

Methodology & Definitions

The study analyses 70 cities around the world to determine the best places for expats to live.

City selection:

For the Expat City Index, we selected 70 of the world's most popular destinations for expats from all the capital cities and major metropolises worldwide. The cities were selected according to GDP and the percentage of the foreign-born population. The final 70 cities range from all corners of the Earth, from New York City, USA, to Taipei, Taiwan.

Standardising and normalising data:

The ranking was calculated according to four criteria: Economics, Living, Environment and Urbanisation, and Family and Society. Each factor was then broken down into further factors, including Average Net Earnings, Average Working Hours, Unemployment Rate, Personal Income Tax Rate, Rental Expenses, and Healthcare Expenditure. Each factor had different units of measurement and needed to be standardised according to the following equation:

$Score_j = 1 + 9 * ((X_i - X_{min}) / (X_{max} - X_{min}))$ and $Score_i = 1 + 9 * ((X_i - X_{max}) / (X_{min} - X_{max}))$ for inverted scores.

The above equation allowed each city to be standardised from 1 to 10, with 1 being the lowest score, and 10 the highest.

The weighting was firstly carried out for the four main categories, and then a score for each criterion was assigned.

A weighted average was used for all the factors in order to create the final score for each criterion. For example, the Economics Score was created by evaluating and aggregating the Average Net Earnings, the Number of Fortune 500 Companies, Work-life Balance, Startup Ecosystem, Unemployment Rate, and the Personal Income Tax Rate of each city.

The formula used for the weighted average, is as follows:

$$\sum_{i=1}^n (\text{weight}_i * \text{score}_i)$$

where, weight_i is the weight of column for factor i , n - total number of columns used for the weighted average, and score_i is the normalised score for factor i .

Finally, to create a comprehensive city ranking, each criterion had equal weight in the index. The total score from the weighted average of each main category was formed as follows:

$$\text{Total Score}_i = 25\% * \text{Economics Score}_i + 25\% * \text{Living Score}_i + 25\% * \text{Environment and Urbanisation} + 25\% * \text{Family and Society}_i$$

The Expat City Index was created using both city and country-level data. In the instance of country-level data, the country score was also applied to every city within that particular country.

Identifying indicators and data sources

In total, 24 indicators were included in the overall ranking. In order to conduct the most relevant research, the data was included from 2017 and 2018, and occasionally from 2015 and 2016 where necessary.

Below are the criteria and sources:

Economics

1. Average Net Earnings: Net hourly earnings are derived by excluding taxes, social security, and other deductions from gross annual income for each city, and dividing it by annual working hours. Source: [UBS Group AG](#)
2. The Number of Fortune 500 Companies (country data). Source: [Fortune Media IP Limited](#)
3. Work-life Balance (country data): The average weekly working hours. Source: [TechRepublic](#)
4. Startup Ecosystem: Startup facilities such as co-working spaces, the number of investors, infrastructure investment, and venture funding. Source: [StartupBlink](#)
5. Unemployment Rate (country data): The percentage of the labour force that is unemployed. Sources: [OECD](#) and [International Monetary Fund \(IMF\)](#)
6. Personal Income Tax Rate (country data): The top marginal tax rate applied to different sources of income, like labour, pensions, interest, and dividends. Sources: [TheGlobalEconomy.com](#) and [Trading Economics](#)

Living

1. House Price to Income Ratio: The ratio of average apartment price to the average amount of disposable income per family. Source: [Numbeo](#)
2. Price of Food: Monthly consumption of food items. Source: [UBS Group AG](#)
3. Monthly Rental Expenditure: Monthly median rent for a small apartment in the city centre. Source: [Teleport](#)
4. Most-Friendly Countries (country data): Countries ranked based on warm and friendly locals. Source: [InterNations](#)
5. Healthcare Expenditure (country data): Healthcare expenses as a percentage of gross domestic product (GDP). Source: [WHO](#)
6. Safety Score: Score for countries based on war and peace, personal security, and natural disaster risk. Sources: [SafeAround](#) and [Numbeo](#)
7. Average Annual Sunshine Hours: Average hours of sunshine per year. Source: [Current Results](#)

Environment & Urbanisation

1. Average Internet Speed (Mbps): Average internet speed (Mbps) to download a 5GB file. Source: [ATLAS & BOOTS](#)
2. Environmental Performance (country data): Countries that have an established environmental policy goal. Source: [Environment Performance Index \(EPI\)](#)
3. Air Pollution: Average PM2.5 concentration ($\mu\text{g}/\text{m}^3$). Source: [IQAir AG](#)
4. Public Transport Ticket Cost: One-way ticket cost for public transport, including bus, tram, and metro. Source: [Numbeo](#)
5. Traffic Congestions: traffic congestion level. Source: [TomTom International BV](#)

Family & Society

1. The Number of Top 1,000 Universities (country data): Countries with a presence of world top 1,000 universities. Source: [Academic Ranking of World Universities \(ARWU\)](#)
2. Percentage of Foreign-Born Population: The foreign-born population as a percentage of the total population (country data). Sources: [United Nations](#) and [Compare your Country](#)
3. Quality of Life: Estimated from the overall lifestyle, including purchasing power, house prices, rent, and healthcare. Source: [Numbeo](#)
4. English Proficiency (country data): Countries ranked based on the English speaking proficiency level of citizens. Sources: [EF Education First](#)
5. The Cost of Living for a Family: The amount needed to sustain a certain standard of living according to housing costs, food, clothing, school tuition, and transportation costs per month. Source: [NomadList](#)
6. Vacation Days: Paid vacation days per year. Source: [UBS Group AG](#)