rural areas and small towns, while only 14% live in municipal capitals (DANE, 2020). Thus, our estimates refer to families and workers living outside of municipal capitals (called "rural and other urban" in the remainder of the document).

The living wage was estimated so that a typical family of four, with 1.54 full-time equivalent workers and two children, can afford a nutritious diet, decent housing, adequate healthcare, education through secondary school, clothing and footwear, transportation, household furnishings, communications, and all other essential expenses.

[8] This value in USD was calculated using an exchange rate of 3,936 COP/USD (average value for the period 15 November to 15 December 2021). It should be noted that the exchange rate fluctuates constantly, so it is best to focus on the values reported in Colombian Pesos (COP) rather than USD, as the former are much more stable and relevant from the viewpoint of workers in Colombia, and USD are generally not used in Colombia.

4. CONTEXT OF THE STUDY

Colombia is a commodity-exporting country, in which coffee has long played a leading role. Coffee production in Colombia started in the middle of the 19th century, relatively late in comparison with other Latin American countries. Yet, by 1890 it became the country's most important export product, and by 1897, it was responsible for 47% of the country's export income (Guhl, 2008). During most of the 20th century, coffee remained Colombia's leading export product and in 1970, it represented 63% of total export earnings (Guhl, 2008). Moreover, during the 1950s, the coffee sector represented 10% of the country's total GDP, and almost 30% of the GDP from agricultural activities (Cárdenas, 1993). However, due to the emergence of other important export products during the last several decades (such as oil, coal, gold, gems, flowers, and bananas), the share of coffee in the total value of exports dropped to 5.9% in 2019. Likewise, the sector currently accounts for only 1% of the country's total GDP and 15.3% of the GDP from agricultural activities.[9]

Nevertheless, Colombia is still one of the main producers of coffee in the world. Currently, it is the world's third-largest producer of coffee, producing 833,400 tons of coffee in 2020[10] and exporting 751,619 tons, worth a total of USD 2,655 million.[11]

Colombia's coffee production is mostly small-scale, with an average farm size of only 1.29 hectares.[12] The mountainous topography, as well as strong coffee-growing traditions, have made coffee harvesting difficult to mechanize, and thus its production has remained a highly labor-intensive activity (see Figure 2). The coffee sector contributes greatly to the generation of employment in Colombia, with a demand for more than 730,000 permanent direct jobs, comprising 25% of agricultural employment.[13]

[9] https://oec.world/en/profile/country/col
[10] https://www.fao.org/faostat/en/#home
[11] https://federaciondecafeteros.org/app/uploads/2020/01/Exportaciones.xlsx
[12] https://federaciondecafeteros.org/static/files/FNCCIFRAS2017.pdf
[13] https://federaciondecafeteros.org/static/files/FNCCIFRAS2017.pdf

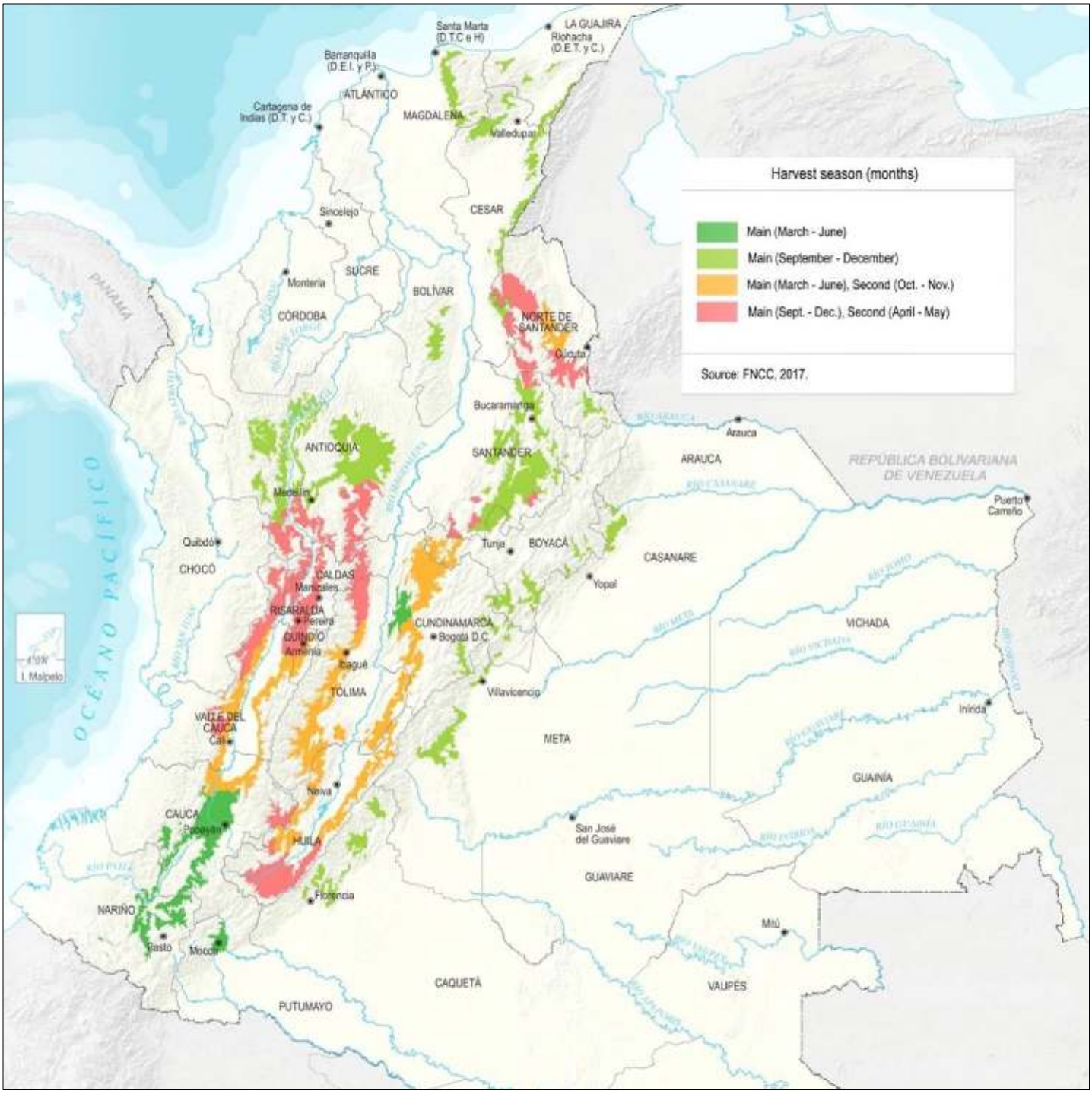
Figure 2. Coffee trees on a slope and a coffee farmer picking coffee cherries

Source: Authors' photos.

There is a large contingent of coffee workers (called *andariegos*) who migrate throughout the country following the demand for harvest workers at different times of the year in different locations. As the ideal conditions for Arabica coffee production are between 1,000 and 2,000 meters above sea level, coffee is grown in the temperate altitudinal range of the three Colombian mountain ranges, which includes 22 departments (out of 32) and thus represents a significant area of production of almost 845 million hectares in 2020.[14] The diversity of the country's microclimates translates into a variety of coffee-growing conditions that make harvest seasons vary by region, and ultimately allows Colombia to harvest coffee almost all year round. Figure 4 shows how some regions have only one harvest per year, while others have two (the secondary harvest season being called the *mitaca* or *traviesa*). It also illustrates how some regions have their main harvest season from March to June, while other areas have it from September to December.

[14] https://sioc.minagricultura.gov.co/Cafe/Documentos/2020-12-30%20Cifras%20Sectoriales.pdf

Figure 3. The coffee-growing regions in Colombia and harvesting months



Source: FNC - IGAC (2017)

Just as the main centers of coffee production in the world have changed their location throughout history, the producing regions in Colombia have also shifted over time. During the 19th century, most of coffee was produced in northern Colombia, in the department of Norte de Santander, followed by Santander and Cundinamarca. In the 20th century, coffee production was mainly located in the central departments of Caldas, Risaralda, Quindío, Antioquia, Valle, and Tolima (Guhl, 2008). Nowadays, Huila, Antioquia, Tolima, and Cauca are Colombia's main coffee producing departments, producing approximately 55% of the country's coffee. Table 1 presents both the area and the distribution of coffee production and coffee producers in the 15 main coffee-producing departments of Colombia in 2020.

Table 1. Distribution of the coffee production and coffee producers in Colombia (2020)

Departments of Colombia	Coffee area (1000 ha) *	Accumulated share of coffee area	Number of coffee producers **	Average size of farms (ha)
Huila	**144.31**	**17.1%**	**84,509**	**1.43**
Antioquia	**117.53**	**31.0%**	**79,336**	**1.18**
Tolima	106.99	43.7%	62,049	1.52
Cauca	91.94	54.5%	91,852	0.81
Caldas	60.82	61.7%	32,721	1.49
Santander	52.01	67.9%	32,808	1.37
Valle	51.19	74.0%	22,792	2.05
Risaralda	44.47	79.2%	19,330	1.82
Nariño	35.76	83.5%	39,797	0.66
Cundinamarca	29,71	87.0%	28,816	0.92
Cesar	23.89	89.8%	7,953	2.89
N. Santander	23.10	92.5%	16,063	1.33
Quindio	19.65	94.9%	5,217	3.48
Magdalena	17.97	97.0%	4,968	3.45
Boyaca	10.14	98.2%	10,612	0.85
Colombia	**844.74**	**100%**	**547,295**	**1.29**

Sources: Authors' calculations based on (*) the Federación Nacional de Cafeteros (FNC) database as well as the (**) Ministerio de Agricultura y Desarrollo Rural (MADR)'s numbers (https://sioc.minagricultura.gov.co/Cafe/Documentos/2020-12-30%20Cifras%20Sectoriales.pdf).

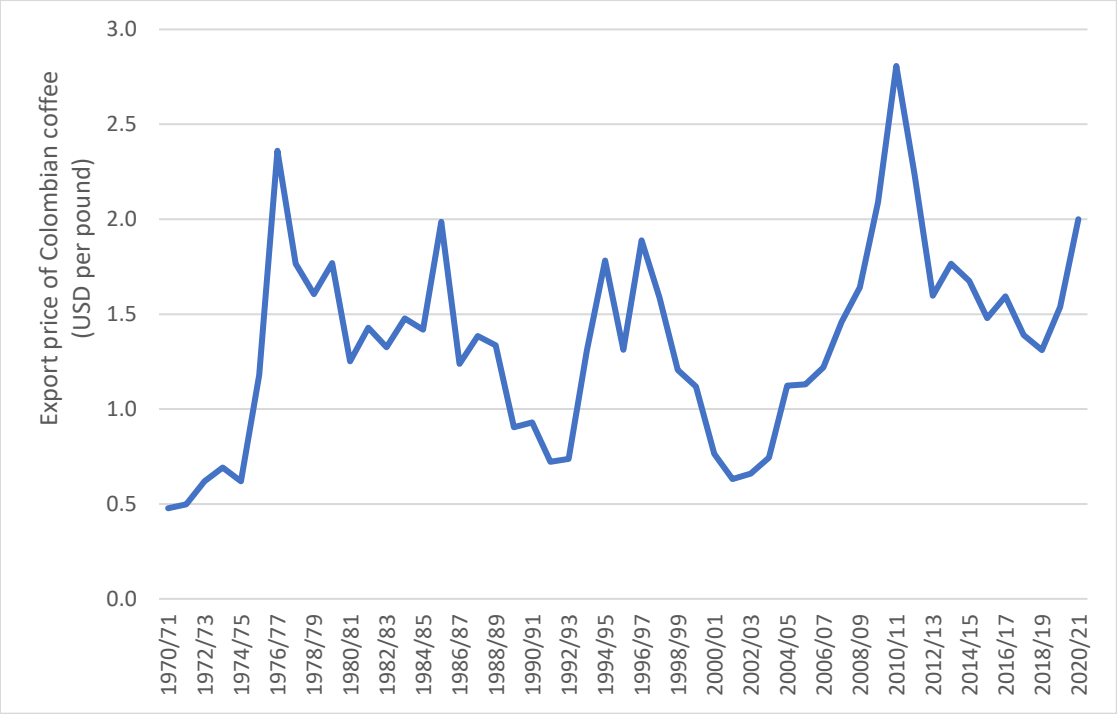
The fieldwork carried out for this study took place in the top two coffee producing departments of Colombia (Huila and Antioquia), in the municipalities located around La Plata and Salgar. The researchers visited 23 farms of different sizes and configurations, and spoke with more than 50 farm owners, workers, and experts to understand what kinds of work are involved in coffee production, and how coffee farmers and workers live. However, as will be clear from the remainder of the report, much of the data used to calculate the living wage comes from secondary sources (mainly DANE household surveys).

It is important to mention that during the fieldwork (December 2021), coffee prices in Colombia were at an all-time high (at least in terms of Colombian pesos). The spike in prices was caused in part by devastating frost damage, followed by droughts, in important coffee-growing regions in Brazil, which killed so many coffee trees that world supply dropped significantly, and buyers had to compete intensely to secure enough coffee to satisfy demand.[15] Prices are expected to remain relatively high for a couple of years, until production in Brazil recovers. Then it is possible that prices may plummet again. This cycle of a few years of high prices caused by a decrease in world supply, followed by a perhaps longer period of low prices and higher supply is typical of the coffee market (see Figure 4).

Arabica coffee is a delicate agricultural product that is very susceptible to environmental conditions and, therefore, climatic events, such as frosts, droughts or excessive rains, can have a large effect on production. Since demand for coffee is inelastic, variations in supply can translate into large variations in prices. This makes the coffee market volatile and unpredictable. Figure 4 shows the boom-and-bust cycles of the coffee market during the last 50 years. The volatility of production and prices is one of the main challenges facing coffee farmers in Colombia, and climate change may further exacerbate existing vulnerabilities, as the frequency, magnitude and total area affected by floods and droughts is expected to be higher in a warmer world. In addition, Arabica coffee can only be grown at certain temperatures. Therefore, sooner or later, some areas in which coffee is currently cultivated will become inhospitable for coffee production.

[15] https://www.gcrmag.com/brazil-frost/

Figure 4. Average annual export price for Colombian coffee in USD, 1970 – 2021



Source: Federación Nacional de Cafeteros (https://federaciondecafeteros.org/wp/estadisticas-cafeteras/)

PART I. FAMILY LIVING COSTS

To estimate the living wage, it is essential to establish the basic living costs for a reference family. This part of the study calculates food costs, housing costs, and all other non-food-non-housing costs for a family of four, in accordance with the Anker methodology.

5. FOOD COSTS

Food costs were estimated by first developing a low-cost nutritious model diet consistent with local food preferences and availability and relative local food prices, and then calculating its cost by surveying local food prices in the towns and cities where coffee workers usually shop. After taking into consideration how free school meals reduce the costs of preparing meals at home, **the estimated total cost of the model diet, for a reference family of two adults and two children, is COP 8,003 per person per day or COP 973,698 per family per month.**[16] Details on how these estimates were reached are provided below.

5.1. Guiding principles and standards for a model diet

According to the Anker methodology, a model diet should meet WHO/FAO's recommendations on nutrition in the most economical way possible, while at the same time being palatable and consistent with local food preferences and availability. A model diet for an upper-middle-income country,[17] such as Colombia, should fulfill the following principles and standards:

- The number of calories in the model diet needs to be sufficient to cover the energy needs of the family members.
- The model diet needs to be nutritious, so 350 grams of vegetables, fruits and pulses per day are included to help provide micronutrients and minerals, as well as some dairy which is rich in calcium and high-quality protein (especially for children).

[16] This corresponds to around USD 2.03 per person per day or USD 247 per family per month. The exchange rate used in this report is 3,936 COP/USD, corresponding to the average exchange rate for the period 15 November 2021 to 15 December 2021.

[17] According to the World Bank's classification, Colombia is an upper middle-income country with an estimated poverty rate of 35.7% in 2019: https://data.worldbank.org/country/CO.

- To meet the WHO/FAO recommendations, the model diet can only include a maximum of 30 grams of sugar and 30–34 grams of oil per person per day.
- Approximately 13% of calories must come from proteins, 15–30% of calories must come from fats, and 55–75% of calories must come from carbohydrates.

5.2. Constructing a living wage model diet for Colombia's coffee region

The development of the model diet started by calculating the average daily calorie requirement per person in the reference household of four persons, which turned out to be 2,395 calories per person per day. This was determined using the following assumptions:

- The average adult height in Colombia is 157.96 cm for women and 171.85 cm for men.[18]
- One adult is assumed to have a vigorous Physical Activity Level (PAL), due to strenuous farm work such as on a coffee farm, while the other adult and the children are assumed to have a moderate PALs and thus require fewer calories.

The diet was developed through an iterative process, facilitated by the Excel calorie requirement and model diet programs that form part of the Anker methodology.

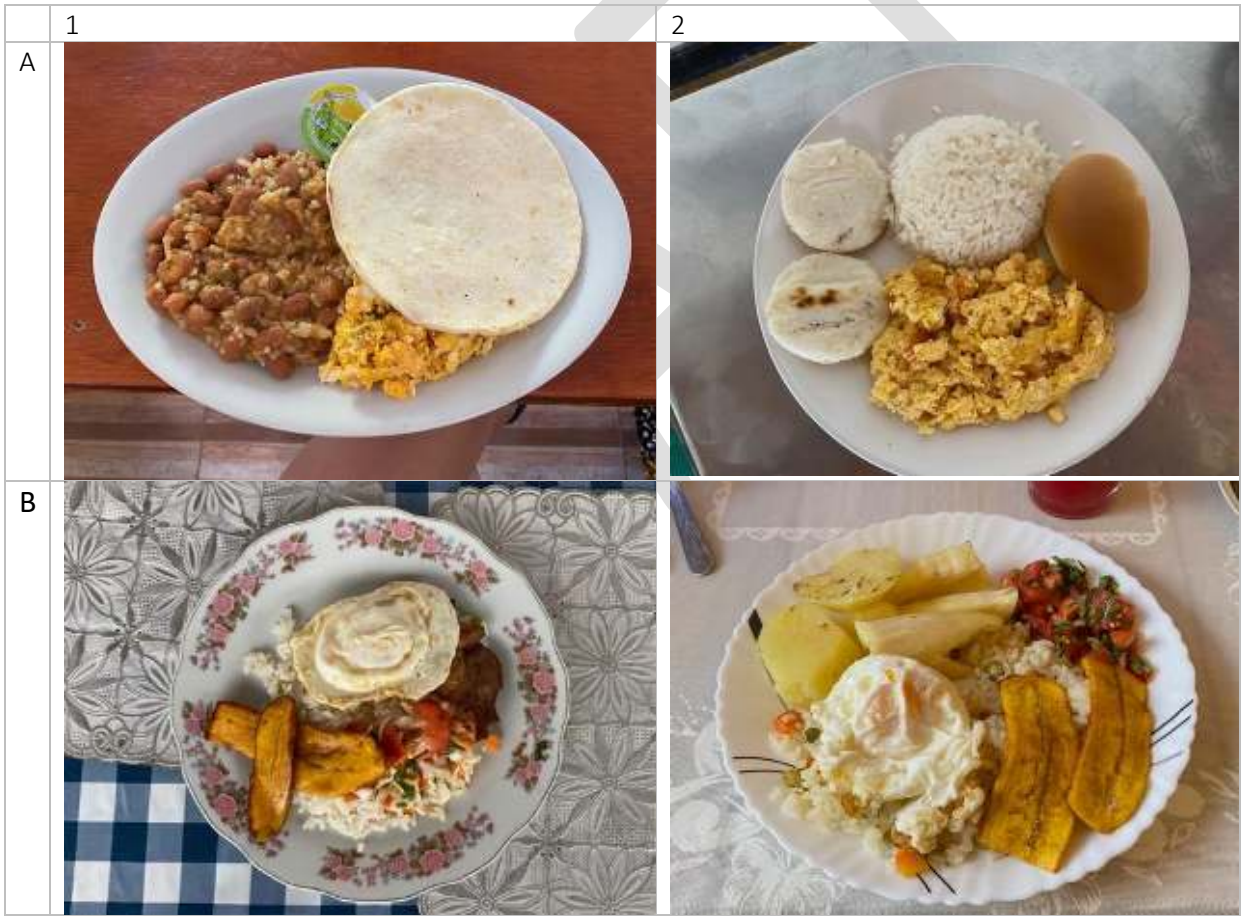
The model diet developed for the banana producing regions of Colombia along the Caribbean coast (Andersen, Anker and Anker, 2018) was used as a starting point. It was established with the help of the list of the 26 most important food items included in the Colombian Consumer Price Index (CPI), as well as the basic food basket for rural areas as indicated in a study by the National Planning Department (DNP) and the National Statistical Office (DANE) (DNP and DANE, 2012). Minor adjustments were made to accommodate the particularities of the coffee-growing regions. For example, *arepas* (corn tortillas) were added to replace pasta and the amount of bread was reduced, since *arepas* tend to accompany almost every meal, and during the three weeks of fieldwork for this study, pasta was not served once (see Figure 5 for examples of typical dishes). *Panela* (a type of sugar extracted directly from sugar cane juice) replaced white sugar, since it is widely produced in the coffee region, and is considered better tasting.

[18] https://worldpopulationreview.com/

To make the model diet as economical as possible while maintaining its nutritional level, the quantities of some foods that are widely available in the coffee-growing regions (such as chicken, eggs and yuca) were increased. In contrast, the quantities of more expensive food products, such as potatoes and beef, that are generally only available in supermarkets, were slightly reduced. The distribution of macro nutrients is 12.6% proteins, 23.6% fats, and 63.7% carbohydrates.

In terms of dietary habits, although there are some differences between the two study regions, the typical diets in the two regions include the same list of main ingredients. This allows us to use the same model diet for both regions.

Figure 5. Food dishes served at the local restaurants and coffee farms in Antioquia and Huila



Notes: In most dishes shown above, a piece of meat is missing as the researchers asked for the vegetarian options. (A1) An Antioquia breakfast, referred to as *calentado,* was comprised of a portion of beans and rice, scrambled eggs, some sort of meat, a piece of cheese, butter and an *arepa*. (A2) A typical Huila breakfast was comprised of rice, eggs with *chorizo*, small *arepas,* and a piece of bread. It is usually paired with a meat-based broth soup. (B) Main dishes in rural areas usually include an animal-based source of protein, rice, potatoes, cassava, fried plantains, and a salad (containing tomatoes, carrot, cilantro, onion and/or cabbage). They are usually accompanied by a portion of soup of either beans or vegetables with a meat-based broth.

Sources: Authors' photos.

Table 2 shows the model diet. To the costs of the 22 ingredients of the model diet, we added 1.7% for spices, sauces, condiments, and salt,[19] 4% for spoilage, and 13% for variety, following the recommendations of the Anker methodology.

Table 2. Composition and costs of the model diet (per person per day) for the coffee-growing regions of Antioquia and Huila

Food item	Purchased grams	Edible grams	Median cost per kg (COP)	Average Cost per person per day (COP)
Rice	204	204	2,800	571
Arepas	100	100	3,050	305
Bread	25	25	6,414	160
Potato	133	100	2,400	320
Cassava	119	100	2,000	238
Plantains	154	100	2,000	308
Beans	56	56	8,000	448
Milk	120	120	2,975	357
Cheese	25	25	14,000	350
Egg	68	60	5,695	388
Beef	25	24	20,000	495
Pork	16	12	18,000	284
Chicken	81	55	11,033	892
Fish	40	24	16,944	678
Cabbage	74	59	2,500	184
Onion	65	59	2,100	137
Tomato	65	59	3,100	200
Orange	81	59	1,515	122
Banana	92	59	2,000	184

[19] The detailed expenditure survey ENPH conducted by DANE in 2016-2017 was used to determine the share of total household expenditures devoted to salt, spices, dressings and condiments (0.27% of all expenditures for middle-income households, corresponding to 1.7% of food expenditures) (see https://www.dane.gov.co/index.php/estadisticas-por-tema/precios-y-costos/indice-de-precios-al-consumidor-ipc/ipc-informacion-tecnica#indices-y-ponderaciones).

Oil	30	30	9,222	277
Panela	30	30	4,300	129
Coffee	7	7	20,500	144
Total cost of the 22 food items of the model diet (Excluding additional costs indicated below)				**7,171**
Additional costs				
Spices, sauces, salt and condiments (1.7%)*				122
Waste and spoilage (4%)				287
Additional variety (13%)				932
Total cost of model diet				**8,512**

Note: *This percentage was calculated by dividing the CPI weights of spices, sauces, salt and condiments (0.27%) with total food expenditure (15.78%) for middle-income households in the current CPI index for Colombia.
Source: Authors' calculations.

5.3. Determining food prices and estimating food costs

This section details how food prices were established. Households in the coffee-growing regions of Antioquia and Huila buy most of their food in markets and supermarkets located in the municipal capitals (see Figure 6), so this is where most of the price data used to determine the cost of the model diet was collected. Prices were collected from more than 40 food suppliers in places where coffee farmers and workers usually shop.

Figure 6. Places of local food provision

Notes: The main food market in the capital city of La Plata, Huila (left); a small store selling fruits and vegetables in Salgar (middle); a local supermarket in the city of Salgar (right).
Sources: Authors' photos.

In contrast to the banana-growing regions of Colombia, where a farmer's land is often dedicated exclusively to bananas, and workers live in cities and buy all their food in supermarkets (Andersen, Anker and Anker, 2018), farmers in the coffee-growing regions often raise chickens, grow sugarcane and cassava, have fruit trees, and even maintain a pond for raising fish (see Figure 7). This is mainly done for convenience and food security purposes, and not because it is substantially cheaper for farmers to grow their own food than to buy it at the nearest market. Although this means that the cost of the model diet might be lower for farm families than for non-farm families in the coffee growing regions because of own food production, it is very difficult to determine if this is so or by how much because own food production has various labor and non-labor costs in addition to the opportunity cost of not using land for commercial uses. Moreover, it is important to make sure that landless workers can also afford the model diet, which is why the Anker methodology recommends only using market food prices.

Figure 7. Food security measures implemented on coffee farms

	1	2
A		
B		

C

Notes: (A1) These chunks of *panela* are typically boiled in water in the morning to create "*panela* water," which is then used as base for making sweet drinks such as coffee, chocolate milk, fruit juices, etc. (A2) A vegetable garden containing green chard and aromatic herbs. (B) Fishponds of different sizes. (C) Animal production, such as chicken eggs (1), pigs, and geese (2).
Sources: Authors' photos.

Therefore, for each food product, the median price[20] was calculated using food prices collected at markets and supermarkets. This was done separately for Antioquia and Huila in order to check whether there were significant differences in food prices between study regions. While there were differences in the prices of individual food-items (see Table 3), the differences were not systematically higher in one area, and furthermore the difference in the total cost of the model diet was just 1.7% (COP 8,550 per day in Antioquia and COP 8,401 in Huila), which is not much of a difference. Therefore, to get the most reliable estimate of the price for each food product, price observations for both study regions were pooled, and the median prices from all supermarkets and markets surveyed were used. The results are presented in Table 3.

Table 3. Median food prices calculated from food price surveys carried out in the coffee-growing regions of Antioquia and Huila in November – December 2021 (in COP)

Food item	Median price in Antioquia	Median price in Huila	Median price both regions
Rice (kg)	2,795	2,950	**2,800**
Arepas (kg)	3,050	3,500	**3,050**
Bread (kg)	6,414	6,759	**6,414**

[20] Median values are used instead of average values, as the median is less sensitive to extreme observations.

Food item	Median price in Antioquia	Median price in Huila	Median price both regions
Potato (kg)	2,323	2,548	**2,400**
Cassava (kg)	2,000	2,000	**2,000**
Plantains (kg)	2,000	2,000	**2,000**
Beans (kg)	8,630	7,800	**8,000**
Milk from powder (prepared liter)	2,967	3,217	**2,975**
Cheese (kg)	14,000	11,000	**14,000**
Egg (12 units)	5,600	5,895	**5,695**
Beef (kg)	24,000	20,000	**20,000**
Pork (kg)	18,000	19,000	**18,000**
Chicken (kg)	11,194	10,738	**11,033**
Fish (kg)[1]	22,600	13,000	**16,944**
Cabbage (kg)	2,500	3,000	**2,500**
Onion (kg)	2,200	2,000	**2,100**
Tomato (kg)	3,290	3,000	**3,100**
Orange (kg)	1,700	1,400	**1,515**
Banana (kg)	2,000	1,900	**2,000**
Oil (liter)	9,450	9,000	**9,222**
Panela (kg)	4,300	4,500	**4,300**
Coffee (kg)	20,200	21,550	**20,500**

Note: [1] The price of fish in Antioquia is for frozen fish filets, while the price of fish in Huila is for whole fresh fish. This means that the price per edible gram in the two study regions is not very different, since around 40% of a whole fish is inedible (e.g., bones, head, tail, scales, skin, intestines). The final average price refers to a mix of fresh and frozen fish.
Source: Authors' calculations.

5.4. Deducting the value of free school lunch from the cost of preparing meals at home

The Anker methodology requires that researchers check for the existence of food programs that might diminish food costs by reducing the number of meals that need to be prepared at home.

Since 2011,[21] Colombia has seen the implementation of a nationwide program called *Programa de Alimentación Escolar* (PAE, for its acronym in Spanish), that is meant to provide a food supplement for consumption within the education establishment to all children and adolescents registered as official students (Sarmiento Rodríguez, 2020). This food supplement is presented in two rations. The main ration is consumed at lunchtime and provides 30% of the energy and nutrients that a child needs in a day. The second ration is consumed in the middle of the morning or afternoon and is designed to provide 20% of the energy and nutrients that a child needs during a day.[22] Although the program suffered interruptions during the pandemic, and some states manage the program better than others, it is supposed to be working nationwide again with the subsiding of the pandemic. Therefore, this food subsidy is taken into consideration below in the calculations of family food costs.

The formula established by the Anker methodology to estimate the replacement value of free school lunches is the following:

> *Replacement value of free lunch provided in school = (# years of school during which free lunch is provided ÷ 18 years as a child) × (number of school days in year ÷ 365) × (average value of free lunch for relevant age groups from Excel program)*

The PAE program covers mandatory Basic Education for a total of nine years. This includes five years of Primary Education and four years of Secondary Education (Sarmiento Rodríguez, 2020). Therefore, the program covers official students from 6 to 14 years of age, and the food supplement is received 200 days per year.[23] According to the Model Diet Worksheet, the average value of lunch

[21] Colombia's governmental efforts to reduce hunger and increase school attendance amongst children through food programs can be traced back to 1968. Nonetheless, it is only since 2011, with the implementation of the National Development Plan 2010-2014, that these efforts managed to achieve a wider scope and universal coverage, as the obligations of guiding, executing and articulating the PAE program were transferred to the Ministry of National Education (Sarmiento Rodríguez, 2020).

[22] https://www.paestaraldia.gov.co/assets/documents/ABC_PAE.pdf

[23] In 2022, the Colombian school year was a total of 40 weeks, meaning 200 days: https://www.seduca.gov.co/normatividad/resoluciones/item/5971-resolucion-2021060095525-de-2021-calendario-escolar-2022

and snack (50% of daily calories) for the 6–14-year age group is COP 3,719, so the formula works out as follows:

$$Replacement\ value\ daily\ school\ meal = \frac{9}{18} \times \frac{200}{365} \times\ 3{,}719\ = 1{,}019$$

Since the typical family of four is composed of two children and two adults, COP 509 (i.e., 2/4 x COP 1,015) should be deducted from the cost of the model diet per person per day. **Therefore, the adjusted daily cost of the model diet is COP 8,512 – COP 509 = COP 8,003 for the coffee growing regions of Antioquia and Huila.** Table 4 shows the final costs of the model diet per person per day.

Table 4. Daily average cost of the model diet for the coffee regions of Antioquia and Huila

	Cost per capita (COP)
Total cost of model diet (Table 2)	8,512
Replacement value of free lunch provided in school	509
Total cost of model diet deducting replacement value of free lunch	8,003

Source: Authors' calculations.

5.5. Seasonality in food prices

Since the living wage estimated for December 2021 will be regularly updated in the future to take into account inflation, it is important to check whether food prices were unusual during the time of food price collection (November and December 2021).

In general, the monthly Consumer Price Index does not indicate systematic seasonality in food prices in Colombia. However, 2021 was a year of significant social protests and Covid-19, which affected the circulation of people and goods and so could have caused temporary spikes in food prices. However, while there were important protests in some of the major cities in late November

2021,[24] everything was found to be normal in the two study regions during the period when the food price data were gathered.

6. HOUSING COSTS

The housing costs for the living wage were estimated by adding the rental cost of a basic acceptable dwelling plus utility costs (water, electricity, and cooking fuel).

The costs of decent housing for a family of four in the coffee-growing regions of Antioquia were estimated to be COP 305,200 per month, while in Huila the costs were slightly lower, at COP 226,895 per month.[25]

The remainder of this section explains how these estimates were obtained, using the 2021 ECV household survey. It also contains information on current housing conditions, as well as a general impression of the housing situation in some of the coffee regions of Antioquia and Huila that came to light during fieldwork.

6.1. Standard for basic acceptable local housing

A living wage should be sufficient to cover the rental costs of a home that satisfies both minimum national and international housing standards. National standards are based on criteria applied in the Unsatisfied Basic Needs (UBN) methodology, which is used to estimate the poverty line in Colombia (DANE, 1987). As for international standards, they are based on the World Health Organization's (WHO) Housing and health guidelines;[26] the International Labor Organization (ILO) Workers' Housing Recommendation;[27] the United Nations International Covenant on Economic,

[24] https://es.wikipedia.org/wiki/Protestas_en_Colombia_de_2021#Noviembre

[25] This corresponds to around USD 78 per family per month in Antioquia and USD 58 in Huila. The exchange rate used in this report is 3,936 COP/USD, corresponding to the average exchange rate for the period 15 November 2021 to 15 December 2021.

[26] https://www.who.int/publications/i/item/9789241550376

[27] https://www.ilo.org/dyn/normlex/en/f?p=NORMLEXPUB:12100:0::NO::P12100_ILO_CODE:R115

Social, and Cultural Rights;[28] and the UN-Habitat definition of a slum.[29] Based on these national and international standards, seven criteria were developed to determine whether a dwelling is adequate. These are presented in the last column of Table 5.

Table 5. International and national decent housing standards, and the study's housing standard

Housing characteristics	International minimum requirements	National standards	Measurable criteria to determine whether housing was adequate
Materials			
Walls	Durable material providing protection from elements	Acceptable if made of cement, stone, brick, polished wood, adobe, bahareque with finish, rough wood, prefabricated material, and/or bahareque without finish	1. Exterior walls are acceptable if they comply with national standards
Roof	Durable material without leaks	Only zinc, concrete, or tile are acceptable	2. Roof is acceptable if it complies with national standards
Floor	Durable material	Carpet, wood/parquet, marble, bricks/tile, rough wood, and/or cement are accepted; dirt floors are not	3. Floor is acceptable if it complies with national standards
Amenities			
Toilet	Access to sanitary toilet and washing facilities	Toilet or latrine connected to sewerage system or septic tank in rural areas	4. Toilet or latrine connected to sewerage system or septic tank
Water	Access to safe water (max. 30 min. total collection time per day)	Piped water is required	5. Piped water within property
Electricity	Access to electricity	Electricity is required	6. Electricity is required
Ventilation and Lighting			

[28] https://www.ohchr.org/en/professionalinterest/pages/cescr.aspx

[29] https://unhabitat.org/sites/default/files/2020/06/indicator_11.1.1_training_module_adequate_housing_and_slum_upgrading.pdf

Housing characteristics	International minimum requirements	National standards	Measurable criteria to determine whether housing was adequate
Ventilation	Adequate ventilation, especially when cooking indoors	NA	
Lighting	Adequate lighting	NA	
Nº of windows	Sufficient for adequate lighting and ventilation	NA	
Living Space			
Nº of m^2	≥ 30 m^2 (increases with economic development) and 48-60 m^2 for upper-middle-income country	NA	7. There must be sufficient rooms, meaning no more than 2 persons per potential sleeping room (this includes bedrooms, living rooms, and dining rooms, but excludes kitchens, toilets, baths, and storage rooms).
Nº of rooms	≤ 2 people per room excluding kitchen and toilet	≤ 3 people per room	
Kitchen location	If kitchen is inside, adequate ventilation for cooking needed	NA	
Condition	In good state of repair	NA	
Environment	Not a slum; no site hazards (surface water drainage, industrial pollution, danger of landslides, flood zone)	NA	Generally beautiful surroundings in study areas visited, but always with some risk of landslides due to the steep topography and heavy rains.

Note: NA indicates that the national standard is not available.

Source: Authors' elaboration.

6.2. Housing quality in the study areas

Table 6 below tabulates a series of relevant housing quality variables for small towns and rural areas in Antioquia and Huila from the 2021 ECV household survey. Only households with 2-7 members were included in the calculations, since these are the households considered relevant for the living wage estimate. The averages for each region cover small towns and rural areas, which

is where the coffee growers and workers usually reside. The sample size is 1,658 households in Antioquia and 1,082 households in Huila. The last column of Table 6 explains what is considered adequate according to national standards.

Table 6. Housing conditions for rural and other urban areas of Antioquia and Huila in 2021

Characteristics	**Antioquia (%)**	**Huila (%)**	**Acceptable standard according to the UBN methodology**
Area of residence			
Municipal capital	81.33	62.20	
Rural and other urban	18.67	37.80	
Roof			
Concrete	8.85	0.92	The last two are not considered acceptable.
Clay roof tiles	19.42	1.52	
Asbestos or cement roofing sheet	27.30	3.27	
Zinc roofing sheet	41.21	92.87	
Plastic roofing sheet	0.56	0.83	
Palm or thatch roof	2.29	0.00	
Waste, other unacceptable	0.36	0.59	
Floor			
Carpet	0.00	0.07	All except the last are considered acceptable.
Polished wood, parquet	0.15	0.12	
Marble	0.08	0.10	
Bricks, tiles	29.05	19.04	
Rough wood	5.95	1.82	
Cement	54.37	68.38	
Earth, other unacceptable	10.41	10.48	
Exterior walls			
Block, brick, stone, polished wood	75.75	62.23	The first 6 categories are considered acceptable according to the UBN methodology.
Adobe	3.38	0.81	
Plastered bahareque	2.36	15.04	
Non-plastered bahareque	0.76	12.08	

Characteristics	Antioquia (%)	Huila (%)	Acceptable standard according to the UBN methodology
Rough wood	16.65	7.70	
Prefabricated material	0.72	1.30	
Bamboo, cane, other plant material	0.00	0.51	
Zinc, cloth, waste materials, other unacceptable	0.18	0.16	
Without walls	0.22	0.17	
Electricity			
Yes	98.86	97.59	Electricity required.
No	1.14	2.41	
Piped water (*Acueducto*)			
Yes	60.89	62.67	Piped water required.
No	39.11	37.33	
Toilet facility			
Toilet or latrine	94.05	98.31	Any kind of toilet or latrine is acceptable. None is not acceptable.
None	5.95	1.69	
Number of rooms			
1	6.15	1.54	The UBN methodology does not specify a minimum number of rooms, but only the number of persons per room (see next).
2	21.09	11.36	
3	43.39	43.59	
4	20.57	32.92	
5+	8.81	10.59	
Number of persons per potential sleeping room			
0 to 2	92.19	92.59	According to the UBN methodology, a household should have no more than 3 people per room.
More than 2 to 3	5.10	6.77	
More than 3	2.71	0.64	
Consumer durables			
Washing machine	50.75	48.11	The UBN methodology does not include these items.
Refrigerator	89.80	88.20	
Water heater for shower	12.75	0.07	

Characteristics	Antioquia (%)	Huila (%)	Acceptable standard according to the UBN methodology
Internet connection	30.13	40.55	
Motorcycle	28.83	61.02	
Hazards experienced during the last 12 months			
Flooding	10.38	2.29	The UBN methodology does not include these items.
Landslide	2.81	2.34	

Notes: The sample was limited to households in rural and other urban areas of Antioquia and Huila, and further limited to only include households with 2-7 members. All calculations in this table are made using the analytical weights provided by DANE (fex_c), to correct for non-proportional sampling of the survey.
Source: Authors' calculations based on the 2021 ECV household survey.

Table 7 shows the percentage of dwellings that meet the standards established for rural and other urban areas in Antioquia and Huila. DANE distinguishes between "municipal capitals" and "rural and other urban" areas. The latter is the most representative of the locations where coffee growers and workers live, which is why it is the area included in Table 7 for both study regions. Only households with 2 to 7 members are included in the calculations, as this is the sample considered relevant for the living wage estimation (excluding single-person households and especially large households which are most likely multi-family households with more than 2 potential wage-earning adults).

It is clear from Table 6 that housing conditions are quite good in both Antioquia and Huila, even in rural areas and small towns. The main deficiency is access to piped and potable water. About a third of households rely on their own water source (a spring or a well), while the rest are serviced by a public water pipe (for which they pay a monthly or annual fee). In either case, the water is not 100% potable, so they must either boil it (most common) or filter it. It is not common to buy bottled water.

Table 7. Percent of homes[1] complying with 7 key healthy housing quality conditions in rural and other urban areas of Antioquia and Huila in 2021

Housing quality conditions (Sample size)	% of households	
	Antioquia (1,658)	Huila (1,082)

Exterior walls ✓	99.61	99.15
Roof ✓	97.34	99.41
Floors ✓	89.59	89.52
Water ✓	60.89	62.67
Toilet ✓	94.05	98.31
Electricity ✓	98.86	97.59
Room ✓	92.19	96.59
Meets all 7 conditions	**53.54**	**55.85**

Note: [1] Only including households with 2-7 members.
Source: Authors' calculations based on data from the 2021 ECV household survey.

The fieldwork generated several interesting findings. First, most small-scale coffee farmers live in modest, but adequate dwellings on their own farms. Recent improvements were observed on many farms, both due to the unusually high coffee prices in 2020 and 2021, which brought in extra income, but also because spending on other items and activities had been severely limited due to pandemic restrictions. Many families installed Internet and Wi-Fi during the pandemic, in an attempt to secure access to online schooling for children. Electric rice cookers and air fryers were also popular new acquisitions.

Conditions for coffee workers, on the other hand, vary considerably. The migrating coffee harvesters (*andariegos*) generally receive free accommodation on the farms during the harvest season. On small farms, they are usually provided with their own bedroom and bathroom, while on larger farms they generally have to sleep in a bunkbed in a dormitory (see Figure 8).

Figure 8. Typical housing for harvest workers (andariegos)

Source: Authors' photos.

Permanent workers living on the farm often have better housing conditions. Indeed, sometimes they occupy the main farmhouse, while the owner lives in the city. Offering attractive housing conditions is one way to attract and keep experienced, reliable workers. Figure 9 shows a few examples of decent housing for permanent coffee workers. However, it is important to keep in mind that only a small percentage of coffee workers are permanent workers.

Figure 9. Attractive housing for permanent coffee workers

Source: Authors' photos.

6.3. Rent or user cost for basic acceptable housing

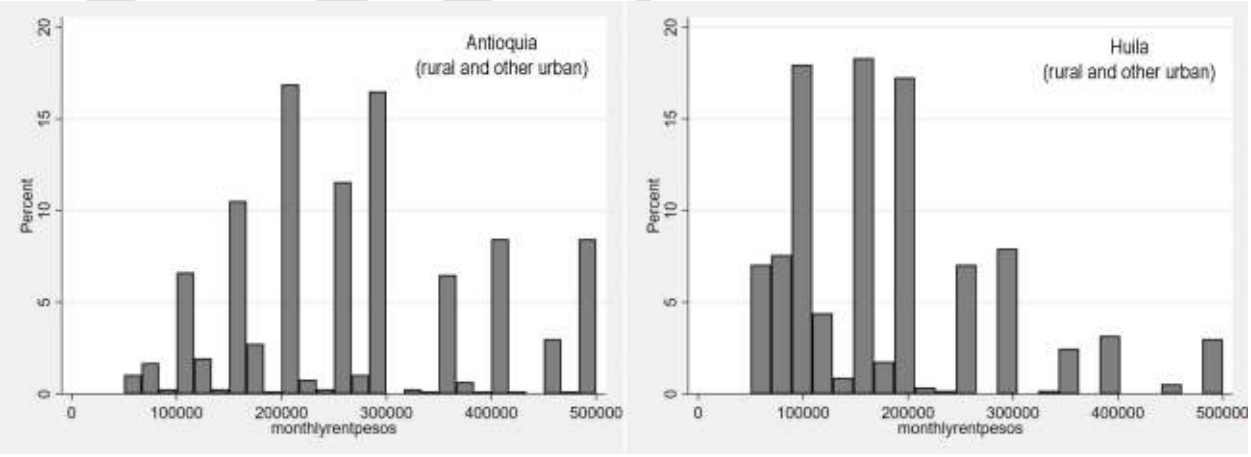
In order to determine the cost of renting basic acceptable housing in the coffee-growing regions of Antioquia and Huila, 2021 ECV household survey data was used. The 2021 ECV survey collected information from each household on either the rent they actually paid or, more commonly, the rent they estimate they would have to pay if they had to rent their current home. From the 2021

ECV household survey, a sub-set of houses for the analysis using the following restrictions was chosen:

- Households located in rural or other urban locations (not municipal capitals).
- Households with two to seven members (excluding one-person households and especially large households likely to be multi-family households).
- Houses meeting all seven housing quality conditions (exterior walls, roof, floor, water, toilet, electricity and rooms all ok).
- Houses with an estimated monthly rent between COP 50,000 and COP 400,000. Less than COP 50,000 is considered unrealistic for any kind of dwelling, and the fieldwork indicated that COP 400,000 was clearly more than enough for basic decent housing in these regions. The estimated rent values for decent housing reported during fieldwork ranged from COP 110,000 in rural areas to COP 450,000 in municipal capitals of the coffee-growing regions.

Figure 10 shows the distribution of rental values for 2,740 decent single-family dwellings (complying with all seven minimum criteria) extracted from the 2021 ECV household survey. Values clearly cluster around multiples of COP 50,000.

Figure 10. Distribution of the rental values of decent houses in rural and other urban areas of Antioquia and Huila in 2021



Source: Authors' elaboration based on data from the 2021 ECV household survey.

While decent housing in rural and other urban areas of Huila is concentrated in the COP 100,000 – COP 200,000 range, there is more variation in the department of Antioquia (because it is a much larger and geographically and economically diverse department). In both regions it is clearly possible to find decent housing for less than COP 400,000. If both too low and too high values are excluded, the median rent for acceptable housing in rural and other urban areas of Antioquia is COP 200,000 while in Huila it is COP 150,000 (see Table 8).

Table 8. Median rent for modest homes[1] complying with 7 key housing quality conditions in rural and other urban areas of Antioquia and Huila in 2021

Region	Antioquia	Huila	Both regions
Share of homes complying with all 7 housing quality conditions (%)	53.54	55.85	54.08
Median rent for homes complying with all 7 housing quality conditions (in COP)	200,000	150,000	200,000

Note: [1] Only households with 2-7 members and complying with all seven housing quality conditions. Excluding extreme values of COP 50,000 or less and COP 400,000 or more.
Source: Authors' calculations based on data from the 2021 ECV household survey.

6.4. Utility costs

To estimate utility costs, we used data from two sources, the 2021 ECV household survey and the 2016-17 National Household Expenditure Survey (ENPH). First, we used the same sample of decent homes in rural and other urban areas of Antioquia and Huila in the 2021 ECV survey, to estimate median monthly utility costs for households which paid for each of these services (see Table 9).

Table 9. Median monthly utility costs for decent homes[1] in rural and other urban areas of Antioquia and Huila, 2021

Region	Antioquia	Huila	Both regions
Electricity	33,500	17,500	29,800
Piped water	14,000	6,000	10,000
Sanitation	8,700	3,755	8,000
Gas for cooking[2]	40,000	44,640	44,000
Trash collection	9,000	5,000	8,600
Total	105,200	76,895	100,400

Note: [1] Only households with 2-7 members, complying with all seven housing quality conditions, and with a rental value between COP 50,000 and 400,000. Only households that pay for each service are included in the calculations.
[2] Piped natural gas is the cheapest and most convenient cooking fuel, but is not available in rural areas. Instead, rural households have to buy gas canisters which are about twice as expensive. For this calculation we doubled the median reported expenditure on piped gas.
Source: Authors' calculations based on data from the 2021 ECV household survey.

It is important to note that households who did not have a specific service were not included in the calculations for that service. For example, only about 60% of rural and other urban households in Antioquia and Huila received and paid for piped water from a water company. The rest have developed their own solutions based on a spring or a well. However, since our housing standard requires piped water on the property, the typical (median) cost for piped water should be included as a necessary expenditure. Similarly, all houses need sewage disposal, and so we include the median cost of sewerage service. Currently, most coffee farmer households in the region do not have this service, but instead rely on septic tanks and other less convenient, but not necessarily less expensive solutions.

For cooking, rural households tend to use a combination of gas, electricity, and firewood. They use these interchangeably, depending on the price and the availability of each option, as well as the meal to be cooked. In the morning, they tend to use gas, as that is the quickest option. For cooking beans, on the other hand, they tend to use firewood, as the long cooking time would consume too much gas. While piped natural gas is the cheapest and most convenient for cooking, it is not available in disperse rural areas, and households instead have to buy gas canisters. The fieldwork indicated that this was about twice as expensive as piped gas, so the reported median monthly costs of piped gas was doubled to arrive at real gas expenditures in the study regions. This amount is similar to the approximately COP 45,000 we found among the coffee farmers we visited during our fieldwork.

There are obvious problems with utility cost data from the ECV survey shown in Table 9. First, utility costs in table 9 are too low according to key informants and our own fieldwork and this is despite the various ad hoc adjustments which we made to increase utility costs reported in the ECV survey. Second, utility costs are clearly too low for Huila.

A second way of estimating utility costs is to use data for rural and other urban households from the 2016-17 National Household Expenditure Survey (ENPH) to determine the percentage of total household expenditures which are for utilities. According to Table 11 below, this share is 4.87% for rural and other urban areas in Colombia. This percentage was multiplied by total family living

cost for a living wage (see Table 16) in each region. This indicates utility costs of COP 123,071 for Antioquia (4.87% * 2,527,125) and COP 120,376 for Huila (4.87% * 2,471,795).

The utility costs of around 120,000 from the second approach are more in line with the information gathered from fieldwork. Using these numbers, total housing costs would be COP 323,071 (USD 82) per month in Antioquia and COP 270,376 (USD 69) in Huila (see Table 10).

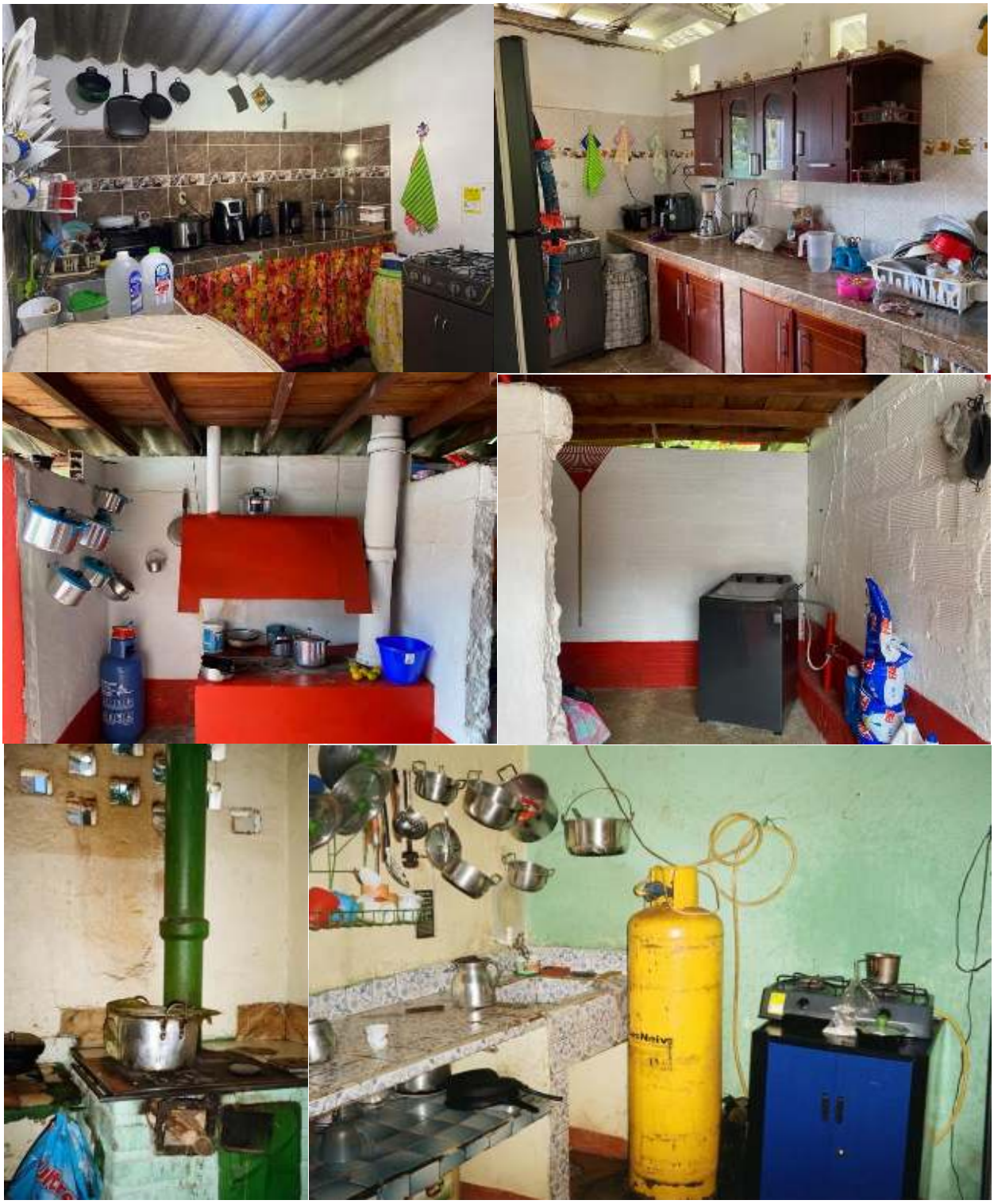
Table 10. Total housing costs for modest but decent homes in rural and other urban areas of Antioquia and Huila in 2021 (in COP)

	Antioquia	Huila
Rental costs	200,000	150,000
Utility costs	123,071	120,376
Total housing costs	323,071	270,376

Source: Authors' calculations.

Figure 11 shows typical kitchens on coffee farms in the study regions.

Figure 11. Kitchen and washing appliances in houses of farmers and permanent coffee workers in Antioquia and Huila



Note: The first sequence of photos is from the homes of coffee producers. The second and third is from the homes of permanent coffee workers.

Sources: Authors' photos.

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

While food and housing account for the majority of expenditures for a typical worker household, there are other essential expenses that should be included in living wage calculations. Health and education are considered human rights, but people also need to spend money on clothing and footwear, personal hygiene, transportation, communication, recreation, household furnishings and certain durable goods.

Whereas food and housing costs are estimated based on normative standards for a nutritious diet and healthy housing, Non-Food and Non-Housing (NFNH) costs are estimated as a mark-up based on an estimated ratio of NFNH costs to food costs according to secondary data. The best data to use for this purpose is the very detailed, year-long household expenditure survey (ENPH) carried out by DANE in 2016-2017 to determine the weights of each of item in the consumption baskets of different types of households in different regions of the country.

Since consumption patterns usually change very slowly over time, this detailed survey is carried out only once every decade, and it is used for the following ten years to calculate inflation. However, during the COVID-19 pandemic, consumption patterns changed quite suddenly according to ECV data. For example, expenditure on transportation dropped from 8.6% in 2016-2017 to 4.9% in 2020, and expenditure on eating away from home dropped from 8.3% to 3.4% during the same period. Transportation costs had almost increased to pre-pandemic levels by 2021, when it accounted for 7.6% of household expenditures at the national level. Clothing saw the biggest drop from 4.1% in 2016-2017 to 1.1% in 2020, and by 2021 it had only recovered slightly to 1.4%. Housing was the category that increased most during the pandemic, increasing from 30.6% in 2016-2017 to 43.9% in 2020. It remained high in 2021 at 41.4%.[30] Just as the ENPH is expected to be used for a decade for determining CPI, this living wage report is expected to be used for the next 5-10 years (updated by inflation annually), and it is important to use expenditure

[30] According to DANE's calculations at the national level based on the 2016-2017 ENPH survey and the 2020 and 2021 ECV surveys.

patterns that are "normal," which is why the 2016-2017 ENPH data is preferred to more recent 2020 or 2021 data.

Table 11 shows the household expenditure patterns for Colombia for "Municipal capitals" and other "Other urban and rural areas" separately, since lifestyles and expenditure patterns differ significantly between the two, and the latter would be most relevant for the coffee-growing regions of Colombia.

In Table 11, expenditures were grouped together into larger groups, although maintaining more detail for some specific items, as required by the Anker methodology. Food costs in the Anker methodology include food and non-alcoholic beverages consumed at home, as well as half of expenditures on food consumed outside the home for an upper-middle income country like Colombia.[31] Housing costs include rental costs (mainly estimated by households, as most people own their own home) as well as utility costs (electricity, water, sewage, gas, and trash collection). NFNH expenditures include everything else, except cigarettes, which are not considered necessary for a decent standard of living. A private car is not considered necessary in Colombia, but a motorcycle is since they are quite common in the coffee-growing regions,[32] as they are the most economical, flexible, and practical means of transportation in the rugged terrain that lacks access to regular public transportation options.

The share of food expenditure is considerably higher in "Other urban and rural areas" (35.44%) compared to "Municipal capitals" (19.44%), while the share of expenditures on Housing and all other NFNH items is smaller. This means that the ratio of NFNH/food expenditures is much lower in "Other urban and rural areas" (1.14) than in "Municipal capitals" (2.52).

[31] While some of the cost of meals away from home is for the food in these meals, about half is typically for profit and services such as food preparation, cooking, cleaning, and serving in an upper-middle income country like Colombia. This is why the Anker methodology adds half of food away from home costs to food costs, while the other half remains in the group of Non-Food Non-Housing expenditures.

[32] As shown in Table 6, about one-third of households in the "other urban and rural areas" of Antioquia have a motorcycle, while this is the case for almost half of the households in Huila.

Table 11. Expenditure patterns in Colombia, according to the 2016-2017 ENPH

Expenditure	Municipal capitals	Other urban and rural	Total
Food (at home and half of food away from home)	**19.44**	**35.44**	**21.08**
Housing	**31.44**	**24.03**	**30.59**
Rental costs	25.19	19.16	24.79
Utilities	6.25	4.87	5.80
Non-Food Non-Housing expenditures	**49.02**	**40.42**	**48.23**
Half of food away from home	4.43	3.51	4.14
Alcoholic beverages	0.65	0.99	0.69
Clothing and footwear	4.04	4.70	4.11
Household furnishings and equipment	3.70	3.90	3.72
Recreation and culture	3.37	2.61	3.28
Healthcare (incl. medicines)	1.83	1.72	1.82
Education (incl. school material)	3.46	0.67	3.14
Transportation	8.75	7.51	8.61
All other expenditures[1]	18.79	14.81	18.72
Eliminated expenses	**0.10**	**0.11**	**0.10**
Cigarettes	0.10	0.11	0.10
Ratio NFNH/food	**2.52**	**1.14**	**2.29**

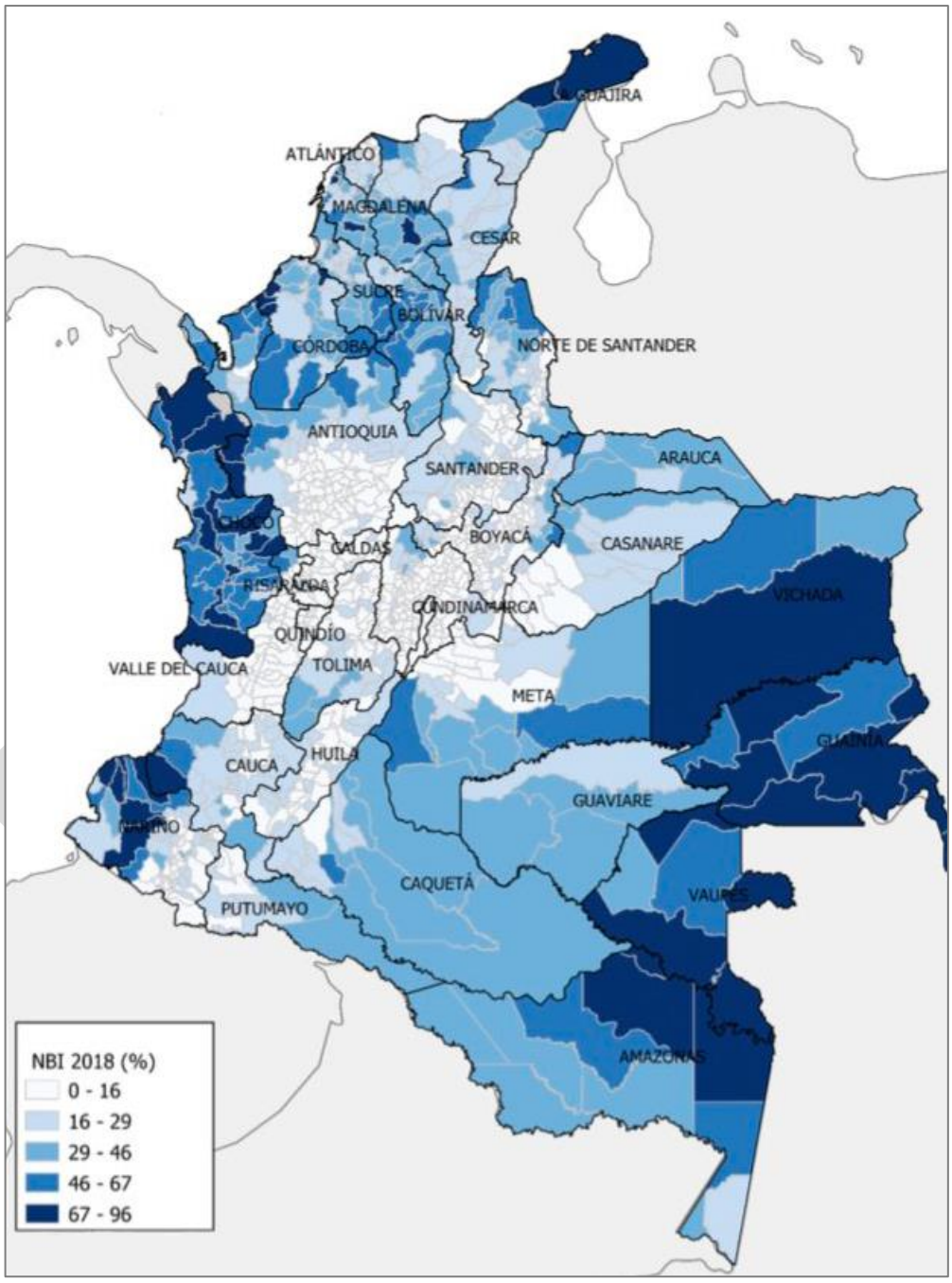
Note: [1] All other expenditures include communications, insurance, haircuts, toys and other expenses that did not fit within any of the other major expenditure groups.

Source: Authors' calculations derived from the National Household Expenditure Survey (ENPH) 2016 – 2017.

The NFNH/food ratios in Table 11 were calculated for Colombia as a whole, since department level estimates were not available. To help determine whether the "other urban and rural" national average ratio of 1.14 is appropriate for the coffee-growing regions of both Antioquia and Huila, we looked at average rates of Unsatisfied Basic Needs (UBN) according to the 2018 population census, as UBN is a good summary measure of living conditions. In the department of Antioquia, the UBN rate in "other urban and rural areas" is 26.9%, which is close to the national average of 30.5% for "other urban and rural areas," while in Huila it is lower at 18.4%. However, the coffee-growing region of Antioquia (comprising the southern part of the department) is more prosperous

than the rest of the department, and it appears to be at least as well off as the coffee-growing regions of Huila (see Figure 12). Thus, we feel that it is reasonable to use the same NFNH/food ratio for both Huila and Antioquia coffee-growing regions.

Figure 12. Unsatisfied Basic Needs (NBI) in Colombia, 2018, by municipality



Source: Elaborated by Jaime Bonet based on data from the 2018 Population Census.

The NFNH/food ratio increases systematically with household income as is typical around the world. The correct ratio to use for living income and living wage calculations is the one that corresponds to families that just have enough income for a decent, but frugal standard of life. In this way, the NFNH estimate should be sufficient for basic decency. This means that the first three deciles in "other urban and rural areas," which suffer from Unsatisfied Basic Needs clearly are not appropriate, and the fourth decile probably does not qualify as decent either. This means that the adequate deciles to use for living income calculations would be the fifth and/or sixths deciles, for which the average of 1.14 calculated for "rural and other urban areas" of Colombia is a good proxy.

This value is lower than the 1.60 ratio that Andersen et al. (2020) found for the banana growing regions of Colombia, but that is to be expected, since banana workers predominantly live in municipal capitals. The ratio is very similar to the one Delajara et al. (2020) used for agricultural regions of Michoacan in central Mexico (1.15), but much lower than the one used by de Freitas Barbosa et al. (2020) for the citrus growing belt of Brazil where most workers lived in small towns (2.12). In any case, it is considered a frugal mark-up-factor, reflecting necessary NFNH expenditures for families at income levels just around the estimated living income for the coffee growing regions of Colombia.

Given monthly food costs for the reference family of COP 973,698, a NFNH/food ratio of 1.14 implies that monthly NFNH expenditures amount to COP 1,110,016 for both study regions.

8. POST CHECKS ON HEALTH AND EDUCATION COSTS

According to Table 11, healthcare costs account for less than 2% of household expenditure and education accounts for less than 1% of household expenditures for families in rural and other urban areas of Colombia. These are low percentages from an international perspective and are undoubtedly due to the public provision of free education and healthcare. The purpose of the present section is to verify that this spending indicated by the secondary data is indeed enough to secure decent healthcare and education services through secondary school, since they are human rights.

8.1 Healthcare post check

With Law No. 100 of December 1993, Colombia made an important step towards a universal healthcare system. According to the 2019 ECV household survey, 92.8% of the population is covered by the public healthcare system (SGSSS), and this percentage is even a bit higher in rural and other urban areas (94.3%) (DANE, 2020).

The healthcare system has two modalities with regard to funding: i) contributive and ii) subsidized. Employees, such as banana workers with a formal contract are in the contributive system, which means that compulsory deductions of 4% are made from workers' salary for contributions to the healthcare system. The employer pays an additional 8.5%. These relatively high healthcare contributions from employers and employees are used to subsidize health services for the rest of the population, including most coffee workers, who are covered by the subsidized system. Everyone receives the same healthcare services regardless of whether or not they contributed to the system.

As in many other countries, some people opt for a private health insurance in order to receive better and speedier care than what the public system is able to offer, but this is a very small share in Colombia, and it is covered by the NFNH estimate.

All coffee workers interviewed during the fieldwork were covered by the subsidized public healthcare system and had received free attention when needed. Thus, the modest household expenses for healthcare (1.72% of total expenditures for "Other urban and rural" households) seems realistic, and we find no reason to make adjustments given excellent health outcomes in Colombia.

The results of this universal healthcare system are quite impressive. Although Colombia's GDP per capita is well below the world average,[33] most health indicators are well above global averages. For example, in 2019, more than 99% of births in Colombia were attended by skilled

[33] According to the World Bank's World Development Indicators, in 2021 Colombia's GDP per capita (USD 6,131) was almost exactly half the world average (USD 12,263).

staff, in comparison to a world average of 80.9%. As a consequence, the infant mortality rate is only 1.18% in Colombia, compared to a global average of 2.82% in the world and the maternal mortality rate is 44 per 100,000 live births in Colombia, compared to 211 worldwide.[34]

Although the situation has improved substantially in recent years, Colombia still suffers from a high level of violence. According to Global Burden of Disease data, inter-personal violence is the main cause of lost Disability Adjusted Life Years (DALYs), causing 8.6% of all DALYs lost.[35] Nevertheless, life expectancy in Colombia is 77.3 years, compared to 78.8 years for the United States and the world average of 72.7.[36]

8.2 Education post check

Colombia's education system has improved considerably over the last couple of decades, both in terms of quantity, quality and equity. However, like most education systems in Latin America, students still perform poorly compared to Organization for Economic Cooperation and Development (OECD) countries and Asian countries. Fifteen-year-old Colombians are about three years of learning behind the OECD average, and 41% have repeated at least one grade (OECD, 2016). These statistics are likely worse in rural areas, and the extended COVID-19 related school closures have certainly not helped.

Government expenditure on education has increased substantially, from 1.7% of GDP in 1980 to 4.5% in 2019. About 80% of students, both at primary and secondary levels, attend public school.[37]

According to our discussions with coffee workers, initial, primary, and secondary education is free, with only some modest expenses related to school uniforms and school materials at the beginning of the school year. These expenses are more than offset by the conditional cash-

[34] All information extracted from the World Bank's World Development Indicators; latest year available.
[35] According to Global Burden of Disease Compare for the year 2019, accessible here: https://vizhub.healthdata.org/gbd-compare/.
[36] All information extracted from the World Bank's World Development Indicators for the year 2019.
[37] According to the World Bank's World Development Indicators for 2019.

transfers that families with children aged 4 –18 receive every two months through the *Familias en Acción*[38] program if the children attend school.[39]

Thus, the 0.67% expenditure for education in "Other urban and rural areas" included in NFNH expenditures is felt to be sufficient to cover education expenses through secondary school, and therefore no adjustment is needed for NFNH.

9. PROVISIONS FOR UNEXPECTED EVENTS TO ENSURE SUSTAINABILITY

Unforeseen events and expenses can quickly throw workers living at a basic lifestyle into poverty and debt from which it is difficult to recover. For this reason, it is common when estimating a living wage to add a small margin above the cost of the basic quality of life allowed for by a living wage. Without such a margin, a living wage is not sustainable (Anker and Anker, 2017).

The Anker methodology recommends adding 5% to the cost of living in order to cover unexpected events. Using this recommended value, COP 120,339 per month per family were added to cover unexpected events and discretionary spending.

[38] https://prosperidadsocial.gov.co/sgpp/transferencias/familias-en-accion/.

[39] Coffee farmers who have children of the right ages benefit have access to these subsidies, but as indicated in Table 11, the average age of adults in the study areas is around 47, so their children tend to be in university rather than school.

PART II. LIVING WAGE FOR WORKERS

10. FAMILY SIZE TO BE SUPPORTED BY THE LIVING WAGE

The Anker methodology uses the family as the unit of analysis when estimating a living wage. This implies that the living wage should be sufficient to support the worker and his/her immediate family. Although families in the study regions tend to be small, and fertility rates low, a **reference family size of four (two adults and two children)** was chosen for this report, because that is the minimum family size allowed by the Anker methodology. At least two children per women are required to sustain a population over time, so less than two is not considered sustainable.

According to the 2021 ECV, two, three and four-person households are by far the most common in rural and other urban areas of Antioquia and Huila (see Table 12). After excluding one-person households (which are not relevant for this report, given that a living wage is a family concept) and large households with more than seven members (which are probably extended families), we find an average household size of around 3.5 persons in all rural and other urban areas of both Antioquia and Huila (see Table 12).

Table 12. Household sizes in rural and other urban areas of Antioquia and Huila in 2021

Number of persons in household	Antioquia	Huila	**Average for both**
1	14.23	16.82	14.85
2	22.48	20.14	21.91
3	24.69	21.05	23.81
4	20.22	20.20	20.22
5	10.92	12.46	11.29
6	4.86	5.89	5.11
7	1.43	1.98	1.56
8	0.46	0.69	0.52
9 +	0.71	0.78	0.73
Average household size	**3.19**	**3.26**	**3.20**
Share of single parent households (%)	**7.53**	**6.13**	**7.19**

Average household size for 2 to 7 person households	3.47	3.62	3.51
Average number of minors in 2 to 7 person households	1.17	1.30	1.20
Average age of head of household in 2 to 7 person households	46.7	46.4	46.6

Note: All calculations in this table are made using the analytical weights provided by the National Statistical Office (fex_c), to correct for non-proportional sampling of the survey.
Source: Authors' calculations based on the ECV 2021 household survey.

The average age of the head of household in the study regions is around 47 years, which means that many of their children are probably already adults. Indeed, the average number of minors (below 18 years) per household is only 1.20 in the study regions. Thus, although a reference family consisting of two adults and two children is used for calculating the living wage, in reality household compositions are often much more complex, and may include grandparents, single parents and grandchildren. The share of single parent families is relatively small at around 7.5% (see Table 12).

11. NUMBER OF FULL-TIME EQUIVALENT WORKERS IN THE FAMILY

When calculating a living wage, it is important to determine how many full-time workers sustain the reference family. The larger the number of income earners in the family, the smaller the required living wage.

Following the Anker methodology, it is assumed that one adult in the family works full-time, that the spouse works part-time, and that none of the children work. Children below the age of 18 are assumed in the Anker methodology to be in school, as a living wage should be sufficient to avoid child labor.

The law currently allows a workweek of up to 48 hours, but in July of 2021 a new law was established stating that the maximum legal workweek will be reduced from 48 to 42 hours per

week without reducing the salary or affecting workers' rights.[40] The implementation of the new workweek could be done immediately or gradually over the next five years at employers' discretion.

In the coffee sector in Colombia, it is usual to work from 6am until 5pm, 5 days per week, with breaks during the workday (Saldarriaga, 2020). According to the 2019 ECV household survey, by far the most commonly reported workweek was 48 hours, and there is no indication of that having been shortened by the end of 2021. Therefore, for the calculations in this report the 48-hour workweek is used.

Since one adult in the family is assumed to work full-time on a coffee farm, the main challenge in this section is to determine how much time the other adult works. According to the Anker methodology, the analysis must be made for men and women of prime working age (25-59-year-olds) and must take into account labor force participation rates, unemployment rates, and part-time work rates. Since the COVID-19 pandemic may have temporarily changed work patterns, the latest pre-pandemic household survey, which is the 2019 ECV survey, is used here.

The 2019 ECV household survey, which is large enough to be representative for our regions of interest, allows to directly calculate the average number of hours worked per week for men and women of prime working age (25-59 years old) living in 2-7 person households. This average includes people who are working full-time (but not overtime[41]), people who work part-time, people who have decided not to work for whatever reason (such as for family care, childcare, household work, or study), and people who are temporarily unemployed or otherwise unable to work at the time of the survey. These data not only include hours worked in the main occupation, but also in a secondary occupation, as well as animal husbandry, volunteering, community work,

[40] See Law 2101 of 15 July 2021: https://dapre.presidencia.gov.co/normativa/normativa/LEY%202101%20DEL%2015%20DE%20JULIO%20DE%202021.pdf

[41] For individuals working more than 48 hours per week, the number was reduced to 48, to be consistent with the Anker methodology, which assumes that a living wage should be earned within normal working hours, without the need for overtime as well as be consistent with ILO convention 1 (1919) which sets 48 hours per week as a maximum.

and other non-remunerated economic activities. It excludes unremunerated domestic work, such as taking care of one's own children and making food and clothes for the family because these are not included in the internationally accepted definition of economic activity or labor force activity.

Table 13 shows the average number of hours worked for men and women in rural and other urban areas of Antioquia and Huila. The simple average is around 26 hours per week for both regions.

Table 13. Average number of work hours per week in the rural and other urban areas of Antioquia and Huila in 2019

Area	Average hours per week worked by 25–59-year-old men and women in 2-7 person households			Implied number of full-equivalent workers per family
	Men	Women	Average	
Antioquia	39.61	12.74	26.18	1.55
Huila	41.08	10.92	26.00	1.54
Average	**39.96**	**12.32**	**26.14**	**1.54**

Notes: The hours worked consist of the "usual" hours worked in the primary occupation, as well as hours dedicated to other economic activities, such as animal husbandry, home office, volunteering and community work, but excludes domestic work, such as taking care of own children and making food or clothes for the family. The sample was limited to households in rural and other urban areas (not municipal capitals), and further limited to only include households with 2-7 members. All calculations in this table are made using the analytical weights provided by the National Statistical Institute (FEX_C), to correct for non-proportional sampling of the survey.

Source: Authors' calculations based on the 2019 ECV household survey.

Given this information, the number of full-time equivalent workers per family in rural and other urban parts of Antioquia and Huila can be calculated as:

$$1 + \frac{26.14}{48} = 1.54$$

12. GROSS LIVING WAGE, PAYROLL DEDUCTION, AND NET LIVING WAGE

Mandatory deductions from wages reduce the amount of take-home pay workers receive. These need to be taken into account when calculating a living wage, to ensure that workers have sufficient net income to cover their living costs. While most coffee workers are currently informal (see below), and do not pay either income taxes or social security contributions, this is neither fair

nor sustainable, so the contributions that workers ought to pay if they were formally employed were added.

In Colombia, the mandatory deductions are 4% for the contributory health system and 4% for the pension system. Table 14 shows the tax brackets for 2021. As long as the living wage is below COP 3,297,977 per month, it is exempted from income tax.

Table 14. Labor income tax brackets for Colombia in 2021

Income range in TVU*/year (Tax Value Units)	Income range in COP/month	Marginal Tax Rate
0 to 1,090	0 to 3,297,977	0%
1,090 to 1,700	3,297,977 to 5,143,633	19%
1,700 to 4,100	5,143,633 to 12,405,233	28%
4,100 to 8,670	12,405,233 to 26,232,530	33%
8,670 to 18,970	26,232,530 to 57,396,897	35%
18,970 to 31,000	57,396,897 to 93,795,667	37%
> 31,000	> 93,795,667	39%

Note: * For the fiscal year 2021, 1 TVU = COP 36,308.
Source: Dirección de Impuestos y Aduanas Nacionales (DIAN) and https://taxsummaries.pwc.com/colombia/individual/taxes-on-personal-income.

12.1. The informality of the coffee sector

In the 2019 ECV household survey, 5,529 respondents said they worked in coffee cultivation. Of these, 67.7% were small, self-employed coffee farmers working their own land, perhaps with the help of family members[42] and temporary workers, but without permanent hired workers. 19% percent were day laborers, who are normally paid either by the kilo of coffee berries picked (during the harvest) or by the day (outside of the harvest season). All of these are informal work

[42] 2.5% of coffee sector workers were reported to be unpaid family workers, although this is undoubtedly an underestimate because spouses who prepare meals for hired workers or do accounting for the family farm should be counted as employed but probably are not because of how information on employment is typically collected.

relationships and therefore do not contribute to either the health system or the pension system, nor do they pay income taxes.[43] Only 5.0% of coffee workers were employed in a more permanent position and would thus likely receive a fixed salary from which health contributions (4%) and pension contributions (4%) would be deducted. Only 4.3% of coffee producers in the survey were large enough to have permanent employees.

According to a survey done by the Nacional Federation of Coffee Growers (FNC, 2017), only 3% of the coffee workers (*recolectores*) surveyed had access to an old age protection system and 97% did not have access to an occupational risk protection system.[44] The predominance of informality in the coffee sector suggests that the vast majority of coffee workers do not currently pay taxes or make social security contributions. Most receive their salary in full every Saturday, with no Christmas bonus (*prima*), no severance pay (*cesantía*), and no old age pension. Despite this, they do, however, benefit from the free subsidized public healthcare system, and may also receive free housing if needed (though of highly variable quality).

Only the 5% of coffee workers who are formally employed on a long term-basis contribute to the health and pension systems, and also receive benefits such as a *prima* (standard bonus which amounts to an extra month's payment per year) and a *cesantía* (also one extra month's pay per year).[45] This is the case for permanent workers at some of the larger coffee farms (called either *mayordomo*, *jefe de cuadrilla* or *patrón de corte*) who oversee the farm and the workers, and they usually benefit from free decent housing with utility costs included.

[43] Only monthly incomes more than COP 3,868,200 pay income tax. This could concern around 3% of coffee growers who have +10 ha of coffee.

[44] The survey was conducted by the FNC during an extension service in November 2016. 7,578 coffee pickers were interviewed.

[45] For details on the different extra payments for formal workers, see https://gomezpinzon.com/salario-minimo-y-calendario-de-pago-de-prestaciones-sociales-en-202/.

12.2. Calculation of the gross living wage

While family living expenses were estimated separately for the coffee-growing regions of Antioquia and Huila, the key values and assumptions listed in Table 15 were the same for both regions.

Table 15. Key values and assumptions used for calculating the living wage for the coffee-growing regions of Huila and Antioquia

Key values and assumptions	
Study month and year	December 2021
Exchange rate of local currency to USD	3,936
Number of full-time equivalent workers per couple	1.54
Number of hours work in normal week	48
Reference family size	4
Number of children in reference family	2
NFNH to Food ratio	1.14

Source: Values derived in previous sections of this report.

Table 16 below presents a summarized version of our calculations of the living wage for the coffee-growing regions of Antioquia and Huila in Colombia. The gross living wage is very similar for Antioquia and Huila, being only 2.2% different. We recommend using the slightly higher living wage estimate for the "Other urban and rural areas" of Antioquia for both study regions, as this will also be sufficient for Huila. In addition, we think that this living wage will most likely also be appropriate for all the other coffee-growing regions in the central part of Colombia.

Table 16. Calculation of the gross living wage (in COP) for workers in the coffee-growing regions of Antioquia and Huila, Colombia for December 2021

PART I. FAMILY EXPENSES	Antioquia	Huila
Food cost per month for reference family of 4 (1)	**973,698**	**973,698**
Cost of model diet per person per day	8,512	8,512
Savings on food costs per person per day from free school meals	509	509
Food cost per person per day considering free school meals	8,003	8,003
Housing costs per month (2)	**323,071**	**270,376**
Rent per month for acceptable housing	200,000	150,000
Utility costs per month	123,071	120,376
Non-food non-housing costs per month (3)	**1,110,016**	**1,110,016**
Preliminary estimate of NFNH costs[1]	1,110,016	1,110,016
Healthcare post check adjustment	0	0
Education post check adjustment	0	0
Transport post check adjustment	0	0
Additional amount (5%) for sustainability and emergencies (4)	**120,339**	**117,705**
Total living costs per month for basic but decent living standard for reference family (5) [(5) = (1) + (2) + (3) + (4)]	**2,527,125**	**2,471,795**
PART II. LIVING WAGE PER MONTH		
Net living wage per month based on 1.54 full-time equivalent workers in reference family (6) [(6) = (5)/1.54]	**1,640,990**	**1,605,062**
Statutory deductions from pay (7)	**142,695**	**139,571**
Social security contributions are 8% of pay (7A)	142,695	139,571
Income tax (7B)	0	0
Other statutory deductions from pay that are fixed amounts (7C)	0	0
Gross living wage per month (8) [(8) = (6) + (7)]	**1,783,685**	**1,744,632**

Notes: [1] Based on an estimated NFNH/food ratio of 1.14.
Source: Authors' calculations.

PART III. ESTIMATING GAPS BETWEEN THE LIVING WAGE AND PREVAILING WAGES

Determining the gap between the estimated living wage and the prevailing wages is an important component of a living wage report to assess how close workers are to receiving a living wage, and this estimate is thus an important datapoint for various stakeholders, policies, and programs seeking to improve worker welfare in the coffee sector in Colombia. It is important to note that coffee generates around 730,000 direct jobs, or about 25% of all agricultural employment in Colombia.[46]

13. PREVAILING WAGES

In contrast to the banana export sector, which is highly formalized in Colombia, the coffee sector is mostly informal, and few workers have stable, long-term contracts with predictable wages and benefits. Indeed, most of the people cultivating coffee are self-employed, which means that they do not receive a wage. Most of the rest are day laborers, who get paid in cash at the end of each week, making it difficult to obtain pay-slips or payment records. Thus, it is very difficult to determine prevailing wages in the coffee sector.

In order to get a rough idea of prevailing wages in the coffee sector, we interviewed 33 coffee workers in Antioquia and Huila during our fieldwork. This small sample was divided into year-round permanent workers paid per day, week, or month, and harvest workers who were paid per kilo. For off-season workers, payments per month ranged from COP 960,000 to COP 1,920,000, with a median value of COP 1,200,000 per month. When permanent housing of decent quality for the whole family around the year was offered as part of the payment, its value was included in the salary calculations using our estimated value for decent housing (see above section on cost of decent housing).

[46] https://federaciondecafeteros.org/static/files/FNCCIFRAS2017.pdf

For harvest workers, payments per kilo ranged from COP 640 to 1,200. The lowest payments correspond to the most abundant and easiest plots to harvest, while farmers with exceptionally steep slopes during the beginning or end of the harvest season raise the price per kilo to attract workers. Depending on these different factors, coffee harvesters can usually pick between 80 and 120 kilos per day. Monthly payments to the coffee harvesters interviewed ranged from COP 1,200,000 to COP 3,000,000, with a median value of 1,920,000. On top of that, some would receive free housing, but only for themselves and not of a quality or size that could accommodate the reference family of four.

Again, it is important and necessary to keep in mind that the above estimates of prevailing wages are only rough approximations partly because of the small number of workers who were interviewed and partly because there was such a large range of wages received.

Evidently, it is more attractive to work during the harvest season as wages are significantly higher. However, unless workers want to move around the country to follow the coffee harvest, as *andariegos* do, over a year a typical coffee worker might be able to earn higher harvest wages only for about 4 months per year, and lower off-season wages (COP 1,200,000/month as calculated above) for the remaining 8 months, but with substantial variation depending on the worker's skills, the management of the farm, and the geographical and meteorological conditions.

Andariegos, migrant coffee harvesters who migrate from region to region following the coffee harvest year-round, constitute quite a different phenomenon. While they may earn higher wages throughout the year, the work does not allow them to stay with their families, which entails many negative consequences and additional expenses. While it is of course perfectly valid to choose this nomadic lifestyle, *andariegos* live a vulnerable life, are not covered by social security, and have few options to accumulate assets or benefits to save for old age.

14. THE LIVING WAGE IN CONTEXT

14.1. The wage ladder

Figure 13 shows a wage ladder, which compares the estimated gross living wage for 2021 of COP 1,783,685 per month (column 6) with five other wage comparisons. The first column shows the gross wage that would be needed to keep a reference family of four persons with 1.54 full-time equivalent workers just at the World Bank's international poverty line for upper-middle-income countries ($5.50 PPP) per person per day, measured in purchasing power parity adjusted international dollars.[47] It is clear that the World Bank international poverty line wage for Colombia is much too low.

The second bar represents the gross wage that would be needed for the same family to be at the national poverty line of COP 354,031 per month per person, which is COP 919,561 per month (4*354,031/1.54) for a family of four. The national poverty line wage is higher than the World Bank poverty line wage, but still much too low for basic decency for Colombia.

The third bar shows the gross minimum wage for 2021 - including *prima, cesantía* and transportation subsidy (908,526*14/12 + 106,454 = COP 1,166,401). The living wage is 53% higher than the gross minimum wage. The minimum wage is obviously too low for decency.

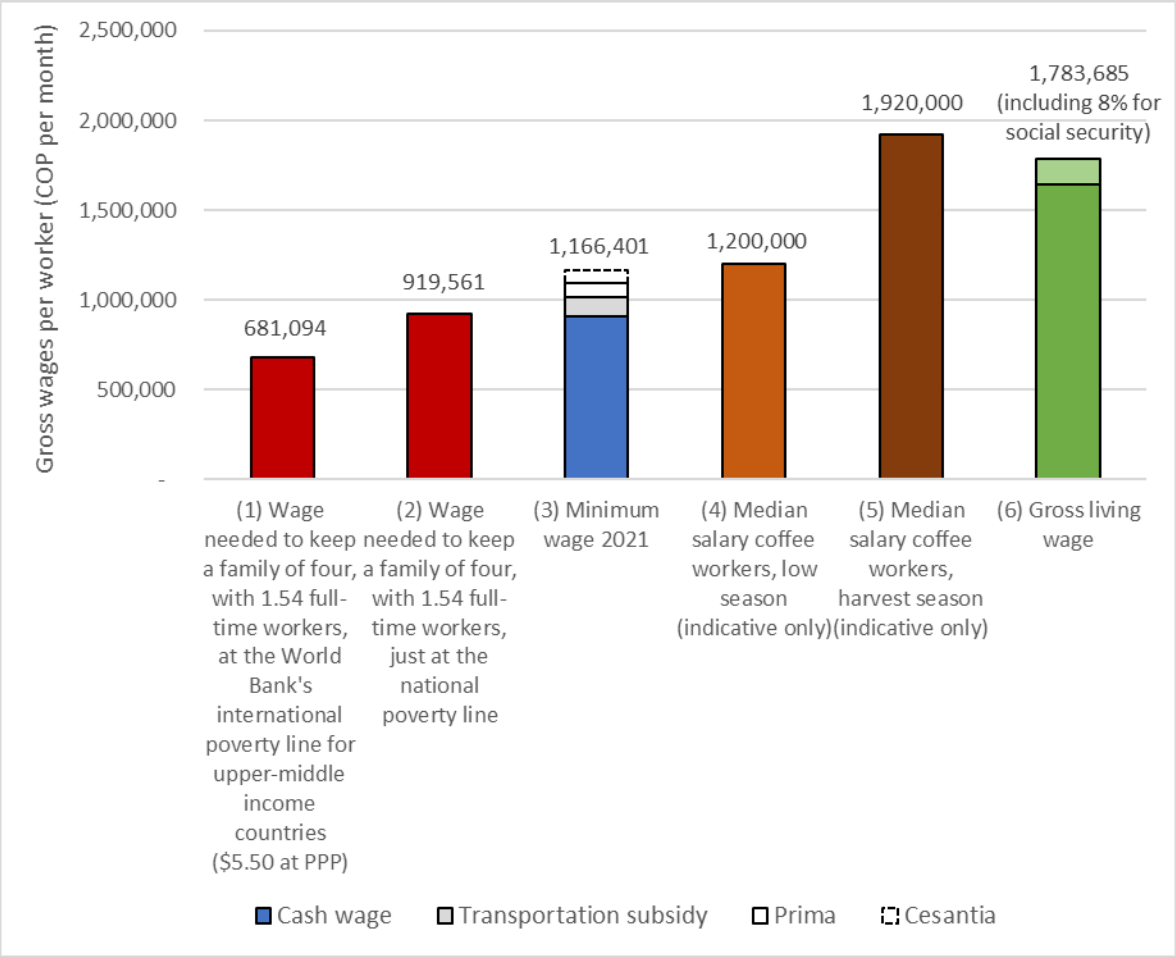
The fourth and fifth columns are only indicative estimates of prevailing wages per month for local coffee workers during the harvest season (about 4 months per year) and during the low season (the rest of the year). The reason why they are only indicative prevailing wages – and so very rough estimates is because they are based on interviews with only 33 coffee workers; in addition, the range of reported wages is quite large. It would appear that off-season wages are similar to

[47] Since October 2017, the World Bank operates with different international poverty lines for different income groups. For upper-middle-income countries, like Colombia, the international poverty line is set at 5.50 PPP-adjusted international dollars per person (http://blogs.worldbank.org/developmenttalk/richer-array-international-poverty-lines). The World Bank also publishes private consumption PPP-conversion factors. The value for Colombia for 2021 is 1,567.45. This is equivalent to a monthly poverty line for a family of four for 2021 of 4*(365/12)*5.50*1,567.45 = COP 1,048,885. This necessary income would be shared between 1.54 full-time equivalent workers, meaning that each full-time worker should earn COP 681,094 to keep the family just at the World Bank's poverty line.

the national minimum wage, while harvest season wages (which are for a short period during the year) are possibly close to the estimated gross living wage.

The estimated gross living wage is about 53% higher than the minimum wage, indicating that the minimum wage is currently not enough to support a family of four at a basic decency level, even if both adults work (one full-time and the other around half-time).

Figure 13. Wage ladder for the coffee-growing regions of Antioquia and Huila (COP/month)



Note: Prevailing wages in columns (4) and (5) are very rough estimates based on only 33 observations and so are only indicative.

Source: Authors' elaboration based on calculations throughout this report.

14.2. Evolution of the minimum wage

In recognition that it was too low, the minimum wage has been increased by more than 10% between 2021 and 2022 to COP 1,000,000 per month (plus *prima*, *cesantía*, and COP 117,172 transport subsidy). Figure 14 shows how the nominal and real minimum wage has evolved in Colombia over the last two decades. Although the nominal minimum wage has almost tripled over the last 20 years, the real purchasing power of the minimum wage has only increased by about 30% during the same period. Inflation is also likely to offset most of the 10% increase in the nominal minimum wage in 2022.

Figure 14. Nominal and real minimum wage in Colombia, 2003 - 2022

Source: Authors' elaboration based on data from https://www.salariominimocolombia.net/historico/.

15. CONCLUSIONS

The estimated family living expenses for the coffee-growing regions of Antioquia and Huila is COP 2,527,125 per month, and the gross living wage (aka living wage) is COP 1,783,685 (USD 453) per month. This is the monthly wage necessary for a typical family of four (two adults and two children), with 1.54 full-time equivalent workers, to pay for a low-cost nutritious diet, decent healthy housing, adequate healthcare, education of children through secondary school, clothing, and other essential expenses.

These values were calculated for December 2021 and cover the coffee-growing regions in the two leading coffee producing departments of Huila and Antioquia. Living costs were found to be sufficiently similar in these two regions for one living wage to be valid for both regions.[48] This estimate is probably also relevant for other nearby coffee producing regions in central Colombia.

The living wage is 53% higher than the minimum wage that coffee workers tend to earn during the long non-harvest season. The living wage is also much higher than the national poverty line wage (94%) and the World Bank international poverty line wage for Colombia (162%). It is difficult to know how our living wage estimate compares to prevailing wages in the coffee sector especially during the four-month harvest season because this work is informal. Our best guess, based on discussions with 33 coffee workers, which is of course a very small sample, is that wages during the harvest season are similar to the living wage while wages in the rest of the year are much lower and similar to the minimum wage. This would mean that the average wage over the whole year for coffee workers is considerably below a living wage.

A structural problem in the coffee sector is the high level of informality, which means that most workers do not have protection against adverse events and retirement savings are virtually nonexistent because they do not generally contribute to the public pension fund. This is not a

[48] As the gross living wage is very similar for Antioquia and Huila, being only 2.2% different, we recommend using the slightly higher living wage estimate for Antioquia, since this will be sufficient for both regions.

sustainable situation, which is why social security contributions were included in the calculation of the gross living wage, even though very few coffee workers currently make those contributions.

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