

## **Using Price Data to estimate Living Wages**

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## Price data

- Required for the calculation of living costs
- No regularly updated price data
- Expensive to collect and regularly update

- Few international projects collect price data
- National stat offices collect prices to calculate CPI but publish only price indices
- Private initiatives

# Billion Price Project

- Daily prices for all goods sold by 7 large retailers in Latin America and the US: 2 in Argentina, 1 in Brazil, 1 in Chile, 1 in Colombia, 1 in Venezuela, and 4 in the US. (2007-2010)
- Daily price indices 2008-2015, monthly, and annual inflation rates for Argentina and the US. Monthly data with annual inflation rates for Argentina, Brazil, China, Germany, Japan, South Africa, UK, US,

A: Price index

110

Online ---- CPI

105

100

Jan-2018 Jan-2010 Jan-2012 Jan-2014 Jan-2016



# WageIndicator Cost of Living Survey

- Started in January 2014.
- Prices are reported by web visitors, via Cost-of-Living app, via offline surveys.
- Includes prices suitable for living wage calculation
- Prices on 100 food items, rental prices and fees,
   public transport, education and health family expenditure
- Today we have sufficient data to calculate living wage for 70 countries (2,2 million prices)

## Cost of Living Survey



10/10/20

#### Conoce más sobre tu salario

- ¿Estás seguro de ganar lo que mereces? Compara tu salario
- Encuesta sobre salario y condiciones de trabajo
- · Conoce el salario de celebridades



#### Conoce más sobre tus derechos laborales

- · El recibo de la nómina
- · El Salario mínimo
- · Pensiones y Jubilación
- · Leyes y Convenios
- · Paro y desempleo
- Despido
- Tus derechos laborales
- Guia Laboral Ministerio Empleo



### ¿Orientación en tu desarrollo profesional?

- Empleo, Formación y Orientación profesional
- Másters y otros cursos
- ¿Adicto al trabajo?
- ¿Qué es la orientación laboral?

Cuál es el precio de...: Papas dulces (1 kg)

Compara tu salario con el de puestos similares en nuestro comparador salarial

Rellena la encuesta sobre salarios y podrás ganar un salario mínimo!

Trabajo Decente Tu trabajo se ajusta a las leyes laborales de la España y a los convenios internacionales?

Cursos para Trabajar

Cuál es el precio de...: Papas dulces (1 kg)

### Encuesta, Salario para vivir



Si no conoces el precio de algún producto, puedes saltarlo

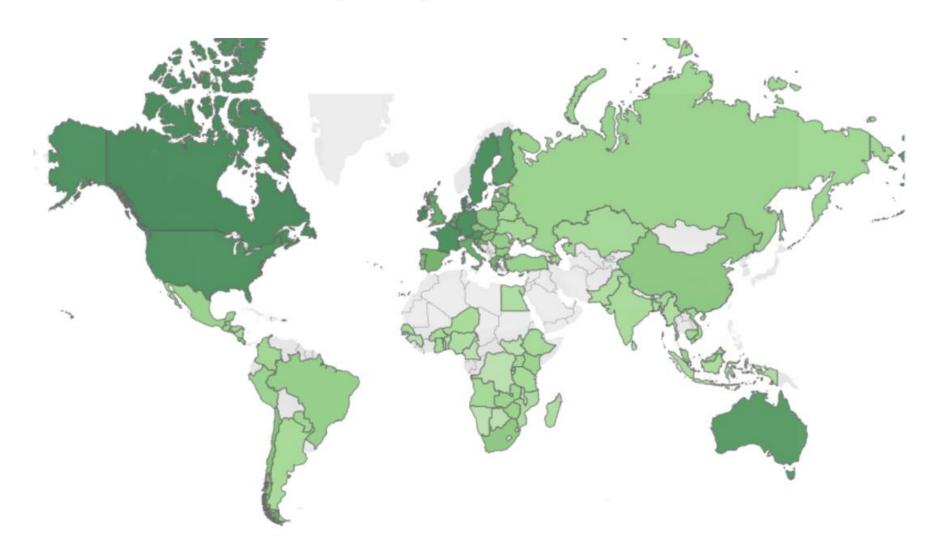
#### Supermercado

Leche (regular) 1 lt
Hogaza de pan blanco fresco (500g)
Pan sencillo o pan pita (500 gr)
Arroz (1kg)
Huevos (12)
Queso local (1kg)
Crema (1kg)
Pechuga de pollo (sin hueso y sin piel), (1kg)

# Price cleaning

- Determine median price for each item, and drop prices below 1/3\*median and above 3\*median
- Take price at 25th and 50th percentile for each item
- Produce interval estimates of living costs
  - More realistic approach relative to point estimates
  - Accounts for the (regional) variation of prices at which different products are accessible
  - In highly developed countries the upper estimate based on the median prices is preferred.

### Living Wages in 70 countries



https://wageindicator.org/salary/living-wage

# Example of food basket

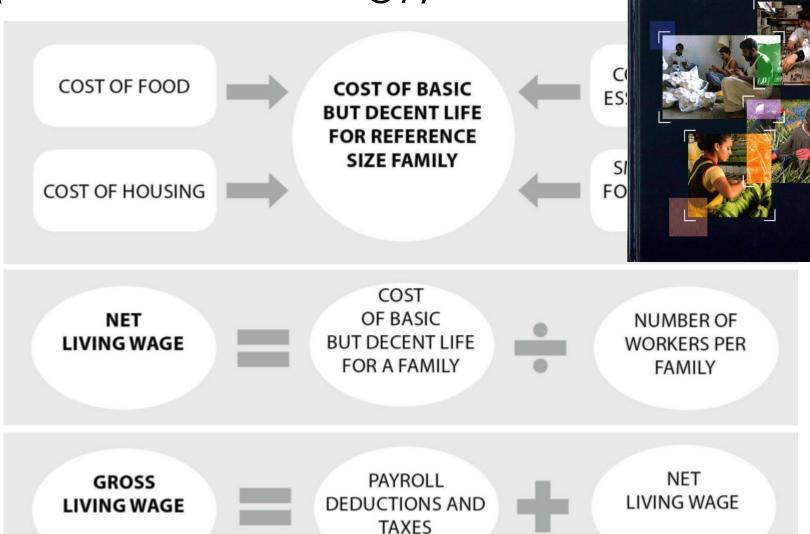
 FAO food balance sheets to construct a food basket

in Slovakia

- Food basket is scaled to 2,100 cal/person/day
- Adults and children have same consumption

Food item	Grams per day	Energy (kcal)	Price per kilo
	1 ,	0, \	•
Wheat, barley and cereals products	275	728	1.4-2
Rice	6	22	.9-1
Meat (beef, pork, poultry)	113	169	4.5-6
Oils (soyabean, olive, palm)	19	172	1-1.3
Sugar (Raw Equivalent)	69	245	.67
Maize and products	0	0	1.6-2
Milk - Excluding Butter	292	135	.56
Vegetables, Other	95	25	1.2-1.5
Potatoes and products	106	69	.46
Butter, Ghee	31	201	4.6-5.2
Groundnuts (Shelled Eq)	9	27	2-2.4
Pulses, Other and products	1	4	.8-1
Egg (price per 10 eggs)	33	45	1.1-1.4
Sunflowerseed Oil	4	37	1.3-1.8
Fish products	18	12	5-7
Beer (0.5 liter/pint)	145	71	1.2-1.6
Sweeteners, Other	30	66	.7-1
Beans	1	2	1-1.6
Sweet potatoes	0	0	1-2
Bananas	13	8	1-1.3
Soyabeans	0	0	2-4
Apples and products	21	9	.7-1
Tomatoes and products	16	3	1-1.2
Onions	12	4	.58
Oranges, Mandarines	33	7	1-1.5
Plantains	3	2	1-1.6
Peas	1	4	.8-1
Roots, Other	0	0	1-1
Seeds and kernels	2	5	2-4.1
Wine (bottle)	8	6	4-4
Pineapples and products	2	1	-
Cream	3	6	1.6-4
Olives (including preserved)	1	2	4.9-6
Honey	2	7	4.9-6
Citrus, Other	1	0	1-1.2
Lemons, Limes and products	5	1	1-1.2
Tea (including mate)	0	0	2-4
Grapefruit and products	2	0	1-1.2
Coffee and products	10	4	5-10

Living wage calculation metho (Anker methodology)



CICI

Richard Anker Martha Anker

MANUAL FOR MEASUREMENT

Living Wages Around the World



Living Wage Estimated using the Anker Methodology **GLOBAL** Meso Region LIVING WAGE Non-Food, Mandatory COALITION Deduction Non-Housing from Pay R\$ 147 Provision for US\$ 40 Unexpected R\$ 1201 Events R\$ 47 6 US\$ 325 US\$ 13 Monthly Living Wage R\$1629

### **Local Housing Standard for Family of Four**

- Housing should provide physical and structural safety and protection from cold, humidity, rain, wind, and other health threats;
- House should have a living room, two bedrooms, an indoor bathroom, and a separate kitchen. Total living space should be at least between the range of the interval of 44.5 to 55 square meters, including outside areas;
- Poor families should not spend more than 30% of their income on rent;
- Walls should be made of brick or plywood, yet stone and adobe walls, if adequately built, meet the standards for outside walls:
- For roofs, concrete slabs, zinc sheets, clay tiles, and plywood are adequate;
- Floors should be cemented, tiled or made of plywood;
- Access to electrical energy;

Housing

R\$ 630

US\$ 170

Access to water supplied by a water utility;

#### **Model Diet**

US \$ 17

**Work Day** 

- 135 g of rice per day (around 1 cup)
- 21 g of maize per day
- 21 g of wheat flour per day
- 56 g of beans per day
- 50 g of bread per day (2 slices)
- 26 g of noodles per day
- 74 g of cassava per day
- 39 g of potato per day
- 123 g of meat per day (10 meals per week for the family)
- 43 g of eggs per day (close to 1 egg per day)
- 197 g of vegetables per day
- 115 g of fruit per day (1orange or 1 banana)
- 200 g of milk per day (around to 2 glasses for every child daily)

Food

R\$ 656 US\$ 177

- 24 g of sugar per day (6 teaspoons)
- 30 g of cooking oil per day (equivalent to 2 tablespoons)
- 1 cup of coffee per day for adults

## Housing cost

- Cost of Living Survey asks about the rental price of apartment with 1 and 2 bedrooms, the location and utilities included in the rent (electricity, water, garbage collection, Internet, and taxes).
- Add housing prices from Numbeo.com (wisdom of the crowd)
- Drop housing prices below 1/5\*median and above 5\*median
- We estimate housing equation to produce a harmonized estimate of a reference apartment (Goedemé et al. 2015).
- The housing cost for a family (an individual) is then a typical rent for a 2-bedroom apartment (1-bedroom apartment) in an average urban area, outside the city center.
- The housing equation also captures regional differences.

# We ask directly about education and health family expenditure

- We asks respondents about the minimal monthly expenses on personal and health care for a 2+2 family
- Expenses for other households are proportionally adjusted
- We ask about the minimal monthly expenses on education (assuming that children attend public school) for a 2+2 family.
- We take reported expenditure at 25<sup>th</sup> and 50<sup>th</sup> percentile.

## Transportation cost

- Most people commute for work or travel for their daily activities (e.g. shopping).
- The price of a regular monthly public transportation pass is taken as the cost of transport.
- Children are assumed to travel for free.

# Taxes and mandatory deduction

- Aim is to construct Gross living wage
- WageIndicator wage survey asks respondents about their gross and net earnings. The ratio of gross/net income is used to calculate the share of earnings spent on taxes and mandatory deductions of low-earning workers.
- For EU countries: the gross/net ratio at the minimum wage

### Expenditure and Living Wage calculation, in EUR

	Total living costs		Fo	Food		Housing		wage	Minimum
	from	to	from	to	from	to	from	to	wage 2018
Bulgaria	524 -	733	248	- 299	141	- 245	371	- 516	261
Czech Rep	737 -	1066	232	- 309	368	- 546	511	- 741	476
Hungary	563 -	792	207	- 266	183	- 310	463	- 651	436
Poland	580 -	1079	232	- 281	186	- 418	446	- 827	488
Romania	400 -	566	195	- 257	113	- 172	306	- 432	400
Russian Fed	351 -	494	179	- 245	60	- 93	224	- 316	127
Slovakia	565 -	828	240	- 320	200	- 320	395	- 580	480
Ukraine	214 -	313	107	- 142	60	- 102	146	- 214	122

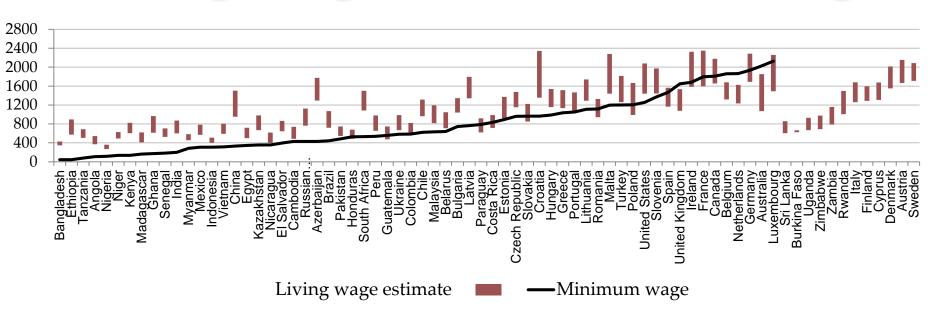
Living Wage is calculated for a 2+2 family. The family employment rate is 1.8 (one adult is a full-time worker and the second adult works 4 days per week). The total living costs are obtained by summing the costs of food, housing, travel, health and education. The 5% margin is added on top. Housing cost is the rent of a two-bedroom home. EUR exchange rate is taken on March 1, 2019.

## Presentation of Living wages in context



Note: Prevailing wages of workers are taken from WageIndicator global dataset on work and wages.

## Living wage vs minimum wage



Note: The figure compares the calculated Living Wage based on living standards with the legislated minimum wage. All rates are expressed in PPP USD dollars.

## Living Wage characteristics

- The living costs cover food expenses considering national food preferences, housing expenses, education and healthcare expenses, travel expenses.
- Living Wage is calculated for different household types and under different assumptions about working hours
- Based on transparent principles and assumptions
- Easy to update regularly (prices are collected continuously)
- Estimates published online











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