LIVING INCOME REPORT (WITH LIVING WAGE ANNEX)

MINIMUM WAGE REGION 4, VIETNAM

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GLOBAL LIVING WAGE COALITION

ABSTRACT

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This report estimates a living income for minimum wage Region 4 of Vietnam using the Anker Methodology. Region 4 is one of four regions used by the Government of Vietnam for setting minimum wages and includes rural areas across the north, center, and south of the country. For Region 4, we estimate a living income of VND 10,095,308 (USD 423) per month, as of November 2022. This is the income required for a typical family of 2 adults and 2 children to afford a nutritious, low-cost diet, healthy housing, adequate health care, education through secondary school, and all other expenses, plus a small margin for unexpected events. Our estimate of a living wage for Region 4 is VND 6,132,865 (USD 257), based on one adult in full-time employment and one adult in part-time employment. These values were calculated using secondary data on household expenditure, labor force activity, and population from the General Statistics Office of Vietnam combined with primary data on local costs of food, housing, health care, education, and transport for a sample of 6 districts in 6 provinces in Northern, Central, and Southern Vietnam. Our living income estimate is around 70% higher than family income based on the 2022 minimum wage for Region 4 (with one adult in full-time employment and one adult in part-time employment).

Any questions, comments, or observations about this study and the results it reports should be directed to the Anker Research Institute leadership:
marthaandrichard@ankerinstitute.org

Keywords: Living costs, living income, living wages, Anker Methodology, Vietnam

JEL classification codes: I30, J30, J50, J80.

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ABOUT THE AUTHORS

Do Quynh Chi was the Director and co-founder of the Research Center for Employment Relations until December 2022. She earned her doctorate in Industrial Relations from the University of Sydney and has over 20 years of experience in labour research, training and consultancy. She has been working with Martha and Richard Anker to estimate living incomes and living wages for Vietnam since 2015.

Nguyen Huyen Le is the Head of the Wage Division, Department of Industrial Relations and Wages, Ministry of Labour, Invalids and Social Affairs of Vietnam. She is also a member of the technical team of the Vietnam National Wage Council. She has been working with Martha and Richard Ankers to estimate living incomes and living wages for Vietnam since 2015.

Richard Anker is co-director of the Anker Research Institute. He developed the Anker Methodology together with Martha Anker and is one of the founders of the Global Living Wage Coalition. He retired after 30 years as a senior economist from the International Labour Organization. He has written 18 books and numerous articles on topics such as poverty, decent work, gender, child labour, demography, and labour markets.

Martha Anker is co-director of the Anker Research Institute. She developed the Anker Methodology together with Richard Anker and is one of the founders of the Global Living Wage Coalition. She retired after 25 years as an applied statistician from the World Health Organization. She has written 8 books and numerous articles on topics such as gender, epidemic prone diseases, rapid assessment methods, and demography.

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We are grateful to the International Coffee Organization (ICO) for funding this study and report.

SECTION I. INTRODUCTION

1. BACKGROUND

> ***"Policies in regard to wages and earnings, hours and other conditions of work calculated to ensure a just share of the fruits of progress to all, and a minimum living wage to all employed and in need of protection;"***
>
> (ILO Philadelphia Declaration, 1944, Annex to ILO Constitution)

Living wage – and the idea that workers should be paid a decent wage and not have to live in poverty – has a long and distinguished history. Indeed, living wage could be considered a mainstream idea and in any case is very far from being a radical idea. Well respected individuals, institutions, and organizations have advocated payment of a living wage for hundreds of years. This includes United Nations Declaration of Human Rights; Popes; Presidents of countries; Constitutions of countries and the International Labor Organization; academics famous for championing free market economics; and 20th century industrialists.

The acceptance and championing of living wages has had a rebirth in recent years. This includes codes of conduct of global companies and standard setting organizations such as those in the Global Living Wage Coalition (GLWC). The United Nations Global Compact – the world's largest corporate sustainability initiative – encourages companies to provide a living wage as an essential aspect of decent work and the Sustainable Development Goals (Target 8.5).

The living wage concept is especially relevant for Vietnam, because its 2019 Labor Code and minimum wage law Article 91(1) specifies that the minimum wage should "satisfy the minimum living standards of the worker and his/her family" and we think that this could be interpreted as requiring payment of a living wage especially since Article 91(2) says that the minimum wage should "vary by region" presumably along with differences in living costs (Socialist Republic of Vietnam, Labor Code 2019, Statutory Minimum Wage Article 91). On the other hand, Article 91(3) says that determination of the minimum wage should also be "adjusted according to the relation between statutory minimum wages and usual salaries; consumer price index, economic growth rate; labor supply and demand, productivity and financial capacity of enterprises", aspects that are not concerned with worker needs.

Living income is a newer concept that uses the same methodology as the living wage to estimate a decent standard of living for farm families.

1.1 The Anker Methodology for measuring living income and living wage

This report uses the Anker Methodology (Anker and Anker 2017) to estimate a living income (and a living wage, see Annex) for the minimum wage Region 4 of Vietnam. The Anker Methodology has gained widespread

acceptance among diverse stakeholders globally and has been used by the Anker Research Institute [1] to estimate living incomes and living wages in over 50 studies in 46 countries to date. [2] Key principles and innovative aspects of the methodology include:

Transparency: Principles and assumptions used to estimate the living income and living wage are clearly indicated. It is important for stakeholders and others to understand how the living wage benchmark was estimated and what working people and their families would be able to afford if they did not earn a living income or living wage.

Normative basis: The living income and living wage are based on normative standards for a nutritious diet, healthy housing, adequate health care, and education for children through secondary school. The normative basis of the Anker Methodology contrasts with typical methodologies for estimating poverty lines which only ensure that working people, such as farmers, and families can afford a sufficient number of calories.

Time and place specific: The living income and living wage are time and place specific so that they are realistic for the location for which they are estimated. The living income and living wage increase with economic development and rising incomes. This also means that separate living income and living wage benchmarks are necessary for rural and urban areas.

Comparison with prevailing wages and incomes: The living income and living wage are compared with current wages paid by establishments and other relevant benchmarks such as minimum wage and poverty line wage or income. The Anker Methodology defines all relevant forms of remuneration for measuring prevailing wage including fair and reasonable values for in-kind benefits and most cash allowances while excluding overtime.

Universal and internationally comparable: The Anker Methodology is universal and relevant for all countries in the world. Anker Methodology living wage and income estimates are internationally comparable as they are based on the same principles everywhere.

Practical and modest cost: The Anker Methodology is practical and relatively inexpensive to implement, as it uses a judicious mix of secondary data, rapid assessment methods, and primary data.

Living income and living wage reports are more than only a number: Anker Methodology living income and living wage reports do not just report a number, but also paint a picture of what it means to live on less than a living income or living wage, and what the living standards would be for working people who would earn a living income or living wage.

1.2 Minimum wage zones in Vietnam used for setting wages

Vietnam is divided by government into 4 regions for minimum wage purposes. This forms the basis for the wage-

1 About Us - Anker Research Institute.
2 All living wage reports in this series can be downloaded from here: https://www.globallivingwage.org/.

setting process for many workers. Since the Anker Methodology is designed to provide useful inputs into wage-setting, the Anker Research Institute (ARI) decided to use the same 4 zones for its living income and living wage studies and estimates. This means that this report for minimum wage Region 4 should be read in conjunction with three companion reports for the other minimum wage regions in Vietnam – thereby covering the entirety of Vietnam. Although there are exceptions, Regions 1, 2, and 3 cover different-size cities. Region 1 is for the especially large cities Ho Chi Minh City and Hanoi which have more than 8 million population each. Region 2 covers other major urban areas such as Da Nang, Can Tho, and Hai Phong, while Region 3 generally covers smaller urban areas. Region 4 covers all other areas, which are mainly rural.

1.3 Structure of this report

This report has 3 sections, plus an Annex. The remainder of this introductory section provides the context for this study and a summary of how the living income for minimum wage Region 4 was estimated using the Anker Methodology. Section 2 is concerned with the estimation of the cost of food, housing, and non-food non-housing needs to ensure a basic but decent living standard for a typical size reference family. Section 3 estimates the living income and compares our estimated living income to other economic indicators and discusses gaps to a living income. Finally, it provides conclusions with a table that summarizes key results of the study. The Annex estimates the living wage for minimum wage Region 4 based on an assumption of 1.86 full-time equivalent workers in the reference family expected to provide support.

2. LIVING INCOME AND LIVING WAGE ESTIMATE

Our estimate of the living income for minimum wage Region 4 of Vietnam is **VND 10,095,308** (USD 423)[3] per month for November 2022. This is around 70% higher than family income based on the 2022 minimum wage for Region 4.

Our estimate of the gross living wage (aka living wage) for Region 4 is **VND 6,132,865** (USD 257) per month consisting of a net (take home pay) living wage of VND 5,427,585 (USD 227) and mandatory payroll deductions of VND 705,279 (USD 30) per month.

3. CONTEXT

The Socialist Republic of Vietnam is the eastern-most country on the Indochina Peninsula in Southeast Asia. With a population of close to 100 million[4], it is the world's 15th most populous country, and the eighth most populous Asian country (Table 1). According to the 2020 UNDP Human Development Report, Viet Nam's HDI value for 2020 is 0.706 which is in the medium human development category (117 out of 187 countries and territories in the world). [5]Compared with other countries in the region, Vietnam's HDI is lower than China, Malaysia, Thailand, and Indonesia

3 The exchange rate used in this report is VND 23,900 to USD as this was the average exchange rate for the study period. However, since exchange rates are volatile, all USD values in this report are provided for expositional purposes and so should only be considered as approximate.

4 https://worldpopulationreview.com/countries/vietnam-population

5 https://hdr.undp.org/en/countries/profiles/VNM

but higher than Laos and Cambodia.

Vietnam has gone from being one of the poorest countries in the world in 1986, with a per capita income below USD 1,000, to a lower middle-income country with per capita income of around USD 3,700 by the end of 2020.[6] Over the last few decades, Vietnam has made remarkable progress in reducing poverty. The percentage of people living in poverty at the World Bank poverty line for low-income countries dropped from almost 60% in the 1990s to less than 1% in 2020.[7]

The Multidimensional Poverty Index (MPI), which includes multiple deprivations of households in the areas of education, health, and living standards, calculates the share of the population that is multi-dimensionally poor, adjusted by the intensity of the deprivations. The MPI of Vietnam, as calculated by the Vietnam General Statistics Office, fell from 9.9 to 4.8 between 2016 and 2020[8]. The proportion of multidimensional poverty households in rural areas is higher than in urban areas, but the rural/urban difference is reducing gradually.

According to the World Bank in 2018, less than 1% of the Vietnamese population lived below the World Bank extreme poverty line (percentage of the population living below USD 2.15 PPP per day) that is applicable to low-income countries, and 19% lived below the World Bank upper-middle-income poverty line of USD 6.85 PPP per day.

Table 1. Economic and social indicators for Vietnam

INDICATOR	VIETNAM
Population (2021)	97.5 million
GDP per capita (2021)	USD 3,757
Human Development Index (2021)	0.706 (Ranking: 117 of 187 countries)
Poverty rate at USD 6.85 PPP per day upper-middle income country poverty line (2020)	19%
Poverty rate at USD 3.65 PPP per day lower-middle income country poverty line (2020)	4%
Poverty rate at USD 2.15 PPP per day at low-income country poverty line (2020)	0.7%
Inequality (Gini Index) (2020)	36.8

Source: World Bank Indicators database.

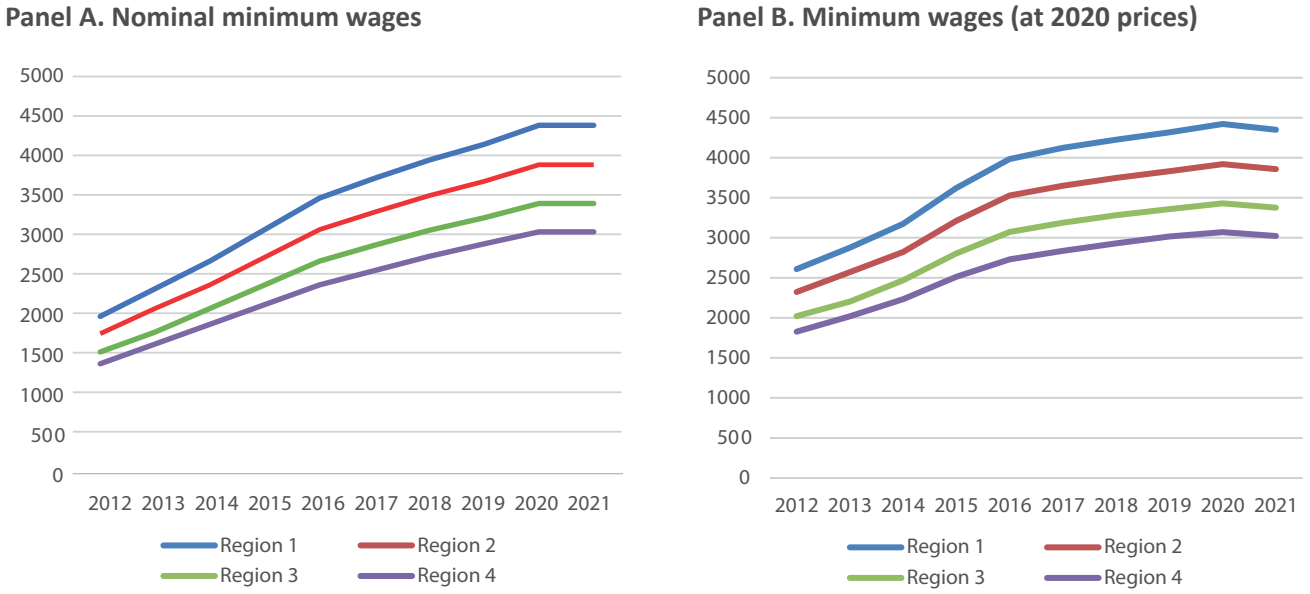
6 https://www.worldbank.org/en/country/vietnam/overview#1
7 https://data.worldbank.org/indicator/SI.POV.DDAY?locations=VN
8 https://www.gso.gov.vn/wp-content/uploads/2021/03/Thong-cao-bao-chi-MDP_MPI_English.pdf

3.1 Minimum wage in four minimum wage zones of Vietnam

Before 2008, there was a single minimum wage for workers for all of Vietnam (see Nguyen, 2013; 2017b). Since January 2008, minimum wages are set according to 4 geographical regions based on differences in living costs between regions and degree of urbanization. During 2008-2011, different minimum wages were applied for workers in the domestic sector and those in the foreign sector. Minimum wages in the foreign sector were around 40% higher than those in the domestic sector (Nguyen, 2017a). Since 2012, common regional minimum wages have been applied to both the domestic and foreign sectors. Minimum wages are adjusted annually.

Figure 1 presents nominal and real minimum wages of the four regions during 2012-2020. Nominal minimum wages have increased at a higher rate than the inflation rate. Thus, real minimum wages increased by around 4% over the period 2012–2020. However, because of the COVID-19 pandemic, the government decided not to adjust minimum wages for 2020 and 2021. Therefore, the nominal minimum wages in 2020 and 2021 remained the same and were equal to VND 3,070,000, VND 3,420,000, VND 3,920,000 and VND 4,420,000 per month for regions 4, 3, 2, and 1, respectively. The nominal minimum wages for the four regions increased in June 2022 to VND 3,250,000, VND 3,640,000, VND 4,160,000, and VND 4,680,000 respectively – the lowest of these being for Region 4.

Figure 1. Monthly minimum wages (thousand VND)



Note: This figure presents the monthly minimum wages (thousand VND per month) of 4 minimum wage regions during the 2012-2021 period. Panel A presents the nominal minimum wages, while Panel B presents the minimum wages at 2020 prices (adjusted by annual CPI). For 2021, the CPI is estimated using the CPI in the first six months.

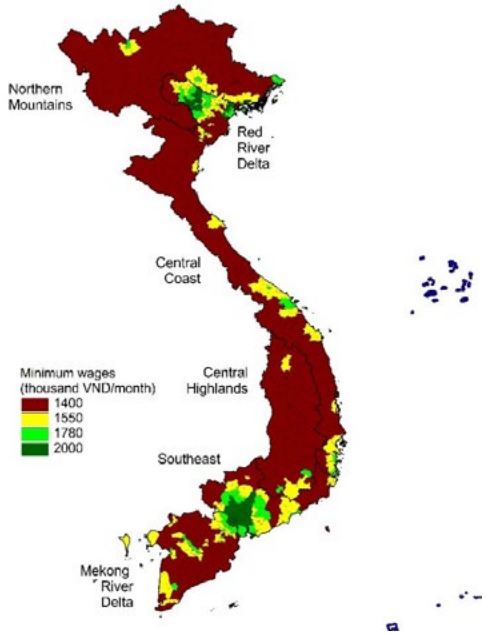
Source: The authors.

3.2 Minimum wage Region 4

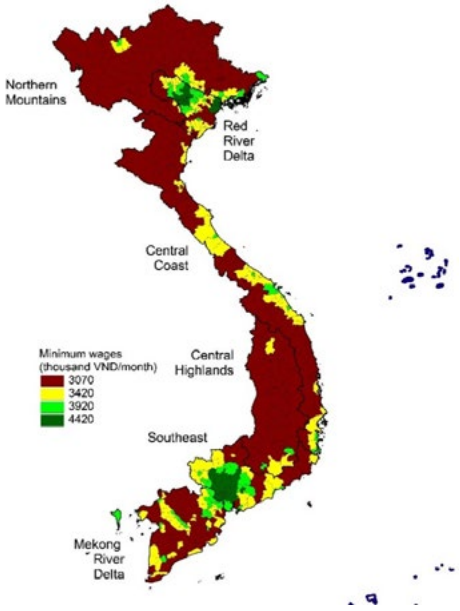
Vietnam has 63 provinces covering 713 districts. As mentioned earlier, minimum wages are differentiated across districts into four minimum wage regions depending on their economic levels[9]. People's Committee of provinces submits the list of their districts in the four regions to the government. Minimum wages for each region are usually updated annually. In addition, the list of districts in the four minimum wage regions is adjusted annually. Figure 2 presents the geographic map of districts in the four minimum wage regions in 2012 and 2020. The number of districts in the lowest minimum wage Region 4 decreased over this period, while the number of districts in higher minimum wage regions increased. In 2020, the minimum wage Region 1 (most developed) covered 11% of districts. Regions 2 and 3 covered 12% and 21% of districts respectively. Region 4 – the least developed – accounted for 56% of districts.

Figure 2. The minimum wage regions of Vietnam

Panel A. 2012



Panel B. 2020



Source: Nguyen V.C. (2021).

Region 4 (the red districts in Figure 2) spans across the country. However, as this study focuses on the coffee industry, we selected the sites for our fieldwork based in part on the concentration of coffee farming. Table 2 indicates coffee production by province according to Ministry of Agriculture and Rural Development (MARD) data.

9 Regional minimum wage levels and the list of districts in each minimum wage regions are adjusted and issued in annual Decrees of the government (Government of Vietnam, 2012-2019).

Table 2. Coffee production in different provinces of Vietnam

Province	Production type (Arabic/ Robusta)	Estimated volumes per year (kilos)	Estimated number of coffee farmers	Average yield/ha (kilos)
Dak Lak	Robusta	526, 613,190	285,576	2,634
Lam Dong	Robusta & Arabica	563,085,949	251,531	3,369
Dak Nong	Robusta	336,006,981	193,674	2,759
Gia Lai	Robusta	260,684,430	147,703	2,860
Kon Tum	Robusta	61,788,880	41,409	2,574
Son La	Arabica	29,180,000	25,710	1,814
Quang Tri	Arabica	3,963, 550	5,791	1,786
Dien Bien	Arabica	4,321,790	3,537	1,786
Binh Phuoc	Robusta	27,842,440	20,846	2,159
Dong Nai	Robusta	17,406,110	10,120	2,468
Others	Robusta & Arabica	14,139,700	10,043	2,059

As a result, we selected the three largest coffee producing provinces in Central Vietnam for data collection (Dak Lak, Lam Dong and Dak Nong). Since Lam Dong is the southernmost province in the Central Highlands and is sometimes considered part of the South, we considered this as partially representative of the South for this study.[10] We also selected Binh Phuroc province in the South, as it has the highest coffee production in the South. For Northern Vietnam, the coffee-planting areas are mainly mountainous and difficult to access (Son La and Dien Bien) and in addition they have relatively small amounts of coffee production. For this reason, we instead selected Thai Binh and Hai Duong for data collection as being more representative in general of the North minimum wage Region 4 (see Table 3).

Table 3. Fieldwork sites for minimum wage Region 4

Province	Region 4 Districts
Thai Binh (North)	Hung Ha
Hai Dương (North)	Thanh Ha
Dak Nong (Central)	Cư Jut
Dak Lak (Central)	Cư M'ga
Binh Phuoc (South)	Bu Đang
Lam Dong (Central)	Cat Tien

10 Note that housing costs and food prices in Lam Dong were found to be similar to those in Bien Phouc and the two study provinces in Central.

4. CONCEPT AND DEFINITION OF A LIVING WAGE AND A LIVING INCOME

The idea of a living income and living wage is that working people and their families should be able to afford a basic lifestyle considered decent by society at its current level of development, without having to work overtime.

The definition of a living wage used in this study is the GLWC definition, which is drawn from an ILO review (R. Anker, Estimating a Living Wage: A Methodological Review, 2011):

> ***"The 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, health care, transport, clothing, and other essential needs including provision for unexpected events."***
>
> Global Living Wage Coalition (2014)

While a living wage is the remuneration required by an individual worker, a living income is the income required by a household, as defined by the Living Income Community of Practice:

> ***"[...] The net annual income required for a household in a particular place to afford a decent standard of living for all members of that household. Elements of a decent standard of living include: food, water, housing, education, healthcare, transportation, clothing, and other essential needs including provisions for unexpected events."***[11]
>
> The Living Income Community of Practice (n.d.)

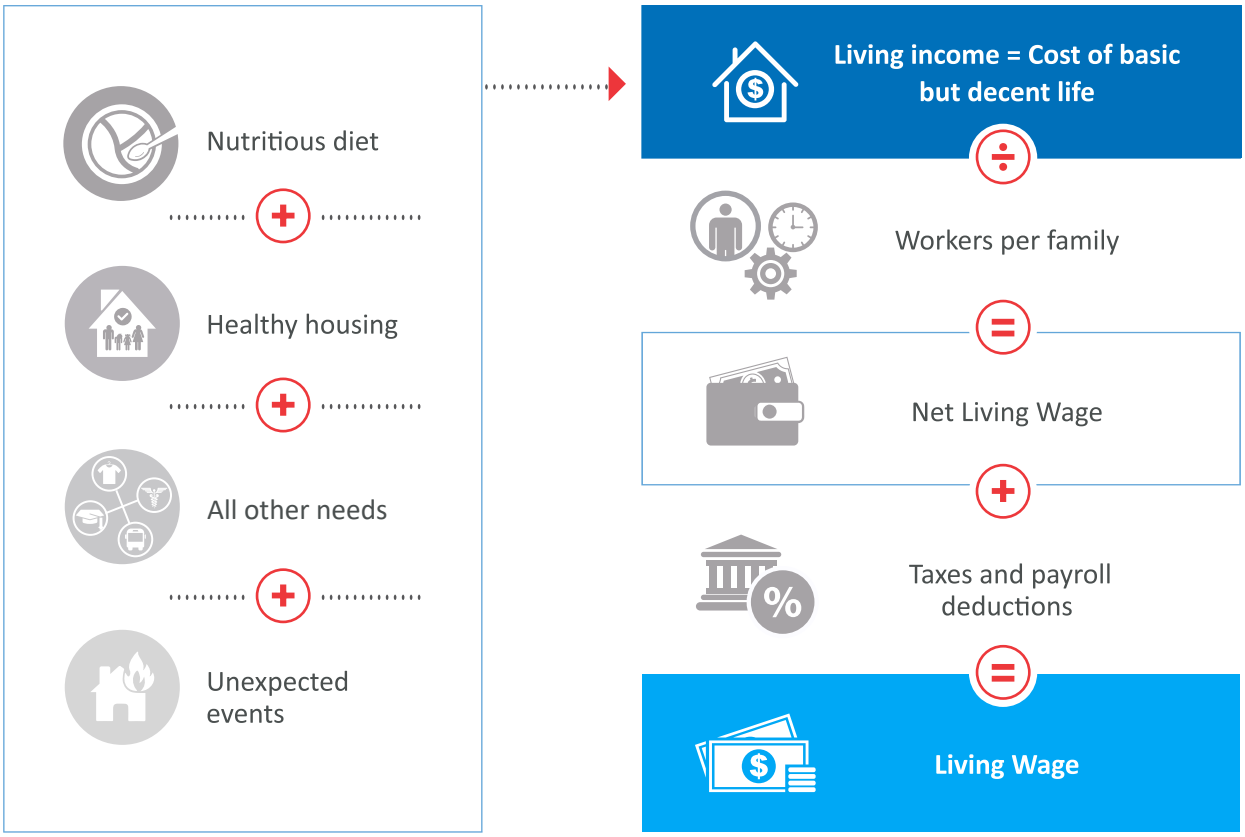
One main idea behind the living wage and living income concepts used in the Anker Methodology is that living costs vary by location within the same country, especially for a large country such as Vietnam. So it avoids any attempt to come up with a single living wage or living income for all of Vietnam. The living income estimated in this report for minimum wage Region 4 is applicable to all households in minimum wage Region 4 whether this is in the north, center, or south of Vietnam.

5. HOW LIVING INCOME AND LIVING WAGE ARE ESTIMATED

Several steps – described in the remainder of this report – are followed in order to come up with a reliable living income estimate for Region 4. Living costs are estimated for a nutritious low-cost diet, basic healthy housing, and other essential needs (termed non-food non-housing costs, or NFNH costs, in this report), and a small margin is added for sustainability and unforeseen events. It should be noted that we are speaking of living costs of families in this study, not living costs of individuals, because living income is a family concept. Therefore, a typical reference family size is determined using secondary household data for Region 4 and living costs are estimated for a family of this size. The sum of all these costs is the income required by the reference size family and this is divided by the number of full-time equivalent adult workers in the family (based on secondary household data) to determine the net (take-home) living wage. To this, statutory payroll deductions and possible income taxes are added to reach the gross living wage. These steps are summarised in Figure 3 below.

11 See: The Concept | livingincome (living-income.com) .

Figure 3. Components of a living wage estimate, moving from the cost of a basic but decent life to net living wage, and moving from net living wage to gross living wage



Source: Adapted from Anker and Anker (2017).

The main secondary data sources used in this report are Government household surveys and population census, such as the following which were conducted by the Vietnamese General Statistics Office (GSO):

- VHLSS (Vietnam Household Living Standard Survey) 2020;
- Population and Housing Census 2019;
- Labour Force Survey (LFS) 2021.

The field research was conducted by a team of 15 research investigators from the Research Center for Employment Relations under the supervision of the lead researcher, Dr. Do Quynh Chi. The research investigators were trained by the lead researcher in the methodology and techniques to collect food and housing prices. In each study province, the research investigators collected food costs from at least 10 markets of various types (such as supermarkets, outdoor markets, 'jumping' markets, and street vendors) that local workers frequently visit. To make sure that the model diet reflects regional preferences, prices of foods that local people prefer were collected. Food costs were collected from 60 markets in total. The markets were located in the 6 selected districts in Region 4 provinces in the North, Center, and South. This means that the 60 markets visited were located in 6 different districts and 6 different provinces located across the country. The research investigators also visited different types of housing, which included both housing that met our healthy housing standard as well as the typical sub-standard accommodation that many workers live in. At each house visited, the research investigators surveyed the location for cleanliness and security, housing conditions (e.g., construction quality, facilities, size,

cleanliness, among others), supply of electricity and water, and housing costs. All of the houses visited were photographed with the consent of the inhabitants.

Calculations of the share of NFNH expenditures of total household expenditures were based on secondary data. Education and healthcare expenditures were then subject to rapid assessment 'postchecks' – using data collected during the field research – to ensure sufficient funds for these human rights. Statutory payroll deductions were added to the take home pay needed by workers in order to arrive at a gross living wage estimate.

SECTION II. COST OF A BASIC BUT DECENT LIFE FOR A REFERENCE SIZE FAMILY

There are five sub-sections in this section determining the following.

1. Food costs
2. Housing costs
3. Non-Food Non-Housing (NFNH) costs
4. Post-check of NFNH costs to ensure sufficient funds for adequate health care and children's education through secondary school, because these are considered human rights in the Anker Methodology
5. Provision for unexpected events

6. FOOD COSTS

Food is the most important expense of households in developing countries. Therefore, estimating food costs is a very important part of estimating a living income.

This section estimates food costs for a reference family of 4 persons using a low-cost, nutritious diet that is consistent with local food preferences and food prices found in local markets. This model diet is nutritious in more than just calories. Our model diet is also nutritious in macronutrients (proteins, fats, and carbohydrates) and micronutrients. This contrasts to how food costs are estimated in typical poverty lines which only requires having enough calories.

This section is divided into 3 parts: (i) general principles used to develop the model diet; (ii) description of the model diet; and (iii) food prices used to estimate the cost of the model diet.

6.1 General principles of the model diet

The following Anker Methodology principles were used to develop and cost our living income model diet:

- The diet should be nutritious and meet national and international standards for nutrition with sufficient number of calories, macronutrients (proteins, fats, carbonhydrates), and micronutrients. It also limits certain foods such as sugar, oil and cakes and confectionaries.
- The diet should be consistent with local food habits and preferences so that workers consider the diet to be palatable because food is part of history and culture, and people will not eat foods that are not considered acceptable.
- Lower cost acceptable food items and brands are chosen to represent major food groups (such as cereals, pulses, dairy, meats/fish, oil, and fruits and vegetables) as the main idea is to develop a healthy but basic diet that is affordable.
- The diet should be consistent with the country's development level, since people all around the world purchase more expensive foods as they become wealthier such as purchasing more prepared foods, more animal-based foods, and more expensive varieties and foods.
- Whenever possible, the amount of food is expressed in portions to be easy to understand by laypersons.

- To be more realistic, the cost of the model diet is increased somewhat to take into consideration the need for spices, salt, sauces, and condiments for palatability; some normal waste, spoilage, and discards; and some allowance for variety.

6.2 Model diet

In order to develop an acceptable, low-cost, nutritious model diet for Vietnam to estimate food costs, several steps are followed in the Anker Methodology. Before describing what was done, it is important to point out that we decided to use the same model diet for all 4 minimum wage regions of Vietnam as a matter of fairness. This means that we did not include more expensive foods and so have a more expensive model diet for the more developed cities such as for Hanoi and Ho Chi Minh City in Region 1 and a less expensive diet for less developed rural areas of Region 4 as is typically done when poverty lines are estimated. However, we made some minor adjustments to the model diet for Region 4 because Region 4 is mainly rural and so work is typically vigorous and so requires more calories, as explained below.

First, we determined the number of calories required for each person in the reference family using Schofield equations recommended by the World Health Organization (WHO). This used the following information:

1. Average height of Vietnamese adult men and adult women. According to the World Population Review, this is 1.6889 meters for men and 1.5843 meters for women for urban areas in Vietnam.
2. Reference family size and composition. This is 4 persons (2 adults and 2 children), as explained below in section 11.
3. Physical activity level level of the members of the reference family. We assumed that one adult in the reference family has vigorous physical activity level (PAL) such as for agricultural work and the spouse has moderate phyical activity level (PAL). This is different from what we assumed for Regions 1, 2, and 3, which are urban areas, where we assumed that both adults have moderate physical activity. We assume that children have moderate physical activity in Region 4 just as we do for Regions 1, 2 and 3.
4. As such, the average number of calories needed per person in the reference family in Region 4 is 2,345 (compared to the 2,257 needed per person per day for Regions 1-3), to which 3 additional calories are added for pregnancy,[12] making the final average caloric intake used in this study being 2,348 per person per day.

Second, we developed the contents of our model diet. We started with the actual food consumption of Vietnamese households to help indicate the general structure of food consumption in Vietnam. For this, we used the fourth income decile of households in the VHLSS 2020 (see Table 4). This is also the reference group used by the National Wage Council when calculating the regional minimum wage of Region 4. When doing this, we decreased proportionally the number of grams of each food item in the VHLSS diet by the proportional difference between the number of calories in our model diet and the VHLSS diet.

12 Additional calories are added for pregnancy. These additional required calories are averaged over all family members and over the number of years between ages 25 and 59 to keep the model diet as per person in the reference family.

Table 4. Food consumption of households in the 4th decile of the household consumption distribution according to VHLSS 2020a

Food items	Average number of edible grams per day	Percent (%) distribution of food expenditures in the VHLSS diet
Rice	417	11.4%
Prepared cereals (noodles and bread)	27	3.3%
Potato	42	0.7%
Pulses and legumes	included with vegetables	
Milk	126	10.3%
Eggs	39	1.8%
Meat	32	39.1%
Fish	43	15.3%
Vegetables	109	2.7%
Fruits	57	5.1%
Oil	25	1.8%
Sugar	8	3.0%
Green tea	-	2.1%
Fish sauce	1	1.5%
Total without spices and condiments and other		**98.1%**

Source: VHLSS 2020.

Third, we adjusted the actual consumption of Vietnamese households indicated in VHLSS (Table 4) so that our model diet would be nutritionally balanced and meet WHO and FAO recommendations on nutrition while remaining palatable.

In a fourth step, we chose the specific food items to represent each major food group based on our survey of food prices and food availability in places where families shop in the 6 study districts in Region 4 (see the specific districts in Table 3). There are certain differences in food choices among the study regions, for example, in Hanoi people prefer potatoes whereas in Southern Vietnam people tend to choose sweet potato; the Northerners prefer coffee whereas the Southerners generally prefer tea. The specific food items in the basic diet, therefore, were selected to capture both the regional varieties and ensure commonality across the country. With this in mind, we included tea in the model diet to capture the cost of tea or coffee that depends on regional preferences; we used the price of potato in the north and price of sweet potato in the south for roots and tubers. For fish, we used the common lower cost varieties of fish which were available in each province. For milk, we included condensed milk for adding to coffee or juice.

Table 5 below indicates the number of edible grams per day for each person in the family for all of the food items included in our model diet. This means that skins, seeds, bones, and shells were excluded from total edible grams. The edible percentage of each food item was based on data from the USDA (United States Department of

Agriculture, 2014[13]) and the Vietnam Food Composition Table published by Vietnam Ministry of Health in 2007.[14] Inedible parts were, of course, included when we costed the model diet using local food prices collected through a survey of local markets.

Food prices were collected in October and November of 2022. The price collectors were trained by the lead researcher on the methodology and during the price collection process they were supported and monitored by a regional team leader who reported directly to the lead researcher. In each district, the price collectors visited different types of markets where workers typically shop.

Our model diet is consistent with local food preferences. We also chose the least expensive acceptable food items and brands for each food group and food item.

- Both plain rice and sticky rice are included in the model diet. Plain rice is used in all meals in Vietnam while sticky rice is used for special occasions.
- Bread in the form of buns is included twice per week.
- Instant noodles and fresh rice noodles are included because they are commonly consumed.
- For chicken and eggs, we included the least expensive varieties, for example, industrial chicken and industrial chicken eggs and not free range or organic.
- Tofu and peanuts were included as they are common.
- Chicken is mainly included for meats because it is the least expensive meat and very common. Some pork is included in the diet even though it is more expensive than chicken, because of strong local preferences and eating habits.
- For fish, we included the average price of two lower priced fish in each location such as tilapia, snakehead, and some varieties of carp.
- Vegetables play an important part in the Vietnamese diet. A wide variety of vegetables are included in every meal such as morning glory, cabbage, tomato, and brocoli. These vegetables are relatively inexpensive and widely available.
- Bananas and watermelon (or another less expensive fruit than watermelon, perhaps seasonal) are included in our model diet to represent the fruit group. These fruits are the lowest cost fruits per edible gram, and they are the commonly eaten fruits across the three geographic regions of the country.
- For dairy, we included 1 box of 180 ml of milk for children and 2 tablespoons of condensed milk for adults for coffee or tea.
- We included fish sauce because it is an important part of Vietnamese cuisine. For this, we used Nam Ngu fish sauce, because it is widely available and not overly expensive.
- Only 8 grams of sugar (2 teaspoons) are included in the model diet, which is a very low amount compared to other countries in the world, because sugar it does not play an important role in Vietnamese cuisine.

Note that our model diet for Region 4 is purposely similar to the model diet we used for Region 1, Region 2, and Region 3 for reasons of fairness which underlies the living wage and living income concept, but we made the following small changes to ensure sufficient calories for the vigorous work that is common in rural areas. First, we

13 Composition of Foods Raw, Processed, Prepared USDA National Nutrient Database for Standard Reference, Release 27 | Ag Data Commons
14 See: INFOODS: Asia (fao.org)

increased the amount of rice in the model diet for Region 4 from 326 grams to 369 grams in order to increase the total number of calories provided by the diet. Second, we reduced the number of eggs from 4 to 3 per week and the number of pork meals from 2 to 1 per week so that the percentage of calories from proteins (12.4%) in the Region 4 model diet is similar to this percentage in the model diet used for Regions 1, 2 and 3.

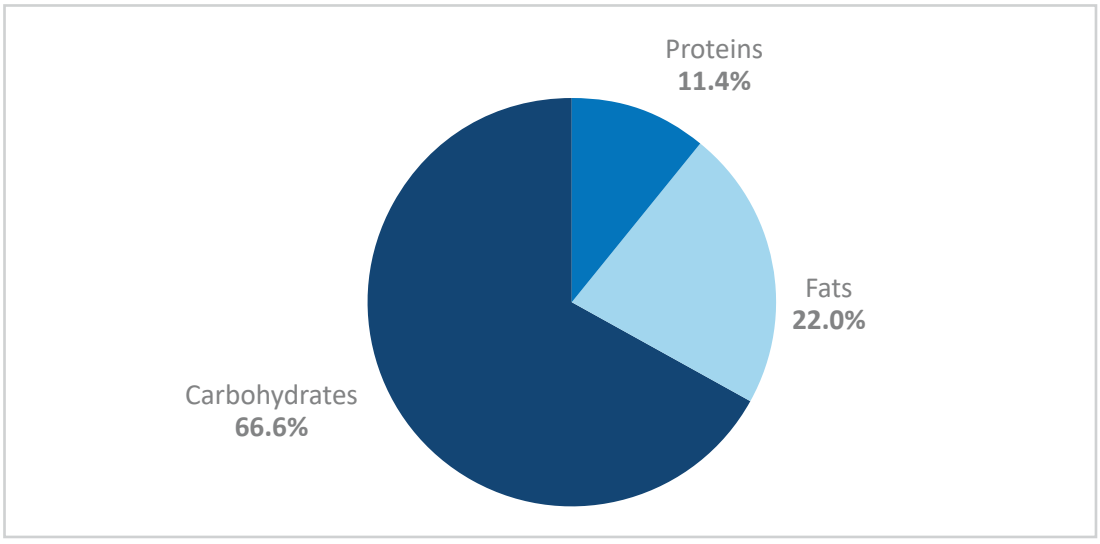
Table 5. Model diet for living income minimum wage Region 4

Food items	Edible grams	Purchased grams	Cost per kg (VND)	Cost (VND)	Comments (Diet is for an average person in a family of 4. Portions for adults are bigger than for children)
Plain white rice	369	369	12,833	4,734	
Sticky rice	20	20	19,667	403	
Hao Hao instant noodles	21	21	56,992	1,205	2 portions per week
Rice noodles (dry)	16	16	10,250	164	1 portion per week
Bread (white)	20	20	45,799	916	2 buns of 70 grams per week
Potato/Sweet potato	40	53	19,333	1,031	
Tofu	28	28	20,780	582	1 portion per day
Peanuts (shelled)	14	14	41,875	585	
UHT milk	90	90	38,333	3,045	1 milk box of 180 ml per child per day
Condensed sweetened milk	10	10	59,868	572	2 tablespoons per adult per day
Chicken eggs (industrial)	19	21	64,833	1,389	4 eggs per week
Pork	12	13	99,167	1,268	2 servings per week
Chicken whole (industrial)	24	36	63,583	2,271	2 servings per week
Fish	36	61	42,396	2,574	3 servings per week
Morning glory	40	81	12,307	995	popular green leafy vegetable
Cabbage	40	51	11,974	605	
Tomato	40	44	22,750	1,011	
Broccoli	40	66	14,015	929	
Squash	40	43	11,433	487	
Banana	40	63	10,475	662	
Second cheapest fruit (often watermelon)	40	54	11,728		
Oil	27	27	42,473	632	2 tablespoons per day

Food items	Edible grams	Purchased grams	Cost per kg (VND)	Cost (VND)	Comments (Diet is for an average person in a family of 4. Portions for adults are bigger than for children)
White sugar	8	8	22,750	191	2 teaspoons per day
Fish sauce (Nam Ngu)	15	15	21,458	322	1 tablespoon per day. Fish sauce is used both for cooking and dipping
Tea or coffee	7	7	100,000	700	Around 2% of food costs
Total Cost not including additional costs				**28,833**	
Total Cost including additional costs				**34,311**	**3% added for salt, spices, sauces, and condiments 4% added for spoilage and waste 12% added for variety**

According to the WHO/FAO (2003)[15], a healthy diet has the following distribution of calories coming from macronutrients: 10-15% of calories from proteins (and in the Anker Methodology this percentage typically ranges from 11-12% in lower-middle-income countries such as Vietnam); 55-75% of calories from carbohydrates; and 15-30% of calories from fats. Figure 4 presents the distribution of macronutrients of our model diet, all of which are within the above-mentioned WHO recommended intervals.

Figure 4. Percentage distribution of macronutrients in model diet for Region 4



15 Diet, nutrition and the prevention of chronic diseases: Report of a joint WHO/FAO expert consultation, Geneva, 28 January - 1 February 2002.

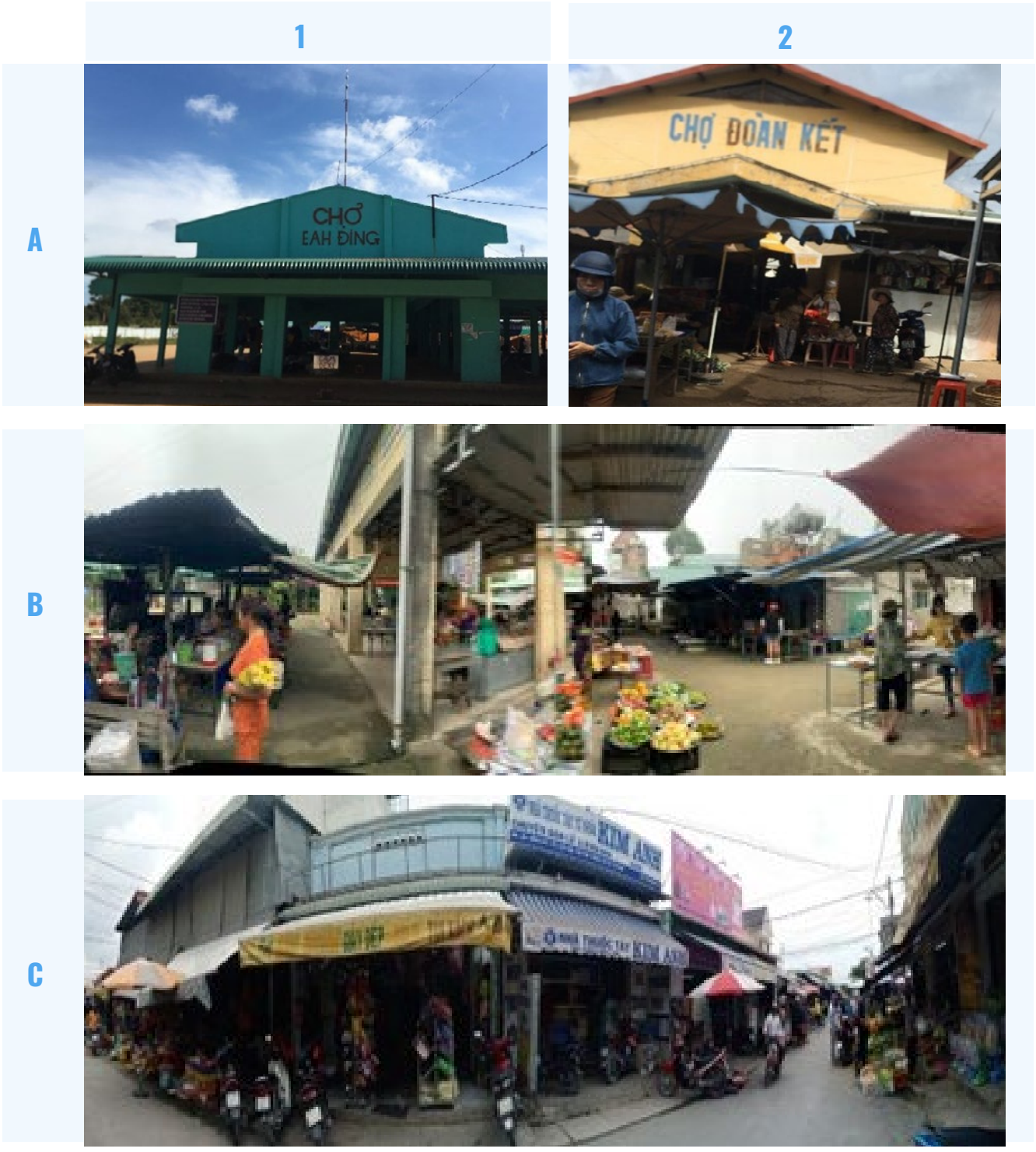
6.3 Food prices

Food prices were collected at different points of purchase where workers shop. This included:

- 'Spontaneous markets' such as small, mobile markets just outside factory gates where workers shop most often on their way from the factory to their houses.
- Outdoor markets which are large and important for workers and the local people. Workers typically shop here once or twice per week. These markets include both shops and sellers with perishable and non-perishable foods. The shops for non-perishable products here are an alternative to the supermarkets.
- Supermarkets and convenience stores: Workers shop here once or twice per week mainly for non-perishable food.

The research team visited between 10 venues in Region 4 in each of the 6 study provinces. The Covid-19 outbreaks in Vietnam between April and October 2021 and the consequent disruption of food supply chains resulted in increases of a number of food prices, especially meat (eg. beef and pork), oil and some vegetables (tomato, broccoli). The food price data were scrutinized for outliers which were excluded from the analysis. The median of the remaining prices was determined for each of the 6 study locations and then the arithmetic average of these 6 median prices across study locations in Northern, Central, and Southern Vietnam was used to determine the cost of the different foods included model diet for Region 4. As indicated above in Table 5, the cost of the model diet is **VND 34,311 (USD 1.44) per person per day. This implies monthly food cost for the family of VND 4,174,505 (USD 175)**.

Figure 5. Pictures of markets visited by the research team



Eah Ding Market, Cu M'Gar, Dak Lak Province (Central Vietnam) (A1), Doan ket Market, Cu Jut, Dak Nong Province (A2), Phu My Market, Cat Tien district, Lam Dong Province (Southern Vietnam) (B), Mua Market, Hung Ha district, Thai Binh Province (Northern Vietnam)(C).

7. HOUSING COSTS

Housing is almost always the second biggest expense for workers in developing countries (after food). Therefore, it is important that the cost of decent housing for a worker and his/her family is well estimated when a living income is measured.

Housing costs in this study are estimated by summing up the costs of rent for an acceptable dwelling, utility costs, and minor expenses for trash collection and other minor expenses. The Anker Methodology differs from the typical methodology used to measure poverty lines where all non-food costs (including housing costs) are estimated together based on observed household spending from a national household expenditure survey. This means that:

- The Anker Methodology ensures that sufficient funds are available for workers earning a living wage to be able to afford decent healthy housing for their family, since housing costs are measured directly based on a healthy housing standard and observation of rental costs and other housing costs in the local study area.
- This approach avoids the problem in many countries (including Vietnam) where national statistical offices do not properly measure the cost or value of owner-occupied housing and so underestimate housing expenditure and costs.
- This approach allows for much better estimates of differences in living incomes and living wages between areas, because local housing costs are measured directly through observation.

The field research undertaken in this study of visiting local housing, thus, leads to reasonable and robust estimates for rent for a living wage for a reference size family in different study locations.

7.1 Standard for basic acceptable local healthy housing

In order to estimate the cost of local housing for a living income, it is first necessary to establish a local decent healthy housing standard. This is done in this section.

First, healthy housing must meet the principles for healthy housing contained in international minimum housing standards indicated in World Health Organization Health Principles of Housing[16] and in ILO Conventions. For example, according to international standards, houses must have a permanent structure; protect against disease and the elements; have adequate amenities such as lighting, good ventilation, and access to safe water and sanitation; be in good repair; and have adequate living space (see Table 6).

Second, it is necessary to make sure that the local housing standard also at least meets the minimum standards for adequate housing according to the Vietnam Government, such as the 2005 Housing Law and the Prime Minister's Decision 2127/QĐ-TTg on 30/11/2011 on housing standards.

16 WHO, 1989. Health principles of housing. Geneva. WHO.

Third, adaptation of international and national minimum standards to the local situation must consider current housing conditions and norms in Vietnam. For this, we used data from the 2020 VHLSS for rural areas (see Table 6).

7.1.1 Minimum Vietnam housing standards for living space

Vietnam has national laws which indicate minimum living space. Article 47(2) of the 2005 Housing Law sets a minimum of 30 square meters (and a maximum of 59 square meters) for urban social housing for low-income families, and the 2015 Decree 99/2015 Article 6(2) states that new flats cannot be smaller than 30 square meters. Decision 2127/QĐ-TTg on 30/11/2011 by Prime Minister states that by 2021, the minimum living area per person as of 2020 (until 2030) in a rural area (Region 4) is 10-14m2 per person and a house should not be smaller than 24 square meters. Thus, these laws and decrees provide a minimum standard of 40-56 square meters of living space as the minimum legal amount of space for rural housing for a family of 4 persons.

7.1.2 Current housing conditions in urban Vietnam and our local healthy housing standard

Table 6 below describes current housing conditions in rural Vietnam as well as our local healthy housing standard for Region 4 (last column).

Table 6. Housing conditions in rural Vietnam (% distribution), international minimum standards, and our study healthy housing standard

Housing Conditions	Urban (%)	International Minimum Standard	Healthy housing standard for Region 4
Structure		Durable structure (protection against elements) Permanent floor above ground	Permanent durable structure with floor above ground
Permanent	24.5		
Semi-permanent	64.7		
Temporary	10.8		
Roof		Permanent roof without leaks Extreme temperature not acceptable	Corrugated iron Concrete Tile
Corrugated iron	42.5		
Concrete/tiles	53.3		
Thatched	3.9		
Walls		Permanent wall	Cement Stone Brick
Cement/stone/brick	75.1		
Wooden planks/iron sheets	13.2		

Housing Conditions	Urban (%)	International Minimum Standard	Healthy housing standard for Region 4
Lighting		At least 1 window per room	Electricity
Electricity	96.6		
Paraffin/kerosene/Gas	1.7		
Water		Safe water in or near house	Safe water inside house
Running water in house	12.4		
Public tap	10.5		
Borehole/tube well	29.9		
Protected well	22.7		
Unprotected well	4.0		
Toilet and sewage disposal		Sanitary toilet in or near house shared by few families	Flush toilet inside house
Flush toilet	43.5		
Ventilation	N/A	At least 1 window per room Minimal indoor air pollution from cooking	1 window per room Good ventilation especially in kitchen
Living space **Government minimum of 10-14 sq. mt. per person for rural areas**[17]	N/A	Approx. 36-48 sq. mt. for lower-middle-income country Ceiling at least 2 meters	40 square meters in keeping with international standard (and local social housing standard)
Local environment	N/A	Not slum. No open garbage. No site hazard	Not in a slum. No open garbage. No site hazard

Source for column 2: 2020 VHLSS./ Source for column 3: Anker and Anker, 2017.

Using housing conditions in rural areas indicated in column 2 of Table 6, and the national and international minimum standards indicated in column 3, we decided on the following housing standards for Region 4:

- Housing should provide physical and structural safety and protection from the cold, heat, humidity, rain, wind, flood, and other health threats
- Walls should be made of cement, brick, or stones
- Roofs should be concrete, zinc/iron sheets, or tiles. As Vietnam is a tropical country, heat proof sheets

17 Decision 2127/QĐ-TTg on 30/11/2011 by Prime Minister.

are needed.
- Electricity
- Access to indoor clean water
- Flush toilet indoors
- Access to garbage collection
- Adequate lighting
- Adequate ventilation: at least one window for each room and adequate indoor ventilation for cooking
- Neighborhood is safe, with minimal garbage and no site hazard
- 40 square meters of living space with at least 1 bedroom and separate kitchen room and toilet

7.1.3 Minimum living space

An important component of a healthy housing standard is the amount of living space. A minimum amount of living space is not only important for decency, but it is also an important determinant of housing cost since the rental cost of housing increases with the amount of living space.

A review by Anker and Anker (2017) of housing standards for social housing and low-income households in 16 countries from around the world used by governments, NGOs, and international organizations found that minimum living space (that is, usable inside floor space excluding walls, storage rooms and areas less than 2 meters high) ranges from around 30 square meters in low-income countries to 90 square meters in New York City. This review found the following general pattern: 30-36 square meters for low-income countries, 36-48 square meters for lower-middle-income countries, 48-60 square meters for upper-middle-income countries, and 60-90 square meters for high-income countries. This implies that 36-48 square meters of living space is appropriate for Vietnam as it is a lower-middle-income country.

This study uses 40 square meters of living space for our healthy housing standard for Region 4 for the following reasons:

- The government standard for living space in rural areas is 10-14 square meters per person, which equates to 40-56 square meters for a family of 4 persons.
- For international comparability which is part of the Anker Methodology, the number of square meters of living space should be more than the lower limit of 36 square meters for lower-middle-income countries such as Vietnam. To be conservative, we decided on 40 square meters since Vietnam (USD 3,590 GNI per capita in 2021) is well within the lower-middle-income country GNI per capita in USD range in 2021 of USD 1,108 to USD 4,225.

7.1.4 Finding local healthy housing

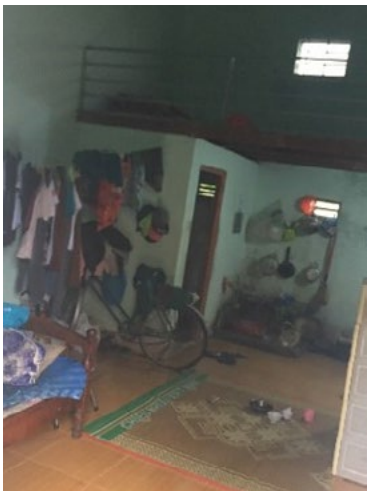
To determine housing costs for housing at our local housing standard, the research team visited local housing in Region 4 to observe rental costs and housing conditions so that the rental cost for healthy housing could be determined. In each of the 6 selected districts in Region 4, the research team visited 7-8 apartments/houses either owned or rented by coffee farmers (in Central and Southern Vietnam) or workers (in Northern Vietnam).

Finding housing that met out healthy housing standard was difficult because the actual housing of low-income people in study areas are far below these standards. Most of the workers and their families in the North live in small, rented apartments of under 20 square meters, usually without windows (see pictures below). The typical design of

Figure 6. Typical family housing in minimum wage Region 4

1

2



3

4

Notes: 1. Typical rented apartments in Cu Jut, Dak Nong Province (Central Vietnam). 2. A typical rented apartment for a family of four Bu Dang district, Binh Phuoc Province (Southern Vietnam). 3. A house of coffee farmers in Bu Dang, Binh Phuoc Province (Southern Vietnam). 4. A house of coffee farmers in Dak Lak Province (Central Vietnam).

these apartments includes the living room, bedroom, kitchen, and toilet included in one room. Furthermore, while structures were durable, the fact that the roofs were made of zinc sheets without insulation, no or few windows, and poor ventilation from cooking made the dwelling extremely hot during the day.

The houses owned by local coffee farmers in Central and South were larger, usually between 50-100 square meters, and usually with a front yard to dry coffee beans. For these houses, we asked owners how much they thought they could rent their house for.

7.2 Rent for basic acceptable housing

In total, we visited 45 housing units in the 6 Region 4 districts. Approximately half were rented and half were owned. Although we asked those who owned their home how much they thought that it would rent for, we found that owners systematically underestimated how much their house would rent for and for this reason we relied only on the information on the rent for rented houses which met our housing standard except possibly for having insufficient living space.

Using information on the size and rental cost of the 27 rented housing units which were acceptable in everything except possibly size, we calculated the rent per square meter for each housing unit. Note that when doing this, we considered the space of a mezzanine as half. So, for example, we considered the size of a unit with 20 square meters of floor space with a 10 square meter mezzanine to be 25 square meters in size (i.e., 20 + 10/2). Using all these per square meter rental values, we determined the median rent per square meter for each of north, central, and south for minimum wage Region 4. We averaged these three values to determine the typical rent per square meter in Region 4. We then multiplied this rent per square meter for a typical acceptable rented housing unit by 40 to get the average rent of an acceptable rented house with 40 square meters.

Based on the procedure described above, the rent of an acceptable rented housing unit of 40 square meters in Region 4 is **VND 1,130,216 per month which we rounded to VND 1,100,000 (around USD 46)**.

7.3 Utilities and other housing costs

During visits to workers' houses, we asked about utility costs per month. In total, 45 families from the 6 study districts of Region 4 across the country were interviewed. The interviewed families generally had access to clean water and electricity 24 hours per day. Some families cooked by LPG gas or coal while others used electricity. Many had to pay for garbage collection, community security, and public lighting, among other costs. Based on this information, we calculated the average utility costs for households of 4 persons and found this to be around VND 550,000 per month (USD 23).[18]

To check if the utility costs that we observed were reasonable, we also looked at how much rural households in the fourth decile of the housing expenditure distribution spend on utilities according to data from the 2020 VHLSS. According to 2020 VHLSS, household expenditure for electricity, cooking fuel, water, and housing services for Region 4 (decile 4) accounts for 5.5% of all household expenditures (see Table 8) which is very similar to what

18 In calculating utility costs for a family, we adjusted reported utility costs for family size by calculating utility cost for electricity, cooking fuel, and water per person, and then multiplying this per person utility cost by four. We then added the cost of other minor expenses such as trash collection which are paid on a family basis.

was found in our fieldwork.

As the monthly utility cost for a family of four in Region 4 is VND 550,000, and the monthly rent for acceptable housing for a family of 4 is VND 1,100,000, the cost for healthy housing in Region 4 in 2022 is **VND 1,650,000 (USD 69) per month.**

Table 7. Monthly housing costs for healthy housing in Region 4

	Housing costs (VND)
Rent	1,100,000
Utility costs	550,000
Monthly housing costs for a family	**1,650,000**

8. NON-FOOD AND NON-HOUSING COSTS

In most countries, poverty lines are calculated by estimating food costs for a diet with enough calories and then adding all non-food costs, the latter accounting for the rest of the income a family needs in order not to be considered poor. The Anker Methodology is different. It not only estimates food costs for a diet which is nutritious in more than just calories, but it also estimates housing costs and other costs separately. Non-food non-housing (NFNH) costs are calculated using VHLSS data on household expenditures for Region 4.

In order to determine NFNH costs, households in the 4th decile of the household expenditure distribution in Region 4 in the VHLSS 2020 database were selected as the reference group (Table 8). It was felt that this reference group is representative of lower-middle-income households who are out of poverty. Before using these data to estimate the NFNH/Food ratio, we made the following adjustments:

- First, tobacco was excluded from NFNH expenditure (1.1%) as being unnecessary.
- Second, expenditure for meals away from home (16.2%) was divided between the cost for the food in these meals and the costs for service, fuel, rent, and profit. According to previous inquires, the cost of meals away from home (such as in street markets) in Vietnam and other East and South-East Asian counties is comprised of around 70% for the food in these meals and around 30% for services, profit, etc. (see Anker and Anker 2017).[19] For this reason, 70% of the total 'meals away' expenditure was allocated to the food group and 30% to the NFNH group.

19 The percentage for food in meals away from home varies from country to country and is typically around 50% in Latin America, while it is around 30% in the United States and high-income countries.

Table 8. Percentage distribution of household expenditures before and after adjustments, Region 4, Vietnam

Expenditure group	% expenditures	Adjustments	% after adjustment
Total Food	**38.1**		**49.4**
Food and non-alcoholic beverages	38.1		38.1
Meals away from home		Added 11.3% (70% of amount spent for food in Meals away)	11.3
Housing	**6.8**		**6.8**
Rentals and maintenance and repairs	1.3		1.3
Electricity, water, cooking fuel and housing services	5.5		5.5
NFNH			
Alcohol	1.0		1.0
Tobacco	1.1	Excluded	0
Meals away from home	16.2	Subtracted 11.3% (70% of amount spent for meals away) and added to Food	4.9
Clothing	4.2		4.2
Household contents	5.9		5.9
Education	1.8		1.8
Healthcare	5.8		5.8
Transport	10.5		10.5
Private vehicle purchase	3.7		3.7
Private vehicle operation	6.4		6.4
Passenger transport	0.4		0.4
Communication	3.0		3.0
Recreation & culture	3.1		3.1
Miscellaneous goods and services	2.5		2.5
Total NFNH	**55.1**		**42.7**
NFNH/Food Ratio	**1.47**		**0.86**

Source: VHLSS 2020.

After these adjustments, NFNH was 42.7% and Food was 49.4% for Region 4, and the NFNH/Food ratio is 0.86. Therefore, the monthly preliminary NFNH cost is **VND 3,590,074** based on the formula below:

Preliminary NFNH per month = NFNH/Food ratio x Cost of model diet for a family of four per month

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

In the Anker Methodology, the preliminary estimate of NFNH costs is subjected to post checks and possible adjustments to make sure that sufficient funds are available for healthcare, education, and (sometimes) transport in the living income estimate. This is because adequate healthcare and education through secondary school are considered human rights in the Anker Methodology, and because in many countries transport is an important expense – including in Vietnam, where owning (multiple) motorbikes is common.

What we do in the following post checks is to first determine the amounts implicitly included in the preliminary estimate of NFNH costs for healthcare, education, and transport and then compare these to estimates of typical costs for education through secondary school, adequate healthcare, and transport based on our own fieldwork visits to local schools, health facilities, and garages as well as discussions with parents and various key informants. When the amount included in the preliminary NFNH estimate for any of these is insufficient, a post check adjustment is made to ensure that there is enough allowed for these expenditures in the living income estimate.

9.1 Amounts included in preliminary NFNH for healthcare, education, and transport

Table 9 indicates amounts included for healthcare, education, and transport in our preliminary NFNH estimate. Column 2 indicates the percentage of all household expenditures for each of these three needs, while column 3 indicates what percentage each of these is of NFNH. Column 4, then, indicates the amount included for each of these in the preliminary NFNH. These amounts were determined by multiplying our preliminary NFNH costs by the percentage each of these items is of NFNH (column 3).

Table 9. Amounts for healthcare, education, and transport included in preliminary NFNH, Region 4

Expenditure	% of all household expenditure (1)	% of preliminary adjusted NFNH (2) = (1) / % adjusted NFNH	Amount included in preliminary NFNH (3) = (2) x preliminary NFNH
Healthcare	5.8%	13.6%	499,562
Education	1.8%	4.2%	152,409
Transport	10.5%	24.6%	889,051

Note: Values in last column do not exactly equate to the formula shown because of rounding.

The next step is to compare values in the last column to our post check estimate of how much is needed for each of these based on data collected in our fieldwork. This is done in the following three sections.

9.2 Healthcare post check

There are four types of healthcare providers in Vietnam:

1. Public hospitals: Public hospitals offer two types of services: services partly covered by health insurance and self-paid services in which patients may enjoy better conditions but must cover all the costs.
2. Community clinics: These are public clinics, providing first aid and common medicines for the local people.
3. Private practitioners: These are doctors and nurses who work for public hospitals/community clinics but who also provide private healthcare services off the official working time.
4. Pharmacies: People sometimes go to these for routine and minor illness and injuries.

There is no data available for Vietnam about the number of episodes of illness per year. So, we use 3.5 visits per person per year as the average number of episodes of illness or injuries per year (once every 3-4 months) as recommended in Anker and Anker (2017). This is 14 illness or injury episodes per year for a family of 4.

According to the VHLSS 2020, outpatient care accounts for around 90% of healthcare visits in rural areas. In rural areas, 67.4% of outpatients visited public hospitals; these are similar percentages as in the VHLSS 2016. According to VHLSS 2020, average healthcare expenditure for the rural areas in 2020 was VND 3,192,100 per person per year.

Given the limited coverage of health insurance and the frequency of people seeking outpatient services from the private healthcare providers, it is reasonable to include some funds in the living income for visits to private health care providers. Regarding the typical types of illness in Vietnam in general, 13.1% reported having diarrhea, 12.6% respiratory diseases, and 7.8% infectious diseases.[20]

Based on our own visits to public and private clinics and pharmacies in Region 4 study districts in Northern, Central, and Southern Vietnam, and information from our discussion with farmers and workers and visits to private clinics, we found that consultation fee for a visit to a private facility was around VND 50,000, rising to VND 350,000 for a specialist such as an optometrist or dentist. The consultation fee for a visit to a public clinic was around VND 40,000. Common medicine for common respiratory diseases such as sore throat, flu and diarrhea (mostly antibiotics) was found to cost around VND 120,000 per episode. Laboratory tests were often used in case of respiratory infection (especially among children), which cost around VND 100,000-200,000 per test. We assumed that 1 lab test is needed for every 4 visits.

Healthcare costs for a family of 4 people are estimated in Table 10 below assuming 3.5 visits per year per person for illnesses as well as one visit per year to a specialist such as an optometrist or dentist.

20 http://khoahoc.tv/nhung-benh-nguy-hiem-nguoi-viet-thuong-gap-phai-49392

Table 10. Estimated healthcare costs for a typical household, Region 4, 2022

Type of provider	Cost per visit for typical illness (1)	Number of visits per year per person (2)	Total cost per year for typical family (3) = (1) x (2) x 4 persons
Public provider[21]		2	
Consultation fee (for a person covered by health insurance)	40,000	2	320,000
Medicine cost (covered by health insurance)	50,000	2	400,000
Lab test cost	100,000	0.5 (assuming 1 lab test for every 4 visits)	200,000
Private provider		1	
Consultation fee	50,000	1	200,000
Medicine	120,000	1	480,000
Lab test	200,000	0.25 (assuming 1 lab test for every 4 visits)	200,000
Specialist such as optometrist or dentist	350,000	1	1,400,000
Pharmacy		0.5	
Medicine	120,000	0.5	240,000
Total			**3,440,000 (VND 286,667 per month)**

Source: Authors' fieldwork and Circular 39/2018/TT-BYT on the healthcare service and medicine prices in public healthcare providers.

The total cost for healthcare indicated in Table 10 added up to VND 3,440,000 per year for a family of 4 or VND 286,667 per month. We assumed that serious illnesses and injuries are treated in public hospitals at no cost.

Comparing our rapid assessment of healthcare costs of VND 286,667 per month with the amount for healthcare included in the preliminary NFNH estimate (VND 499,562 per month), we find it is not necessary to make a post check adjustment to NFNH for healthcare.

21 Public providers include public hospitals (where the workers have health insurance) and community clinics.

9.3 Education post check

The Vietnam education system has 5 years of primary school (beginning at age 6), 4 years of secondary school, and three years of high school. It is also compulsory for children to attend at least 1 year of pre-primary school (at age of 5). However, we observed in our fieldwork that most children in Region 4 are also expected to attend pre-primary school beginning at age 3. Most parents send their young children to a public pre-primary school. Before that, children are generally taken care of by grandparents or relatives in addition to the parents partly themselves, especially when one spouse is not in full-time paid employment or does not have a job.[22]

According to the VHLSS 2020, the attendance rate for primary school was 99.6% and for lower secondary and upper secondary schools it was 96.5% and 88% respectively. Furthermore, 95.1% of school children attend a public school, and this is true for the vast majority of children at all levels (including pre-primary). Therefore, there is no need to consider the possible need to attend private school.

For every school year, the Ministry of Education and Training provides information on the range of school fees based on what the provincial departments of education and training specify these fees are for the local education institutes at each education level (urban and rural separately). Apart from the school fees, our own discussions with workers and their families showed that parents are expected to contribute certain other amounts such as for school funds, purchase of uniforms and text books, and "required" extra classes (see Table 11 below). While most of these additional school costs are frowned upon by government, they are a fact of life for most parents. The school terms for primary, lower secondary, and upper secondary last for 9 months per year while the pre-primary children go to class the whole year.

We interviewed 10 families in each of the 6 study provinces in Northern, Central, and Southern Vietnam about school costs. Most of the interviewees were local people but some were migrants. The research team also checked the education costs indicated in Table 11 with local teachers in Hung Yen (north), Thua Thien Hue (central) and Long An (south).

Table 11. Annual educational expenses and cost of education per month for reference size family in Region 4

Type of expenses	Pre-primary	Primary	Lower secondary	Upper secondary
School fees [23]	420,000	No cost	250,000	400,000
School funds	500,000	500,000	500,000	500,000
Compulsory health insurance[24]	563,220	563,220	563,220	563,220
Uniforms	Not required	275,000	275,000	300,000

22 In this report, we assume that one parent works 86% time.
23 Decision by Hai Duong Department of Education on school fees for the school year of 2021-2022: https://bientap.vbpl.vn//FileData/TW/Lists/vbpq/Attachments/150468/VanBanGoc_NQ%207%20Hoc%20phi.phu%20luc.pdf
24 Each student pays 70% of health insurance (the state pays 30%).

Type of expenses	Pre-primary	Primary	Lower secondary	Upper secondary
Learning materials (e.g., textbooks)	250,000	600,000	600,000	650,000
Extra classes	Not required	500,000	700,000	750,000
Total cost per year	**1,733,220**	**2,438,220**	**2,888,220**	**3,163,220**
Number of years in each level	3	5	4	3
Total annual cost x number of years	**5,199,660**	**12,191,100**	**11,552,880**	**9,489,660**
Average cost per child per year (assuming parents responsible for children for 18 years)				**2,135,183**
Average cost for reference family per month				**355,864**

Notes: School fees in the public education system were provided by the provincial authority. The school fees used in this table are based on the applicable fees indicated by the provincial authorities in the 6 surveyed provinces for the school year of 2021-2022. The cost of meals and snacks in pre-primary school are excluded in the calculation of education costs in this table partly because this reduces food costs at home; and partly because they are not in cluded in the education expenditure group in Vietnam household expenditure statistics. Note that we estimated that the value of snacks and milk received in pre-primary school is similar to the VND 1,320,000 parents pay for this using the following assumptions: children receive one 110 ml box of milk each school day; milk costs per liter as indicated in our local food price survey; children go to pre-primary school 229 days per year (and so excluding weekends, public holidays, 10 sick days, and 10 parent's leave days).

Based on the above cost figures in Table 11, we estimated that school expenses for a family with 2 children (the reference family size for Region 4) is VND 4,270,366 per year or VND 355,864 per month. This amount is VND 203,454 higher than the VND 152,409 included in the preliminary NFNH costs for education (see above). For this reason, we added a post-check adjustment for education of VND 200,000 per month (USD 8) to our preliminary estimate of NFNH costs. There are several reasons why an education post-check adjustment is found to be needed such as: (i) the low amount of household expenditures by international standards for education according to VHLSS 2020 data (2.1% only), (ii) existence of many different types of expenses for parents for public schooling in Vietnam, and (iii) our assumption of pre-primary school attendance for ages 3-5.

9.4 Transport post check

Previous Anker Research Institute living wage reports for Vietnam in 2016[25] included a detailed transport post check, because while private motorbikes were felt to be necessary, ownership of motor vehicles was less than it is currently and therefore the actual spending on private transport in NFNH might not have been sufficient. Now,

25 These 2016 reports can be found on the GLWC website: Resource Library - Global Living Wage Coalition

however, according to the 2020 VHLSS, rural households own 1.48 motorbikes on average (1.70 for urban areas). It is clear that the norm and actual situation in Vietnam is for families to own at least one motorbike – and generally own 2 motorbikes and use them to commute to work, bring children to school, shop, etc. This was confirmed in our fieldwork as all the families we visited or spoke to owned at least one motorbike, and most owned two. Coffee farmers said they used their motorbikes to visit their farms and to transport products, fertilizers, farming tools, among others on daily basis. The importance of owning a motorbike in Vietnam is supported by the household expenditure data shown in Table 8 above which indicate that 10.1% of all expenditures of households in the fourth decile of the household expenditure distribution in Region 4 is for the ownership and operation of private vehicles. In contrast, only 0.4% of all household expenditure is for passenger transportation. Given this large current spending on private vehicles (with VND 889,051 per month included in the preliminary NFNH estimate for transportation), we did not think that it was necessary to do a detailed transport post check for this study.[26]

9.5 Post check summary

After the above post checks for education, healthcare and transport, the total post check adjustment for NFNH is **VND 200,000 per month** as shown in Table 12 below.

Table 12. Post check adjustments to the preliminary NFNH estimate

	Amount included in preliminary NFNH estimate (1)	Amount needed according to post check (2)	Difference between post check and amount in preliminary NFNH (3) = (2)-(1)	Post check adjustment
Healthcare cost	499,562	286,667	negative	none
Education cost	152,409	355,864	203,454	200,000
Preliminary NFNH cost		3,590,074		
Total adjusted NFNH costs		**3,790,074**		

10. PROVISION FOR UNEXPECTED EVENTS TO ENSURE SUSTAINABILITY

It is important to add a margin to the living income to allow for unexpected events and sustainability. This is important to avoid having families falling into debt and not being able to get out of it. The Anker Methodology uses 5% for emergencies and sustainability. This is **VND 480,729 (USD 20)**.

26 None-the-less to make sure that a post check adjustment was not necessary, we did a very quick estimation of the cost of owning and operating two motorbikes. This estimate is slightly more than the VND 889,051 included in our preliminary NFNH estimate for transport. It was based on the following assumptions. (1) Purchase of a common secondhand motorbike (Honda Wave Alpha 100c) was found to cost VND 17,800,000, which implied a prorated monthly depreciation cost of around VND 150,000 assuming a 10 years of service life. (2) Other one-time costs for helmets for the family and registration fees came to around a prorated VND 6,000 per month. (3) Insurance was found to be around VND 5,000 per month. (4) Running costs for maintenance and repairs worked out to be around VND 115,000 per month. (5) Cost for petrol worked out to be around VND 240,000 per month. The total of all these costs was around VND 500,000 per motorbike and so well less than VND 1,000,000 per month considering that some families have 1 motorbike and other families have two motorbikes – and so similar to the amount included in our preliminary NFNH for transportation. We concluded that this small difference does not justify a transportation post check adjustment.

SECTION III. LIVING INCOME

11. FAMILY SIZE NEEDING TO BE SUPPORTED BY LIVING INCOME

The reference family size used in this report to estimate family living expenses and the living income is 4 persons. This family size is consistent with both the total fertility rate (i.e., average number of births women are having over her lifetime) and average household size in rural Vietnam. The total fertility rate for rural areas is 2.26 according to the 2019 Population Census (GSO, 2019). Since the under-5 mortality rate is only 25.1 per 1000 live births according to the 2019 Population Census, this implies 2.20 surviving children after adjusting for the child mortality rate. This implies a family size of just over 4 (4.2).

Average household size in rural Vietnam is 3.86 according to the 2019 Population Census when single person households (which are without children and so not relevant for living income which is a family concept) are excluded. This also implies a family size of just under 4 (3.86). And since the most frequent rural household is also 4 persons (26.6%), data on rural household size imply a family size of 4 persons.

Taken together, these two approaches to determining a reference family size both point to a typical family size of around 4 persons and for this reason, this report uses a reference family size of 4 (2 adults and 2 children).

12. INCOME LADDER WITH COMPARISON WITH OTHER MEASURES OF INCOME

This section compares our monthly living income with other measures of family income such as at the minimum wage, at the poverty line, and at the average prevailing agricultural wage. These comparisons are illustrated in Figure 7 below. Note that when a comparator measure is per person, such as a poverty line, it was converted into a family income using the number of full-time equivalent workers (1.86) and the number of persons (4) in our reference family for Region 4.

12.1 Poverty line income

Vietnam is a lower-middle-income country according to the World Bank and so its international poverty line is 3.65 internationally comparable dollars (i.e., PPP, purchasing power parity dollars) per person per day. This means that the World Bank poverty line family income for Vietnam for 2022 is VND 3,351,564 (i.e., 3.65 x 7,547.15 PPP for Vietnam for 2022 x 4-person family size x 365/12 days per month).

The official national poverty line per person per month for Vietnam was VND 1,033,000 for 2020 (World Bank 2022). This implies a rural family poverty line of VND 4,374,494 for 2022 (i.e., VND 1,033,000 PL in 2020 x 1.059 for inflation to 2022 x 4-person family size). Recently, Vietnam introduced a multi-dimensional poverty line which includes a per capita monetary poverty line of VND 1,500,000 for Region 4; this implies a family poverty line income of VND 6,000,000 (i.e., VND 1,500,000 PL x 4-person family size).

Our living income for Region 4 is around 3.0 times the World Bank poverty line family income and around 2.3 times higher than the Vietnam national poverty family income. It is around 1.7 times the new multi-dimensional monetary poverty line family income. All these poverty lines are clearly much too low for basic decency, although the new multi-dimensional monetary poverty line is much better than the official national poverty line or the World Bank poverty line.

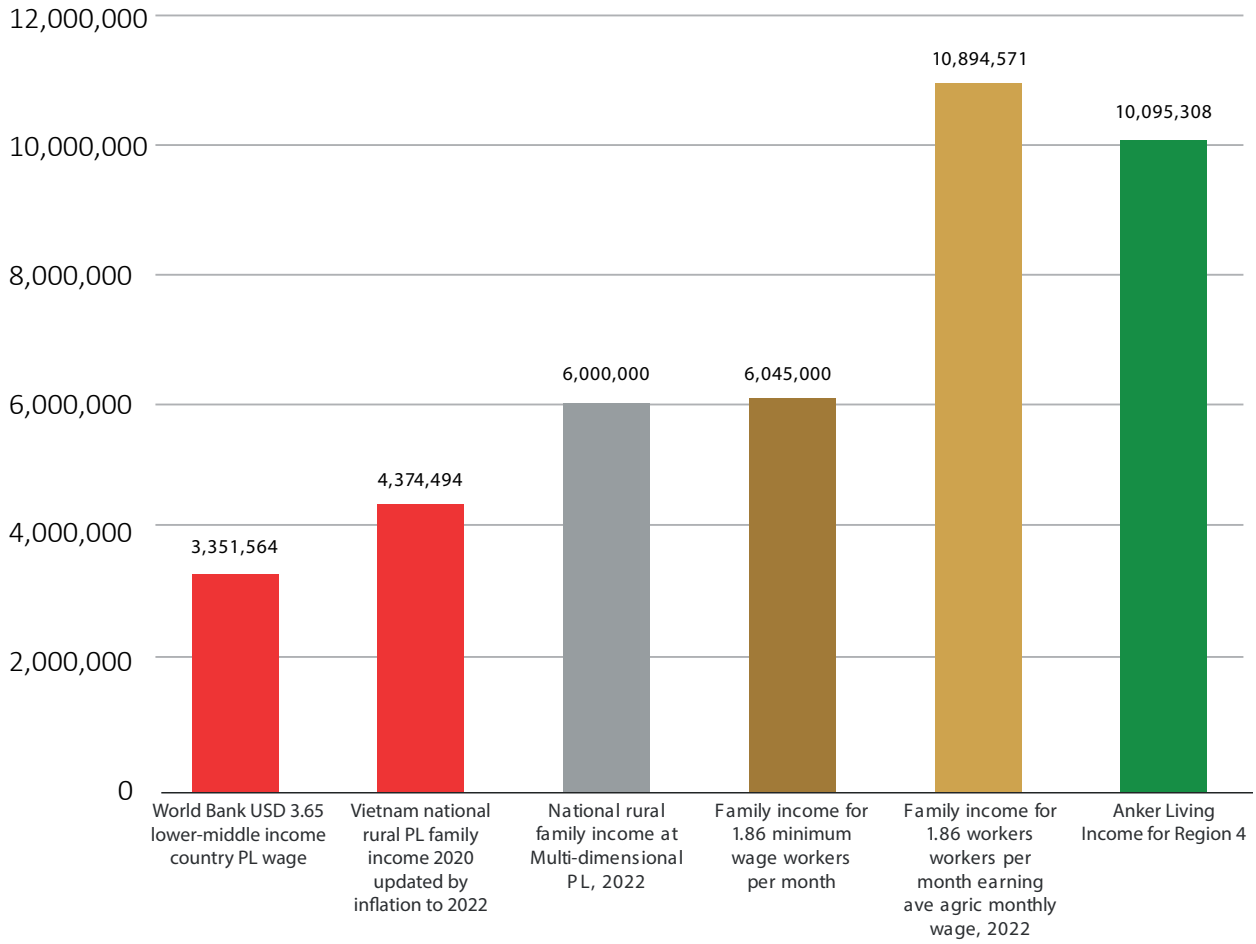
12.2 Minimum wage

The minimum wage for Region 4 in 2022 was VND 3,250,000. This implies a family income of VND 6,045,000 (i.e., VND 3,250,000 minimum wage x 1.86 full-time workers in the reference family). Our living income for Region 4 is around 70% higher than family income at the minimum wage for Region 4. The minimum wage for Region 4 is not nearly sufficient for even basic decency.

12.3 Average wages

The average monthly wage for skilled agricultural workers in 2022 according to ILOSTAT was VND 5,857,296 (VND 6,380,591 for men and VND 4,683,410 for women). This implies a family income of VND 10,894,571 (i.e., VND 5,857,296 x 1.86 full-time worker in family). Surprisingly, this family income is slightly higher (by 8%) than our living income for Region 4. However, there are explanations for this surprising result. These include: (i) agricultural work often involves overtime and living income must be earned in normal working hours; (ii) the reported average prevailing wage is for what is called “skilled agricultural workers” which includes supervisors, managers, and specialists, and possibly excludes regular agricultural workers in this average; (iii) agricultural work is highly seasonal and reported average monthly earnings might largely reflect peak season earnings, (iv) we use a very high 1.86 full-time equivalent workers per family and it is difficult for agricultural employees to get such a large amount of work over the year given the seasonal nature of agricultural work, and (v) since ILOSTAT data are probably for registered formal workers, they would have to pay statutory payroll deductions which would reduce take home pay by 11.5%, and in addition such formal workers might receive higher pay than informal workers.

Figure 7. Income ladder comparing the living income to other family income indicators, Region 4



13. CONCLUSIONS

This report estimated a living income using the Anker Methodology for the minimum wage Region 4 of Vietnam. An annex provides an estimate of a living wage for Region 4. These estimates are based on a combination of primary data on costs of living collected in field visits in minimum wage Region 4, as well as secondary data from GSO (government General Statistics Office of Vietnam) household surveys such as on household size, fertility, food consumption, labor market conditions, household expenditures, and housing conditions and costs. We visited and collected primary data in six Region 4 provinces in Northern, Central and Southern Vietnam (Thai Binh and Hai Dương, Dak Nong and Dak Lak).

Tables 13 and 14 below provide a summary of the components of our living income estimate as well as key assumptions. Living income, which is a family concept, was estimated for a typical size family of four for Region 4 of Vietnam. It is VND 10,095,308 (USD 422)[27] for November 2022.

This report has been very clear about the assumptions it used to estimate its living income so that stakeholders and others are able to understand how our living income benchmark was estimated and what workers and their families would be able to afford and would not be able to afford if they did or did not earn a living income. The living income is based on normative standards for a nutritious diet, healthy housing, adequate healthcare, education for children through secondary school, and private ownership of motorbikes. Our estimate is based on both household survey data from GSO and new fieldwork research on food prices, housing costs, school costs, healthcare costs, and motorbike costs as well as interviews and focused group discussions with farmers and workers and their families, stores and vendors, service providers, and others to determine the realistic cost of needs of typical families in minimum wage Region 4.

It is important to restate that our living income estimate is a conservative estimate of how much is needed for decency because we used lower cost items that meet our basic acceptable standards. Therefore, our living income benchmark is far from an exaggerated and utopian estimate of needs.

Although the Vietnamese government has been continuously increasing minimum wages over time, as indicated in this report, the minimum wage for Region 4 only provides a family income of around half of our conservative living income. Similarly, international and national poverty lines for Vietnam are much too low for basic decency. Our living income is around (i) 3 times higher than family income based on the World Bank poverty line for lower-middle income countries such as Vietnam, (ii) 2.3 times higher than family income based on the national poverty line, and (iii) 70% higher than family income based on Vietnam's new multi-dimensional monetary poverty line. On the other hand, our living income is similar to family income if members earned the 2022 average monthly wage of skilled agricultural workers, as this family income is 8% higher than our living income.

However, it needs to be kept in mind that there are various reasons why the average monthly wage of skilled agricultural workers overestimates how much agricultural workers are likely to earn over the year, such as (i) agricultural work often involves overtime and living income must be earned in normal working hours; (ii) agricultural work is highly seasonal and reported average monthly earnings might to a large extent reflect peak

27 The USD exchange rate in the study period was 23,900 VND to USD (Vietcombank). Since exchange rates are volatile, this and other USD values in this report are reported for expositional purposes only.

season earnings; (iii) the reported average agricultural prevailing wage is for what is called "skilled agricultural workers" which includes supervisors, managers and specialists, and might exclude typical agricultural workers; (iv) it is difficult for agricultural employees to get close to full-time work over the year given the seasonal nature of agricultural work, and (v) formal agricultural workers would have to pay statutory payroll deductions which would reduce their take home pay by 11.5%.

Considering the large gap between family income based on the minimum wage and our living income for Region 4, it is unrealistic to expect the minimum wage to be increased to the living wage level anytime soon – but at the same time, there is no reason why the minimum wage gap to living wage could not be closed by raising it more quickly over time than inflation. Also, it would be possible to raise the income of farmers toward a living income level more quickly in export-oriented industries through a concerted effort of international brands and buyers, social compliance companies, and the government to figure out the best measures that fit with the specific conditions of product sectors.

Table 13. Summary table for estimating living income for minimum wage Region 4

PART I. FAMILY EXPENSES		
	VND	USD
Food cost per month for reference family (1)	**4,174,505**	**175**
Food cost per person per day	34,311	1.44
Housing costs per month (2)	**1,650,000**	**69**
Rent per month for acceptable healthy housing [a]	1,100,000	46
Utility costs	550,000	23
Non-food non-housing (NFNH) costs per month taking into consideration post check adjustments (3)	**3,790,074**	**159**
Preliminary estimate of NFNH costs per month	3,590,074	150
Health care post check adjustment	0	0
Education post check adjustment	200,000	8
Transport post check adjustment	0	0
Additional amount (5%) for sustainability and emergencies (4)	**480,729**	**20**
Total living costs per month for basic but decent living standard for reference family size (5) [5 = 1+2+3+4]	**10,095,308**	**423**

Table 14. Key values and assumptions for living income estimate

	Values and assumptions
Date of study	November 2022
Location	Region 4 (2 study districts in each of Thai Binh, Hai Dương, Dak Nong, Dak Lak, Binh Phuoc, Lam Dong)
Exchange rate of local currency to USD	23,900
Number of full-time workdays per month	26
Number of hours in normal workweek	48
Number of workers per couple	1.86
Reference family size	4
Number of children in reference family	2
Ratio of non-food non-housing costs to food costs	0.86

REFERENCES

Anker, R. (2011). Estimating a living wage: A methodological review. Conditions of Work and Employment Series No.29. ILO, Geneva

Anker, R. and Anker, M. (2017). Living Wages Around the World: Manual for Measurement. Edward Elgar Publishing Ltd., Cheltenham and Northampton.

Borino, F. (2016). Piece rate pay and working conditions in the export garment sector. ILO Discussion Paper No. 28. Available at: https://www.ilo.org/wcmsp5/groups/public/---ed_dialogue/---dialogue/documents/publication/wcms_663063.pdf, last accessed 18 July 2023.

General Statistics Office (2019). Vietnam Population and Housing Census. GSO, Hanoi.

General Statistics Office (2020). Vietnam Household Living Standards Survey. GSO, Hanoi.

General Statistics Office (2020). Vietnam Labour Force Survey. GSO, Hanoi.

International Labor Organization Vietnam (2021). Vietnam Industrial Relations Report 2019. ILO Working Paper. Available at: Industrial Relations Report 2019 (ilo.org), last accessed 25 May 25, 2023.

Nguyen, V. C. (2021). Impacts of Minimum Wage Adjustments on Employment. ILO Vietnam Technical Report. ILO Vietnam, Hanoi.

Socialist Republic of Vietnam (2005). Law on Housing, issued on 29th November 2005 (Available at: http://www.moj.gov.vn/vbpq/en/lists/vn%20bn%20php%20lut/view_detail.aspx?itemid=5972), last accessed 22 November 2022.

Socialist Republic of Vietnam (2019). Labor Code 2019. Vietnam National Congress Library.

World Bank Vietnam (2022). From the last mile to the next mile: 2022 Vietnam poverty and equity assessment. The World Bank Vietnam Technical Report. Available at: https://www.worldbank.org/en/country/vietnam/publication/2022-vietnam-poverty-and-equity-assessment-report, last accessed 25 May 2023.

ANNEX A. LIVING WAGE

This annex estimates the living wage for minimum wage Region 4 which is rural. This is done by first estimating the expected number of full-time workers in a typical reference family and dividing the living income required indicated in this report by the number of full-time equivalent workers per family in the reference family to get the net living wage (take home pay required). Mandatory payroll deductions and income tax are then estimated, and this is added to the net living wage to determine the gross living wage. The net living wage for Region 4 is VND 5,427,585 (USD 227) and the gross living wage (aka living wage) is VND 6,132,865 (USD 257) for Region 4.

A1. NUMBER OF FULL-TIME EQUIVALENT WORKERS IN FAMILY PROVIDING SUPPORT

This section describes how the number of full-time equivalent workers in the reference family was estimated for minimum wage Region 4 (rural) of Vietnam.

Data for rural areas from the 2020 VHLSS were used to estimate labor force participation rates, unemployment rates, and part-time employment rates for prime-aged workers (ages 25–59) for Region 4. A person was considered to be working part-time employee if s/he worked fewer than 30 hours during the reference week. Unemployment consists of individuals who indicated they had no work and were looking for work during the reference period. The following rates were estimated for prime working ages 25-59. They are the average of female and male rates (Table A1).

- Labor force participation rate: 97.2
- Unemployment rate: 1.2%
- Part-time work: 21.1%

The following formula was then used to determine the probability that a person in the prime working age is a full-time worker. The main idea underlying the formula is that the higher the labor force participation rate, the lower the unemployment rate; the lower the part-time work, the more likely that another adult family member will be working full-time.

$$Prob(FT\ Employment_{25-59}) = LFPR_{25-59} \times (1 - Unemployment_{25-59}) \times (1 - PT\ Employment_{25-59}/2)$$

Where FT represents full-time, LFPR is the labor force participation rate, and PT refers to part-time.

The average percentage of full-time work per adult is 0.86 (Table A1). As there is one adult in the reference family already working, the number of full-time equivalent workers in the family is 1.86. Dividing the total living costs by 1.86 results in a net living wage for Region 4 of VND 5,427,585 (USD 227).

Table A1. Number of full-time equivalent workers in reference family

	Male	Female	Overall
Labor force participation rate ages 25 - 59	98.6	95.7	97.2
Unemployment rate ages 25 - 59	1.1	1.4	1.2
Part-time employment rate ages 25-59	17.1	25.0	21.1
Probability person is full-time time worker			0.86
Number of full-time equivalent workers for reference family			1.86

Source: VHLSS 2020.

A2. TAKE HOME PAY REQUIRED AND TAKING TAXES AND MANDATORY DEDUCTIONS FROM PAY INTO ACCOUNT

The net living wage estimated above indicates the net take-home pay required for Region 4 (rural areas). However, the gross living wage which needs to be actually paid has to take into account mandatory payroll deductions that workers have to contribute to social security and union dues. Note that workers would not pay income tax in Vietnam on our living wage for Region 4 as it is below the threshold for income tax in Vietnam.
Vietnamese workers have the following statutory payroll deductions:

- 8% for social insurance
- 1.5% for health insurance
- 1% for unemployment insurance
- 1% for union dues for union members.

Thus, total payroll deductions are 10.5% for non-union members and 11.5% for union members. The unionisation rate in the formal sector in Vietnam was 43.5% in 2018. According to a VGCL (Vietnam General Confederation of Labor) official we spoke to, over 80% of enterprises employing over 100 workers are unionised. Therefore, we decided to include the 1% for union dues in our calculation here.

As of 1st January 2016 according to the 2015 Social Insurance Law, the basis for calculation of mandatory deductions included the basic salary plus wage-related allowances such as seniority allowances, attendance allowances, and dangerous toxic working condition allowance. As of 2018, all components of workers' cash-based pay are taxable. Therefore, we increased the net living wage to take into account statutory deductions from pay to arrive at the gross living wage (aka living wage). Otherwise, workers would not have sufficient take home pay for basic decency.

The formula for calculating the gross living wage thus is:

Gross wage required for living wage = Net living wage /(1.0 - 0.115 payroll deductions)

Therefore, the gross pay required for a living wage is **VND 6,132,865 (USD257) for Region 4 of Vietnam** with VND 705,279 in mandatory payroll deductions.

A3. LIVING WAGE IN CONTEXT: WAGE LADDER

This section compares our monthly living wage with other measures of wages such as the minimum wage, poverty line wages, and average prevailing agricultural wage. These comparisons are illustrated in Figure A1 wage ladder below. Note that when a comparator measure is per person, such as a poverty line, it was converted into a wage by multiplying it by the number of persons in our reference family (4) and dividing it by the number of full-time workers in our reference family (1.86).

A3.1 Poverty lines

Vietnam is a lower-middle-income country according to the World Bank and so its international poverty line is 3.65 internationally comparable dollars (i.e., PPP, purchasing power parity dollars) per person per day. This means that the World Bank poverty line wage for Vietnam for 2022 for our reference family of 4 is VND 1,801,916 (i.e., 3.65 x 7,547.15 PPP for Vietnam for 2022 x 4-person family size x 365/12 days per month / 1.86 full-time workers in reference family).

The official national poverty line per person per month for Vietnam was VND 1,033,000 for 2020 (World Bank 2022) which is VND 1,093,624 updated by inflation to 2022. This implies a rural poverty line wage of VND 2,351,879 for 2022 (i.e., VND 1,033,000 PL in 2020 x 1.059 for inflation to 2022 x 4-person family size / 1.86 full-time workers per family). Recently, Vietnam introduced a multi-dimensional poverty line which includes a per capita monetary poverty line of VND 1,500,000; this implies a family poverty line income of VND 3,225,806 (i.e., VND 1,500,000 PL x 4-person family size / 1.86 full-time workers per family).

Our living wage for Region 4 is around 3.4 times the World Bank poverty line wage and around 2.6 times the Vietnam national poverty line wage. It is around 1.9 times the new multi-dimensional monetary poverty line wage. These poverty lines are clearly much too low for basic decency, although the new multi-dimensional monetary poverty line is much better than the official national poverty line or the World Bank poverty line.

A3.2 Minimum wage

The minimum wage for Region 4 in 2022 was VND 3,250,000. Our living wage for Region 4 is around 90% higher than the minimum wage in Region 4. The minimum wage for Region 4 is not nearly sufficient for affording basic decency.

A3.3 Average agricultural wage

The average monthly wage for skilled agricultural workers in 2022 according to ILOSTAT was VND 5,857,296 (VND 6,380,591 for men and VND 4,683,410 for women). Our living wage for Region 4 is only 5% higher. This small difference is surprising. There are a number of explanations for this unexpected result. These include the following: (i) agricultural work often involves overtime and a living wage must be earned in normal working hours; (ii) this reported average prevailing wage is for what is called “skilled agricultural workers” which includes supervisors, managers and specialists, and in addition it is possible that unskilled agricultural workers are not included in this average; (iii) agricultural work is highly seasonal and reported average monthly earnings might largely reflect peak season earnings, (iv) we use a very high 1.86 full-time equivalent workers per family and it is

difficult for agricultural employees to get such a large amount of work over the year given the seasonal nature of agricultural work, and (v) since ILOSTAT data are probably for registered formal workers, they would have to pay statutory payroll deductions which would reduce take home pay by 11.5%, and in addition such formal workers might receive higher pay than informal workers.

Figure A1. Wage ladder comparing the living wage to other wage indicators, Region 4