

# Prices and earnings 2015

Do I earn enough for the life I want?



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## Africa

Cairo (Egypt)  
Johannesburg (South Africa)  
Nairobi (Kenya)

## Asia

Bangkok (Thailand)  
Beijing (China)  
Hong Kong (China)  
Jakarta (Indonesia)  
Kuala Lumpur (Malaysia)  
Manila (Philippines)  
Mumbai (India)  
New Delhi (India)  
Seoul (South Korea)  
Shanghai (China)  
Taipei (Taiwan)  
Tokyo (Japan)

## Eastern Europe

Bratislava (Slovakia)  
Bucharest (Romania)  
Budapest (Hungary)  
Kiev (Ukraine)  
Ljubljana (Slovenia)  
Moscow (Russia)  
Prague (Czech Republic)  
Riga (Latvia)  
Sofia (Bulgaria)  
Tallinn (Estonia)  
Vilnius (Lithuania)  
Warsaw (Poland)

## Middle East

Doha (Qatar)  
Dubai (United Arab Emirates)  
Istanbul (Turkey)  
Manama (Bahrain)  
Nicosia (Cyprus)  
Tel Aviv (Israel)

## North America

Chicago (United States)  
Los Angeles (United States)  
Mexico City (Mexico)  
Miami (United States)  
Montreal (Canada)  
New York City (United States)  
Toronto (Canada)

## Oceania

Auckland (New Zealand)  
Sydney (Australia)

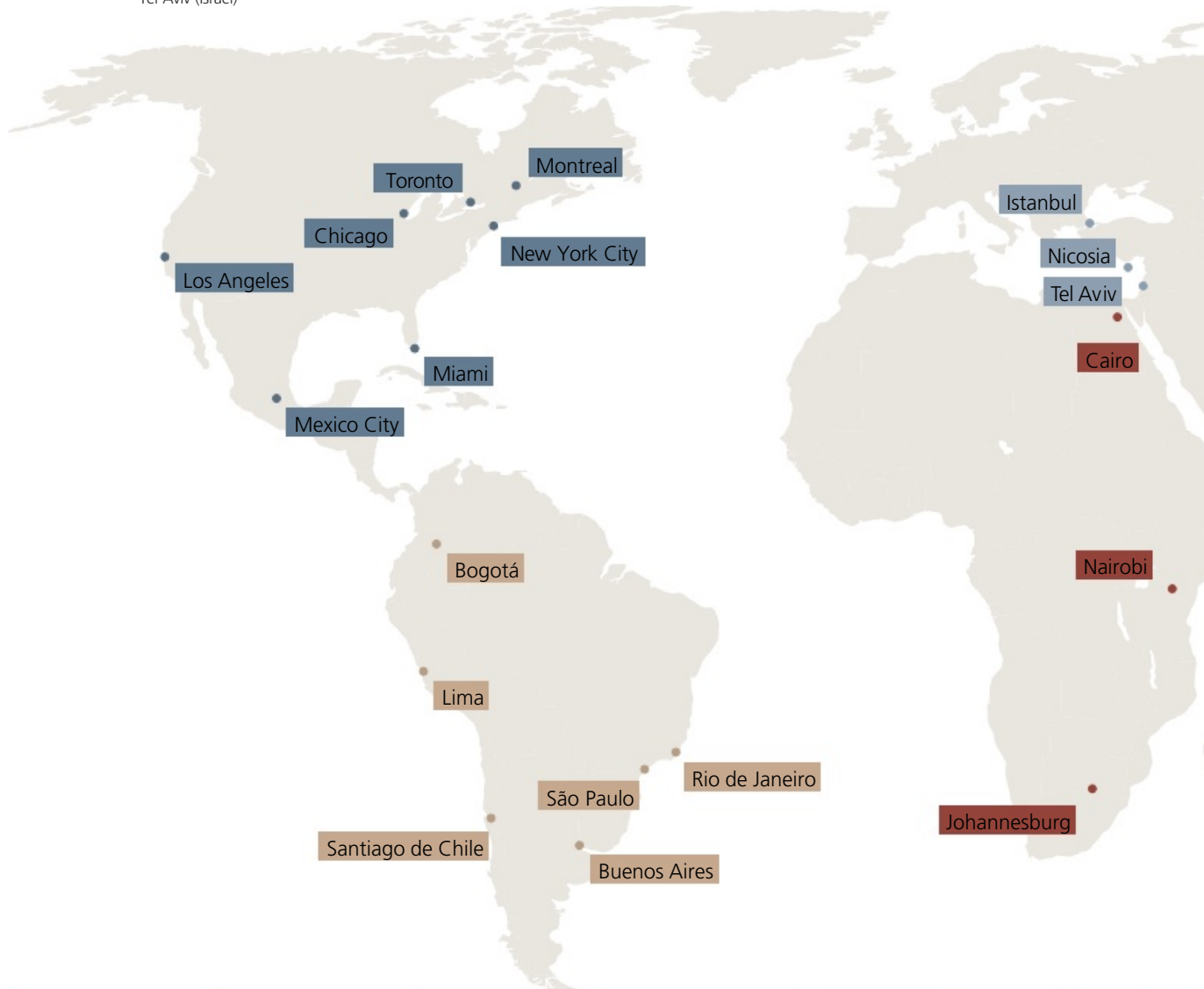
## South America

Bogotá (Colombia)  
Buenos Aires (Argentina)  
Lima (Peru)  
Rio de Janeiro (Brazil)  
Santiago de Chile (Chile)  
São Paulo (Brazil)

## Western Europe

Amsterdam (Netherlands)  
Athens (Greece)  
Barcelona (Spain)  
Berlin (Germany)  
Brussels (Belgium)  
Copenhagen (Denmark)

Dublin (Ireland)  
Frankfurt (Germany)  
Geneva (Switzerland)  
Helsinki (Finland)  
Lisbon (Portugal)  
London (Great Britain)  
Luxembourg (Luxembourg)  
Lyon (France)  
Madrid (Spain)  
Milan (Italy)  
Munich (Germany)  
Oslo (Norway)  
Paris (France)  
Rome (Italy)  
Stockholm (Sweden)  
Vienna (Austria)  
Zurich (Switzerland)





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## Dear reader

Global exchange rates moved sufficiently of late to prompt talk of a “currency war”. States and currency zones are hoping for a weak currency to generate momentum in their economies, especially in the export sector. The measures of various central banks aimed at staving off deflation are also affecting exchange rates. These circumstances make it more difficult to compare purchasing power in different currency zones.

Against this backdrop, we are particularly pleased to present you with the 16<sup>th</sup> edition of our *Prices and earnings* study, in which we compare purchasing power in 71 cities across the globe. Our analysis of more than 68,000 datapoints highlights the effects of political and economic events on prices and earnings, and reveals significant changes compared with the previous study three years ago.

The cities of Zurich and Geneva, for instance, have become markedly more expensive since the last study – mainly due to the Swiss National Bank’s decision to abandon the EURCHF minimum exchange rate early this year.

Three years ago, the minimum exchange rate was set at CHF 1.20. Life in cities within the eurozone and in Tokyo, on the other hand, has become less expensive as the euro and yen have depreciated against the US dollar. And with the currencies of certain emerging markets falling significantly, price drops have been even more pronounced in those parts of the world.

*Prices and earnings* is now available at [www.ubs.com/pricesandearnings](http://www.ubs.com/pricesandearnings), from the UBS Newsstand and in the iOS app. We are also launching new open data options, so you can download all raw data from the first report in 1971 to the most recent 2015 figures for free.

We would like to thank all the participants in our survey, including students, UBS employees and various people around the world who tirelessly collected first-rate data for this report. We would also like to thank our colleagues at Communications & Branding and WM Innovation for their cooperation in producing this report.

We hope you find it interesting and informative reading.

# Comparison of prices and earnings

Between the end of March and end of April 2015, we completed a standardized survey on prices of 122 goods and services, and earnings for 15 professions in 71 cities worldwide. The survey was conducted locally by mutually independent observers. More than 68,000 data points were collected and included in our calculations of the indicators in this report.

To effectively compare cities, we converted all prices and earnings in local currencies to a common currency, the US dollar (USD). Average exchange rates from the data collection period were used to minimize the effect of daily price fluctuations. The exchange rates are listed on pages 14–15.

While we originally started the survey with 72 cities, we needed to remove Caracas, Venezuela. Due to the current complex political and economic situation in the country, with large fluctuations in inflation and exchange rates, we decided that the results for it would not represent current circumstances.

## Reference basket of goods

To make an effective comparison of purchasing power worldwide, a standardized basket of goods and services is required, even though consumer habits and preferences vary greatly. Our reference basket of 122 goods and services is based on the monthly consumption habits of a European three-person family. If products were not available in some cities, or deviated too far from our parameters, local representative substitutes were sometimes used. To make up for the missing coverage, individual items were weighted differently as a correction. We attained a coverage level of almost 70% of the EU's harmonized index of consumer prices (HICP) this year.

Changes in consumer habits stemming from technological developments were accounted for by updated specifications for electronic products. The iPhone 4S from 2012, for instance, was replaced with an iPhone 6. We also expanded data collection possibilities for our housing section to get a more accurate picture of local accommodation worldwide. Also, the furnished four-room apartment was changed to a furnished two-room apartment.

## Reference profile of working populations

As with our prices section, we created a reference profile of 15 professions, representing the structure of the working population in Europe. We included profiles of workers of varying ages, family status, work experience and education levels. To offer a fuller picture, we introduced the profession of a hospital nurse to replace the financial analyst. This change affected our weighting of the other professions, a fact to consider when comparing this version of the report to those of previous years. We also expanded our social security contributions section considerably to encapsulate both employee and employer contributions, providing a more realistic cost of the global workforce.

### Note

Individual cities by geographical region are found on the map on pages 2–3.

Price, earnings, index, time, and percentage figures are rounded off in most cases to improve readability. The index values are calculated on data collected in the survey, relative to a reference city.

The sample size per city may not be statistically representative for single data points.

Our weightings are based on Eurostat data for EU countries.

# Overview









# Working time required to buy...

Some consumer goods are available all over the globe. We decided to feature four in our section that calculates how much time an average worker in each city must work to earn enough to purchase each one. As staple consumer goods, the McDonald's Big Mac and the Apple iPhone will be the same quality and nature whether bought in Doha or Rio de Janeiro. This makes their worldwide prices and affordability comparable. Workers in Hong Kong only have to work on average nine minutes to be able to buy a Big Mac, while workers in Nairobi have to work almost three hours.

## Who works harder to buy a Big Mac?

The distribution of city rankings changes according to the reference goods being bought. Oslo, in the lower half of the table for buying bread, jumps to the top for rice. Workers there can afford it in one-eighteenth of the time that their counterparts in New Delhi require. For the iPhone, workers in cities such as Zurich and New York City require on average less than three days on the job to be able to grab one. In contrast, workers in Kiev must labor, on average, over 13 weeks to earn enough for the same phone. Workers in Buenos Aires cannot access official markets to purchase the iPhone 6 locally.

### Methodology

Prices of each product were an average from all survey participants and, where possible, were compared to the manufacturers' official local retail price. The price of each product was then divided by the net hourly wage for our 15 professions and converted to either minutes or hours.

### Working time required to buy

Cities	1 Big Mac in min.	1 kilo of bread in min.	1 kilo of rice in min.	1 iPhone 6 16GB, in hrs.
Amsterdam	16	7	7	49.8
Athens	26	20	34	98.2
Auckland	13	13	5	44.6
Bangkok	37	47	17	149.6
Barcelona	21	14	7	59.1
Beijing	42	40	36	217.8
Berlin	13	9	13	43.3
Bogotá	35	18	18	143.7
Bratislava	24	13	15	100.8
Brussels	16	14	9	46.1
Bucharest	44	11	28	219.1
Budapest	44	14	20	183.7
Buenos Aires	29	57	21	n.a.
Cairo	62	32	66	353.4
Chicago	11	10	6	28.4
Copenhagen	20	13	11	54.6
Doha	18	19	12	69.9
Dubai	17	9	13	55.8
Dublin	15	6	8	43.4
Frankfurt	13	10	14	41.6
Geneva	11	5	4	21.6
Helsinki	16	10	10	44.4
Hong Kong	9	18	13	51.9
Istanbul	34	22	23	132.2
Jakarta	67	70	58	468.0
Johannesburg	17	10	13	86.9
Kiev	55	26	44	627.2
Kuala Lumpur	23	17	13	136.3
Lima	38	45	15	192.2
Lisbon	22	16	8	88.6
Ljubljana	15	11	25	85.4
London	12	6	16	41.2
Los Angeles	11	10	5	27.2
Luxembourg	10	12	7	28.2
Lyon	16	10	12	47.2
Madrid	19	13	7	60.5
Manama	20	5	11	62.7
Manila	87	83	34	334.2
Mexico City	78	46	22	217.6
Miami	11	11	7	27.0
Milan	18	16	14	53.4
Montreal	13	12	5	32.1
Moscow	20	12	24	158.3
Mumbai	40	27	49	349.4
Munich	13	7	5	40.9
Nairobi	173	44	62	468.0
New Delhi	50	23	73	360.3
New York City	11	12	16	24.0
Nicosia	11	5	9	44.9
Oslo	19	20	4	37.6
Paris	15	10	9	42.2
Prague	30	11	15	143.2
Riga	34	20	26	172.5
Rio de Janeiro	32	18	9	139.9
Rome	18	10	14	53.7
Santiago de Chile	32	15	13	130.8
Sao Paulo	25	16	5	109.2
Seoul	18	22	19	57.2
Shanghai	35	37	25	163.8
Sofia	40	14	28	231.3
Stockholm	17	18	11	46.9
Sydney	11	10	5	34.0
Taipei	13	10	14	69.2
Tallinn	29	15	12	115.5
Tel Aviv	21	12	12	75.3
Tokyo	10	14	10	40.5
Toronto	15	12	7	37.2
Vienna	12	10	6	40.0
Vilnius	29	19	17	131.6
Warsaw	25	20	24	141.6
Zurich	11	5	5	20.6

n.a. = not available

60 hours  
(5 days)

1 iPhone 6 16GB  
1 Big Mac  
1 kilo of bread  
1 kilo of rice

60 minutes  
(1 hour)

Zurich

Tokyo

New York City

20.6 hrs  
11 min  
5 min  
5 min

40.5 hrs  
10 min  
14 min  
10 min

24 hrs  
11 min  
12 min  
16 min

London

Frankfurt

Paris

41.2 hrs  
12 min  
6 min  
16 min

41.6 hrs  
14 min  
10 min  
13 min

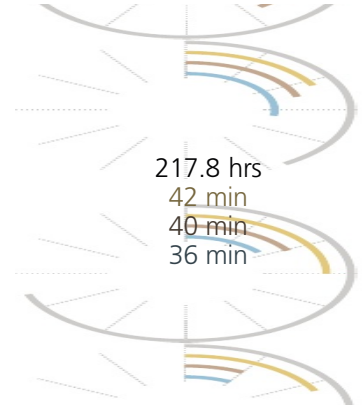
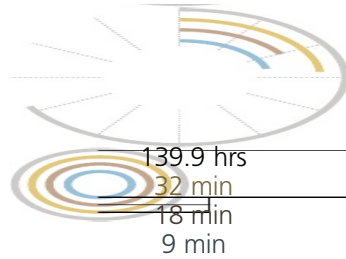
42.2 hrs  
15 min  
10 min  
9 min

Hong Kong

Rio de Janeiro

Beijing

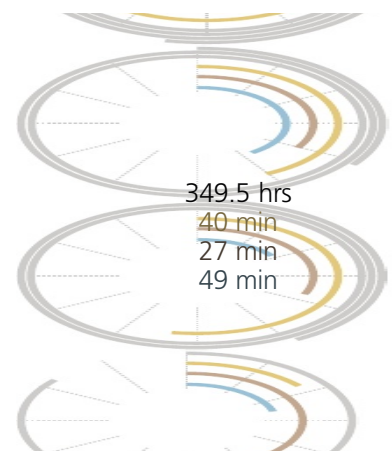
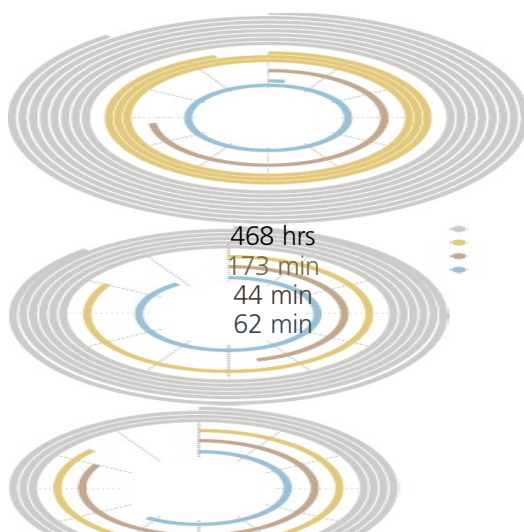
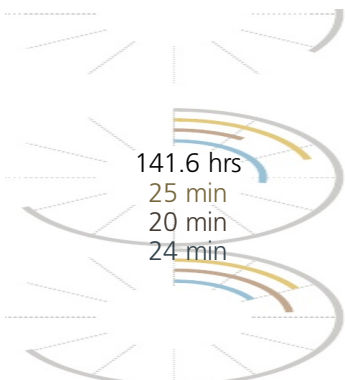
51.9 hrs  
9 min  
18 min  
13 min



Warsaw

Nairobi

Mumbai



# Exchange rates used and inflation

Changing exchange rates should – in theory and in the long run – compensate for differences in inflation across countries and cities. If US inflation is 2% higher than the Eurozone's for an extended time, the US dollar should depreciate 2% per year against the euro. However, exchange rates tend to fluctuate more than inflation differences across currency areas, due to political events, economic developments, and/or monetary policy decisions by central banks. This helps to explain the relative movements of cities in our rankings.

The Swiss National Bank dropped the 1.20 EURCHF floor on January 15, 2015. The impact of this decision was still being reflected in exchange rates a few months later, when we were collecting data. The Swiss franc appreciated 5% against the US dollar between the beginning of the year and April. This greatly affected our indicators, as Zurich and Geneva both rose to the top in price and wage levels. Similarly, the euro had lost almost one-quarter of its value against the US dollar from mid-2014 until the end of the first quarter of 2015, which caused Eurozone cities to plunge in our price and wage-level rankings.

## How stable is my currency?

The trade and financial sanctions imposed on Russia by Western Europe and the USA since the Ukraine conflict in mid-2014 has had a sizeable impact on the Russian ruble, which has lost almost 42% of its value in US dollar terms since 2012. The Ukrainian hryvnia also experienced an over 64% drop relative to the US dollar after the Ukrainian central bank stopped supporting its reserves in early 2014. This also led to 12% local inflation that year. Both Russia and Ukraine plummeted in our rankings, with Kiev now at the bottom of our price and wage-level charts.

Economic and political instability in South America greatly affected exchange rates, placing certain countries in unfavorable positions. The Brazilian real has depreciated almost 35% against the US dollar since 2012 due to continuously declining foreign trade. This resulted in official inflation figures of over 6% in 2013 and 2014. Countries like Argentina and Colombia faced similar fates.

The Asian scene is mixed. The Japanese yen lost value but the South Korean won appreciated versus the US dollar. Japan has yet to experience the growth promised by Abenomics, introduced in 2013, though inflation has risen from 0.0% in 2012 to 2.7% in 2014. The South Korean won has gained over 6% against the US dollar since 2012, with inflation falling from 2.2% in 2012 to 1.3% in 2014.





