

# A Global Analysis of Cooking Around the World

 **A report by Gallup and Cookpad**

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# Introduction

Cooking reflects a lot about a society. How much time people spend cooking, what resources they have and use to do it, how and with whom a meal is shared ... these are all windows into people's lives. The act of cooking is also related to a country's health, economy and environment.

Prior to Cookpad's partnership with Gallup in 2018, there had never been a thorough global analysis of cooking across the world. This report is an important starting point for future research and explores if — and

how — home cooking correlates with other life factors. This is the first time that questions about cooking have been included in the Gallup World Poll. They reveal how frequently people cook; who cooks and who eats; how cooking fits into people's lives; and how cooking may vary by culture, region and country.

Ideas about what constitutes cooking certainly vary, especially across food cultures. Gallup defined cooking as a meal prepared at home, mostly from ingredients such as vegetables, meats and grains.

**The following survey questions were asked on the 2018 wave of the Gallup World Poll.**

**The next few questions will ask you about cooking at home. By “cooked at home” we mean a meal prepared at home mostly from ingredients, such as vegetables, meats, and grains.**

Thinking about the past 7 days, on how many days did YOU, personally, EAT LUNCH that was cooked AT YOUR HOME, either by you or someone else?

Please tell me whether any of the following people COOKED any of those LUNCHES AT YOUR HOME in the past 7 days?

Thinking about the past 7 days, on how many days did YOU, personally, COOK LUNCH AT YOUR HOME?

Thinking about the past 7 days, on how many days did YOU, personally, EAT DINNER that was cooked AT YOUR HOME, either by you or someone else?

Please tell me whether any of the following people COOKED those DINNERS AT YOUR HOME in the past 7 days?

Thinking about the past 7 days, on how many days did YOU, personally, COOK DINNER AT YOUR HOME?



# About This Research

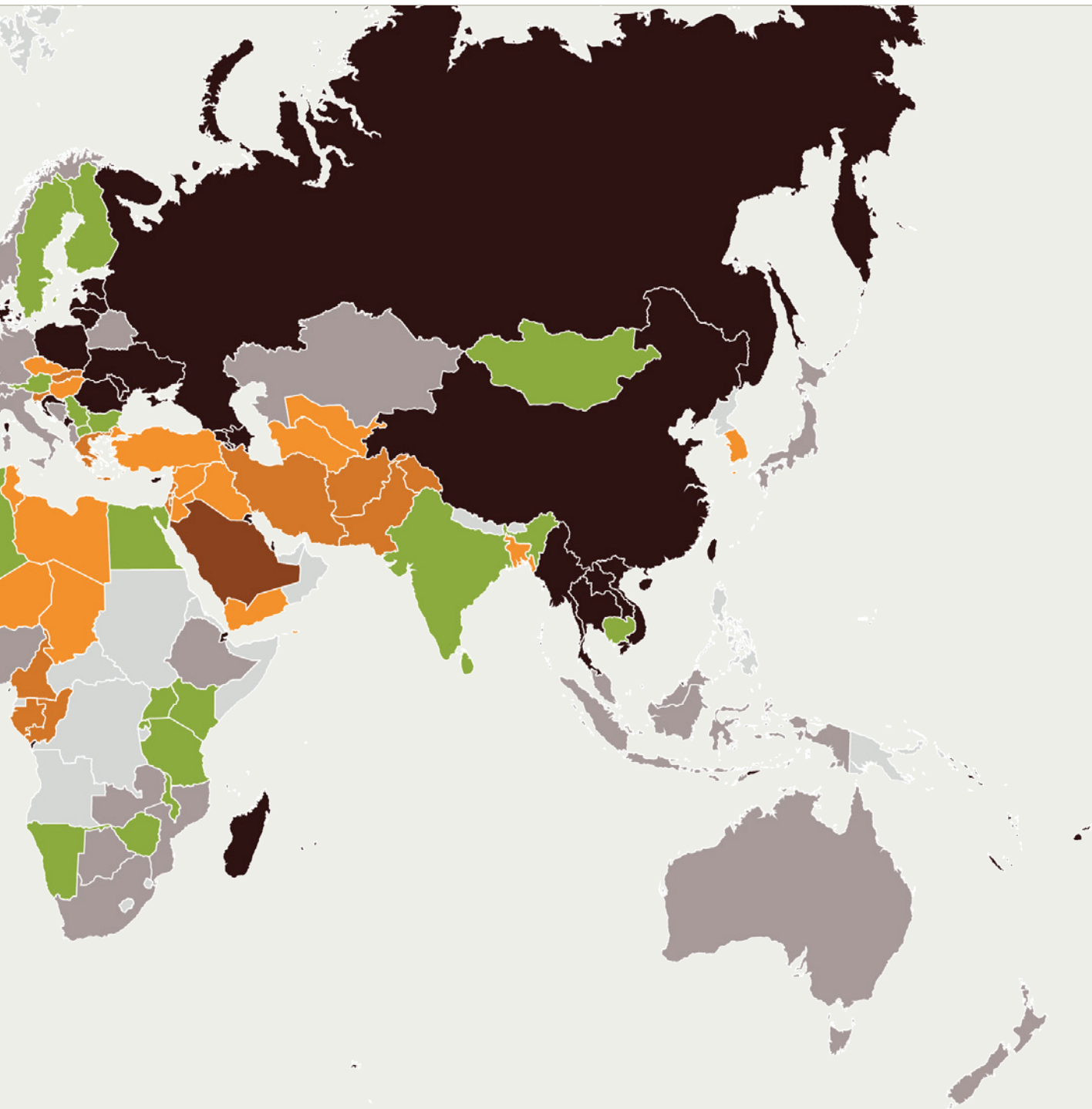
The Gallup World Poll has surveyed the global population since 2005 and represents 99% of the world. This report encompasses findings from 143 countries across all regions of the globe. Gallup also collects information on demographics, as well as on issues ranging from the ability to afford food, the quality of water, standard of living, and the positive and negative emotions people experience, which allows for deeper insights about cooking around the world.

Unlike other surveys, the Gallup World Poll includes individuals who would not ordinarily be included in this type of research because of the difficulty and cost associated with reaching them, such as individuals who can only be surveyed in person because they do not have access to a phone or the internet, people who are illiterate, people in rural and hard-to-reach areas, and residents for whom census data are out-of-date or infrequent. Gallup uses different strategies to reach respondents (namely phone and face-to-face) in different countries. World Poll national data are weighted to reflect geographic and demographic distributions of country populations.

Responses to this survey are from randomly selected individuals, but they speak to the context of those individuals' households. Respondents were randomly selected from within each household that was selected to participate in the survey. This means that this is not a survey of exclusively home cooks because the respondent may not have always been the primary cook in their household. Speaking with people with various roles in their respective homes gives a full perspective of cooking within that country.

Cookpad and Gallup seek to make a valuable contribution by studying these previously unknown patterns in global cooking and share a goal of building upon these findings in future research.







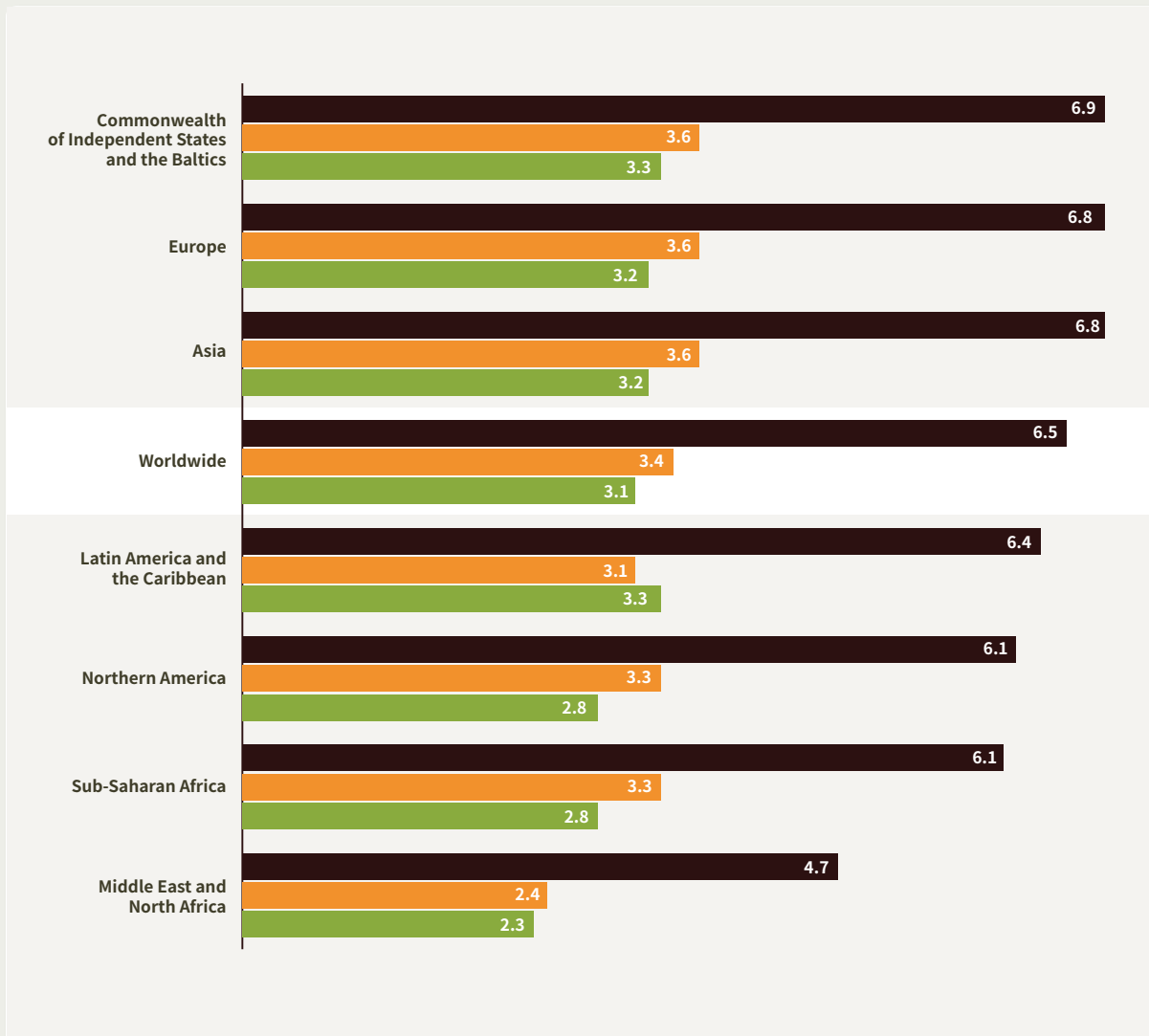
## Frequency of Home Cooking by Region and Country

Based on the questions asked, respondents can report cooking up to 14 times per week — seven times for lunch and seven times for dinner. Using this scale, people cook 6.5 meals per week on average globally.<sup>1</sup>

Regionally, cooking is above the global average in the Commonwealth of Independent States and the Baltics (6.9 meals per week), Europe (6.8 meals) and Asia (6.8 meals), whereas cooking is at about the global average in Latin America and the Caribbean (6.4 meals). People cook a bit less often on average in Northern America (6.1 meals) and sub-Saharan Africa (6.1 meals) and cook the least in the Middle East and North Africa (4.7 meals).

<sup>1</sup> In a small number of cases, respondents only provided a numerical response to lunch or dinner, but not to both. In these cases, their responses were not considered in the calculation of the average of total meals cooked per week, but they were included in the averages of just lunch or dinner.





### Average home cooking by region

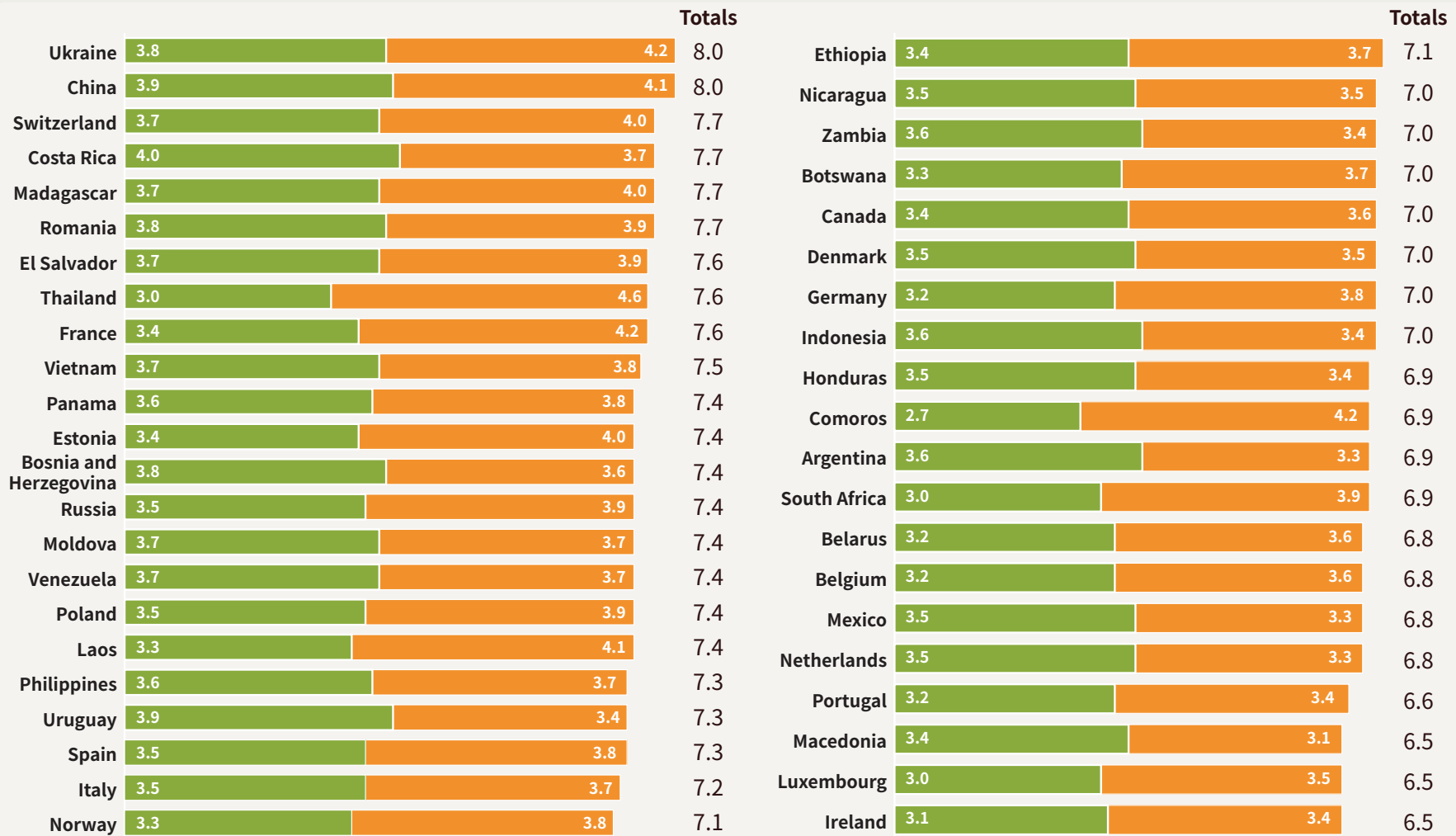
■ Total meals cooked per week ■ Dinner ■ Lunch

< These figures represent cooking averages per capita — not average eating habits — as many respondents live in households where some people may cook more than others.

Frequencies of cooked meals per week are greatest in Ukraine and China, where an average of eight meals are cooked in both countries. Cooking frequencies are also high in Switzerland, Costa Rica, Madagascar and Romania — each with an average of 7.7 meals cooked per week — as well as in El Salvador, Thailand and France, where the average is 7.6.

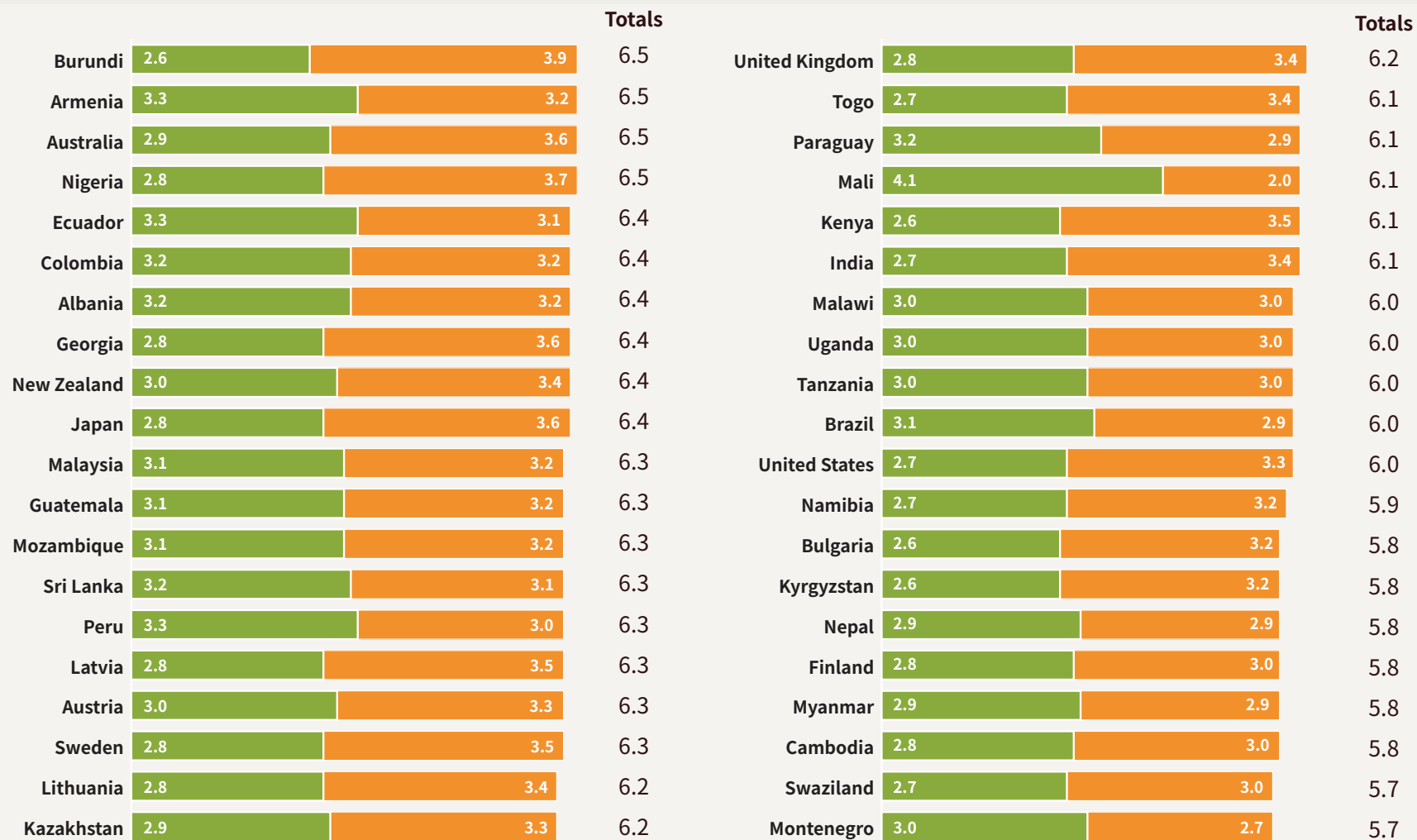
Average numbers of meals cooked per week are lowest in the Middle Eastern nations of Jordan (2.8), Lebanon (2.8) and Saudi Arabia (3.4), as well as the Asian countries of Singapore (3.5) and Taiwan (3.7).

The number of days per week that people across the world cook dinner (3.4) is slightly higher than the number of days they cook lunch (3.1), and this is true across all regions except for Latin America and the Caribbean, where lunch (3.3) is cooked slightly more than dinner (3.1). At the country level, four countries — Greece, Chile, Lebanon and Mali — cook an average of at least one more lunch than dinner.



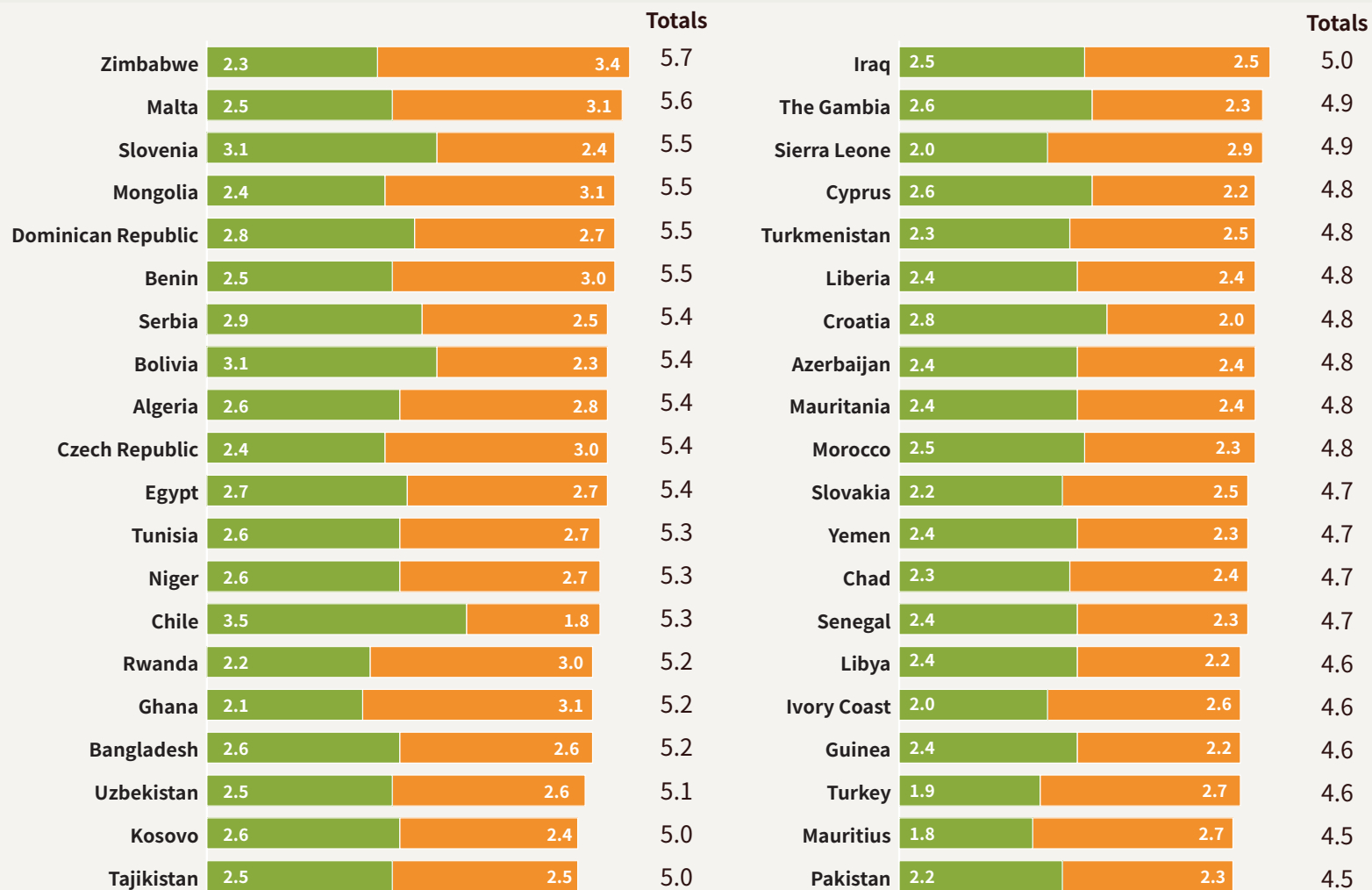
### Average home cooking by country

- Number of days cooked lunch at home in past seven days
- Number of days cooked dinner at home in past seven days



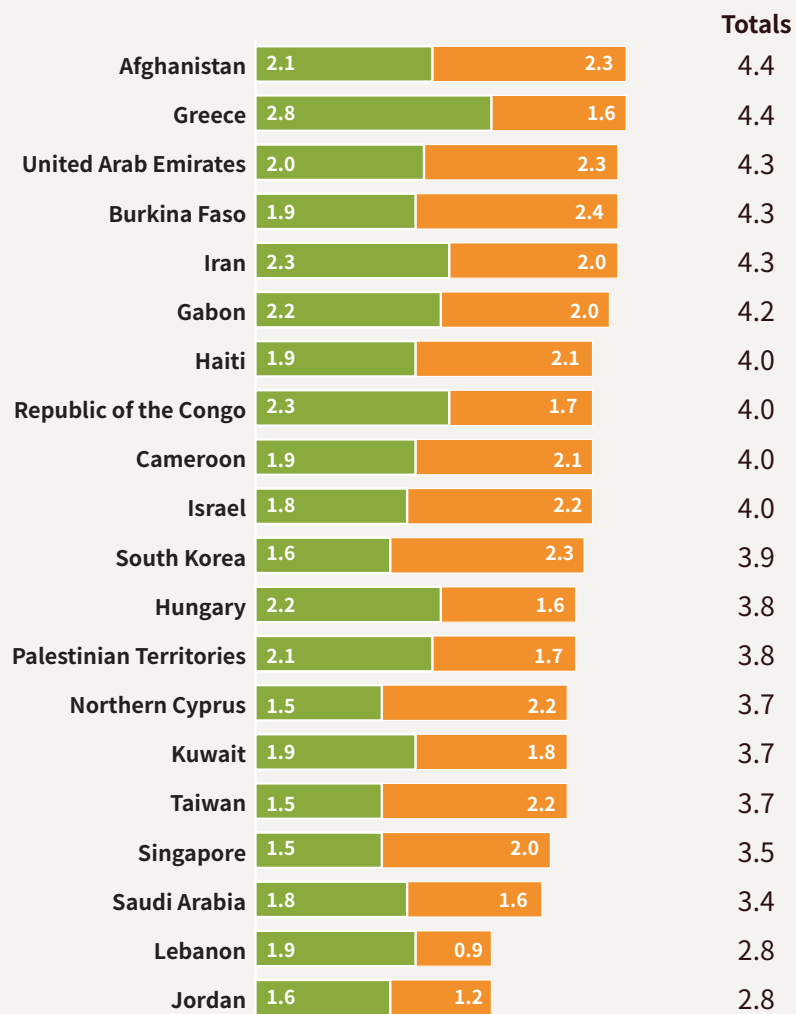
## Average home cooking by country (continued)

- Number of days cooked lunch at home in past seven days
- Number of days cooked dinner at home in past seven days



### Average home cooking by country (continued)

- Number of days cooked lunch at home in past seven days
- Number of days cooked dinner at home in past seven days



### Average home cooking by country (continued)

- Number of days cooked lunch at home in past seven days
- Number of days cooked dinner at home in past seven days



## Eating Home-Cooked Meals

Worldwide, people eat an average of 10.9 home-cooked meals each week. Despite variations across regions in the number of days that a meal was cooked at home, the number of home-cooked meals eaten per week is more stable. Residents in the CIS & the Baltics (11.7), Latin America and the Caribbean (11.3), and Asia (11.2) eat the most home-cooked meals, while Europe, at 10.8, is in line with the global average. Residents in SSA and MENA eat fewer home-cooked meals than the worldwide average, with both regions at 10.2, while residents in Northern America (8.5) eat the fewest home-cooked meals in the world.

Home-cooked meals eaten at home are eaten most in Venezuela, where an average of 13.2 meals are eaten each week. Following Venezuela, average figures of home-cooked meals eaten at home are greatest in the South Asian countries of Myanmar (13), Nepal (12.9) and Bangladesh (12.7) — as well as in Yemen (12.8), Ukraine (12.6), Albania (12.6) and Nicaragua (12.5).

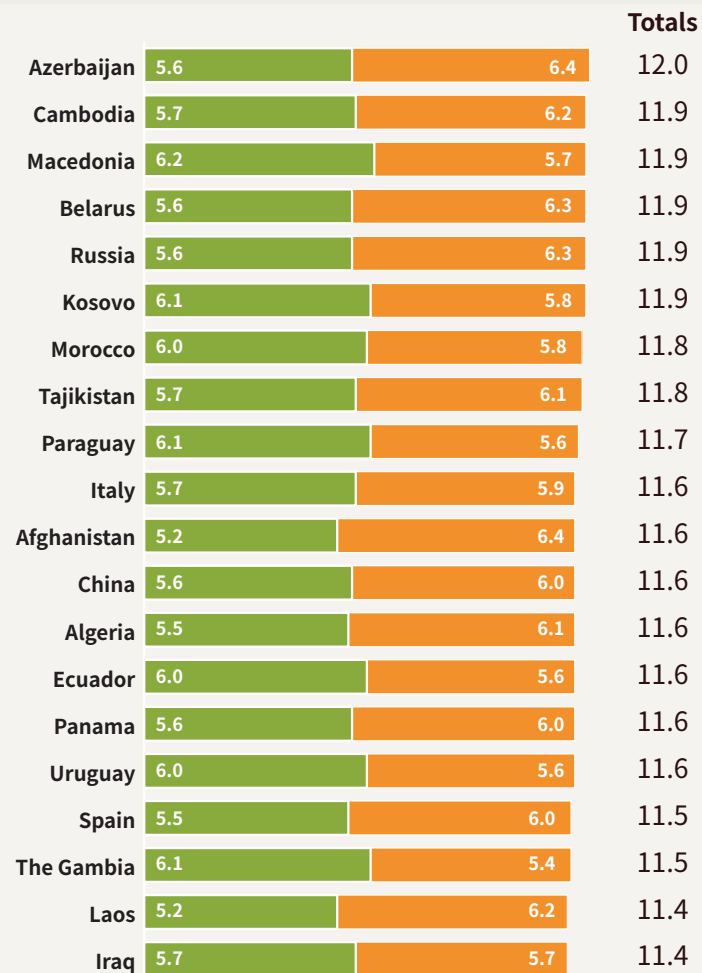
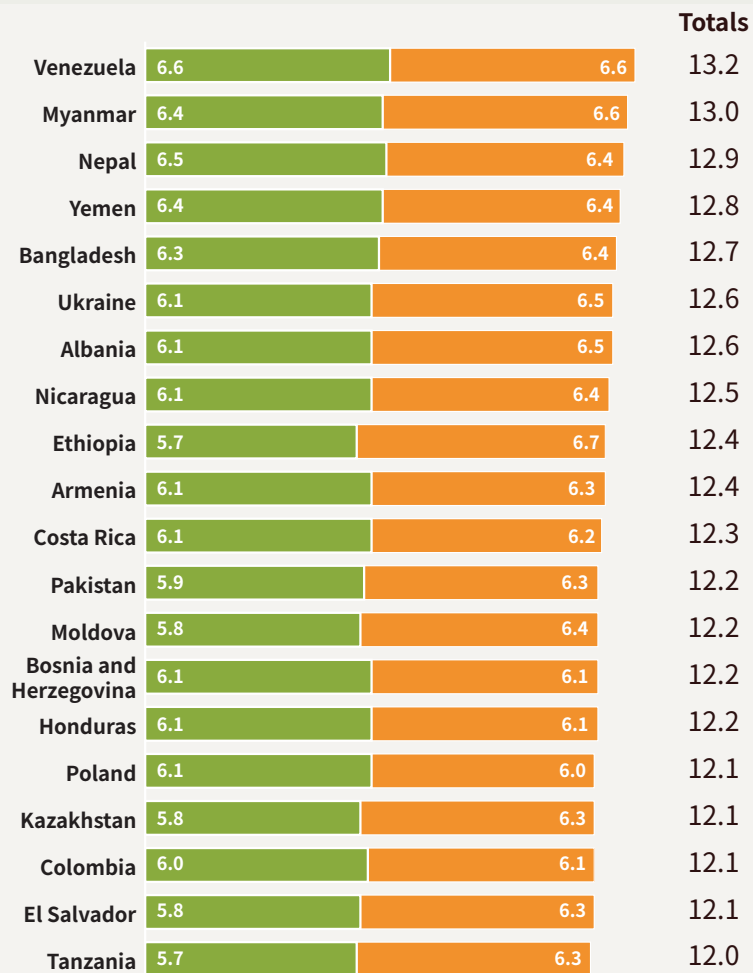
Home-cooked meals are eaten the least frequently in the Republic of the Congo (5.3), South Korea, (5.5), Haiti (6.0), Taiwan (6.8) and Niger (6.8).

Similar to their cooking patterns, the number of days per week that people eat home-cooked dinners (5.7 days per week) are a bit more than the number of days they eat home-cooked lunches (5.2 days) — and this is true across all regions except for Latin America, where home-cooked lunches (5.8) are eaten a bit more than dinners (5.5).

In five countries, respondents report eating at least two more dinners than lunches in the past week — the eastern Mediterranean countries of Northern Cyprus (5.4 dinners vs. 3 lunches) and Turkey (5.2 vs. 3.1); the islands off the eastern African coast of Comoros (5.9 vs. 3.8) and Mauritius (5.7 vs. 3.6); and Zimbabwe (6.5 vs. 4.2).

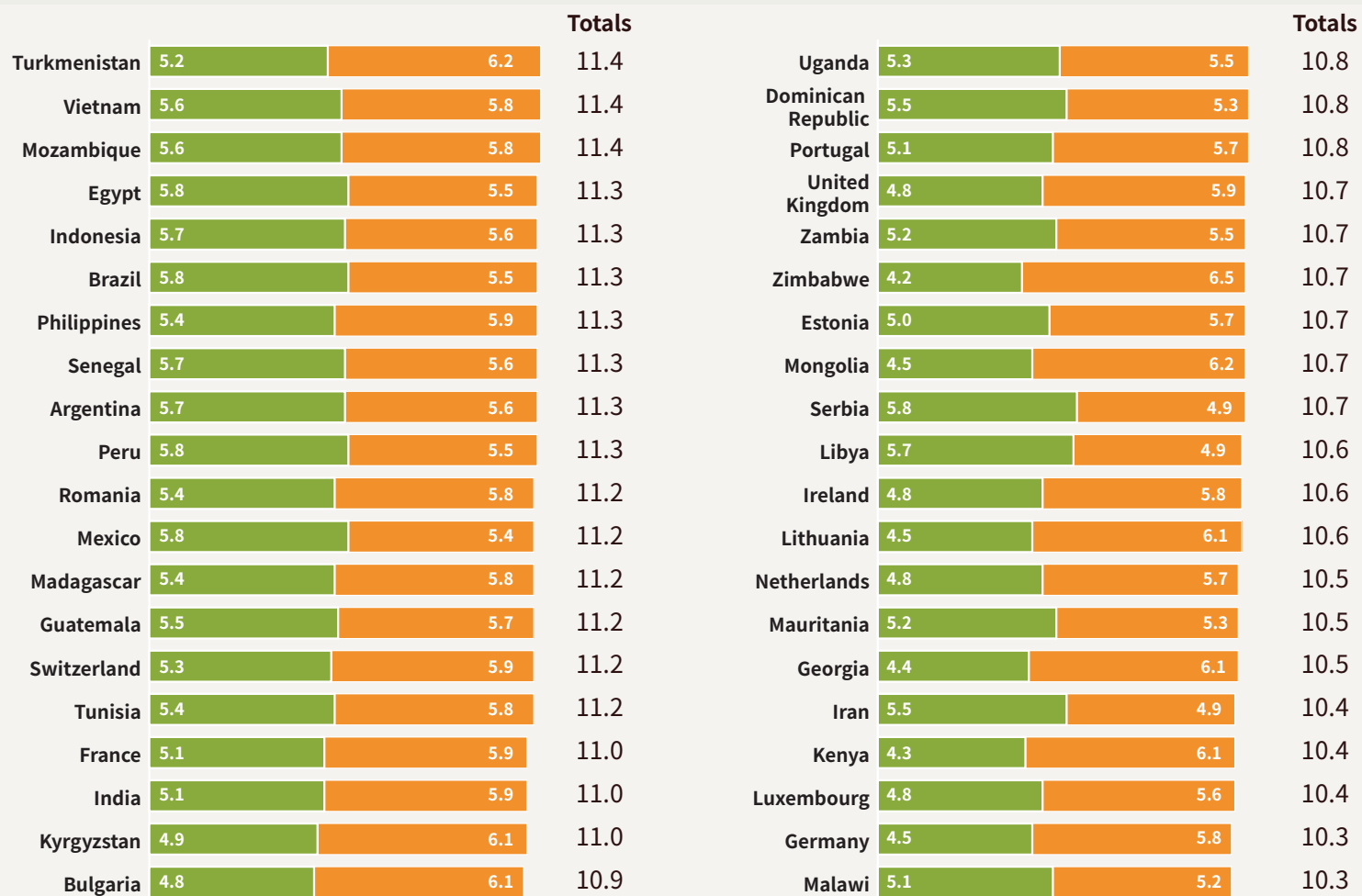
Meanwhile, respondents in three countries report eating at least two more home-cooked lunches than dinners — Lebanon (5.2 lunches vs. 2.8 dinners), Greece (5.1 vs. 3.1) and Chile (6 vs. 3.1).

Residents eat the most home-cooked dinners per week in Ethiopia (6.7), Myanmar (6.6), Venezuela (6.6), Ukraine (6.5), Zimbabwe (6.5) and Albania (6.5). Home-cooked lunches are eaten the most per week in Venezuela (6.6), Nepal (6.5), Myanmar (6.4) and Yemen (6.4).



## Average meals eaten at home by country

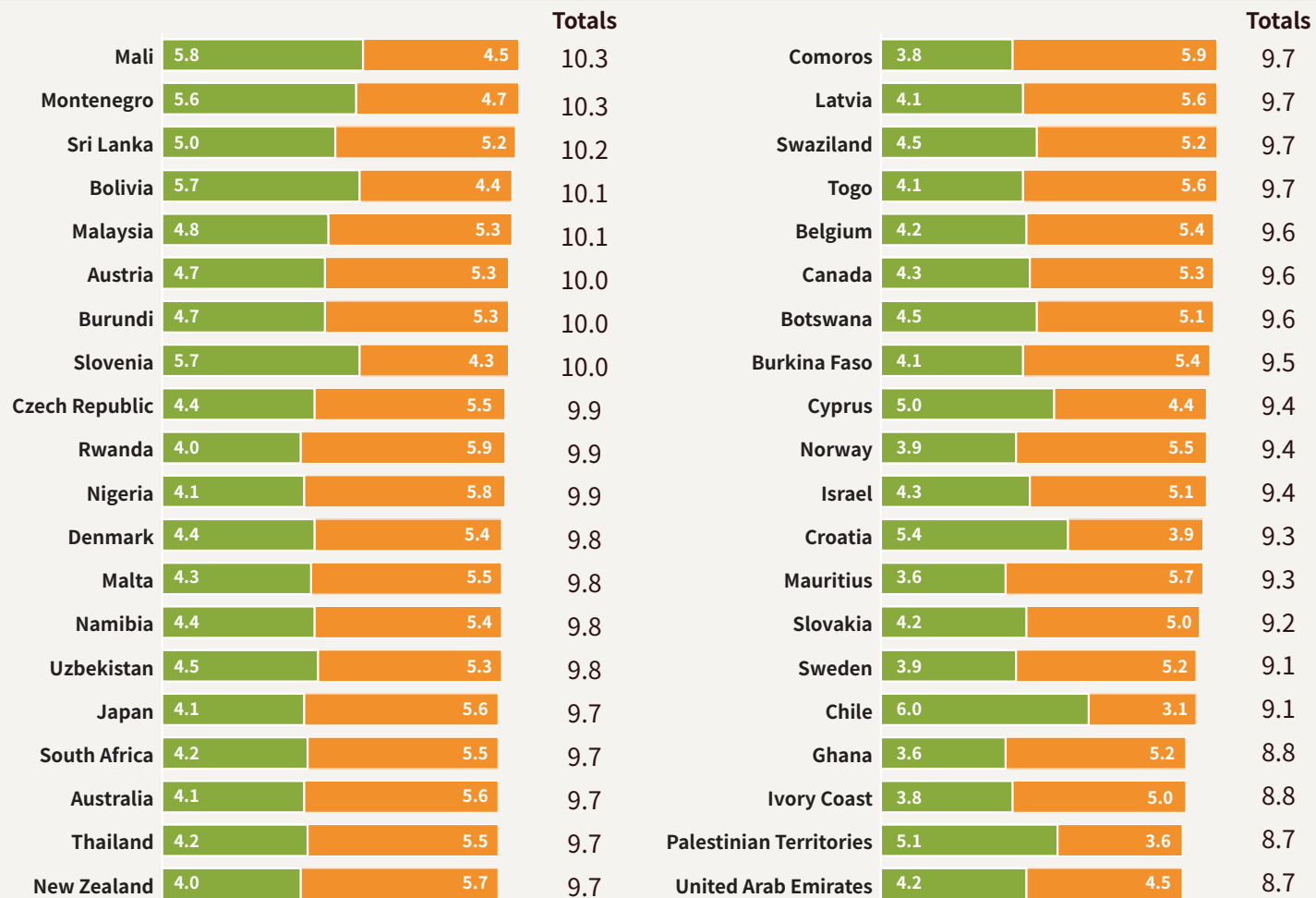
- Number of days ate lunch cooked at home in past seven days
- Number of days ate dinner cooked at home in past seven days



### Average meals eaten at home by country (continued)

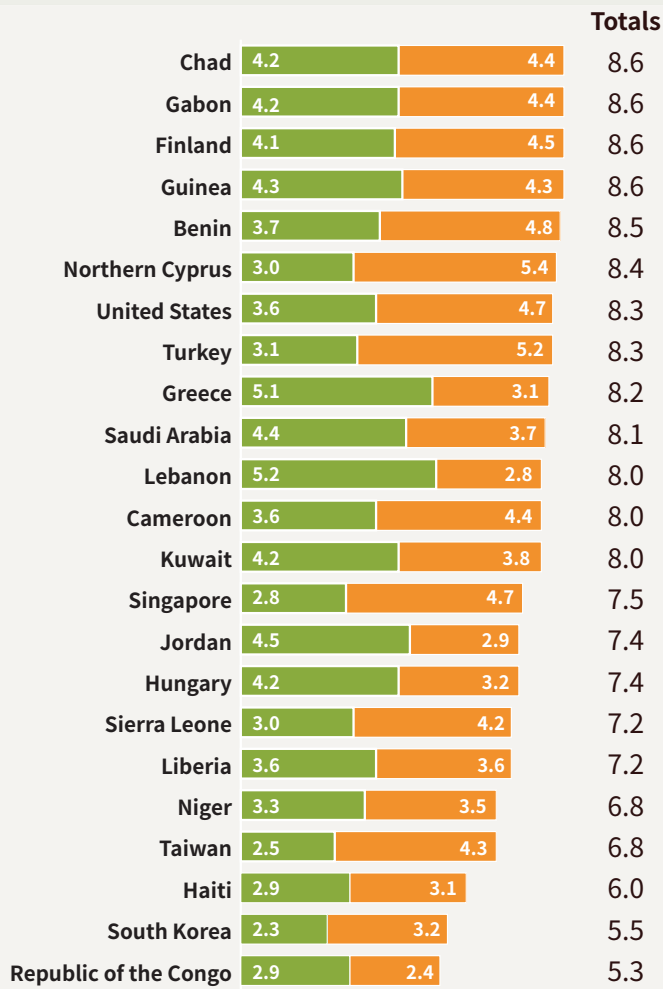
- Number of days ate lunch cooked at home in past seven days
- Number of days ate dinner cooked at home in past seven days





### Average meals eaten at home by country (continued)

- Number of days ate lunch cooked at home in past seven days
- Number of days ate dinner cooked at home in past seven days



### Average meals eaten at home by country (continued)

- Number of days ate lunch cooked at home in past seven days
- Number of days ate dinner cooked at home in past seven days



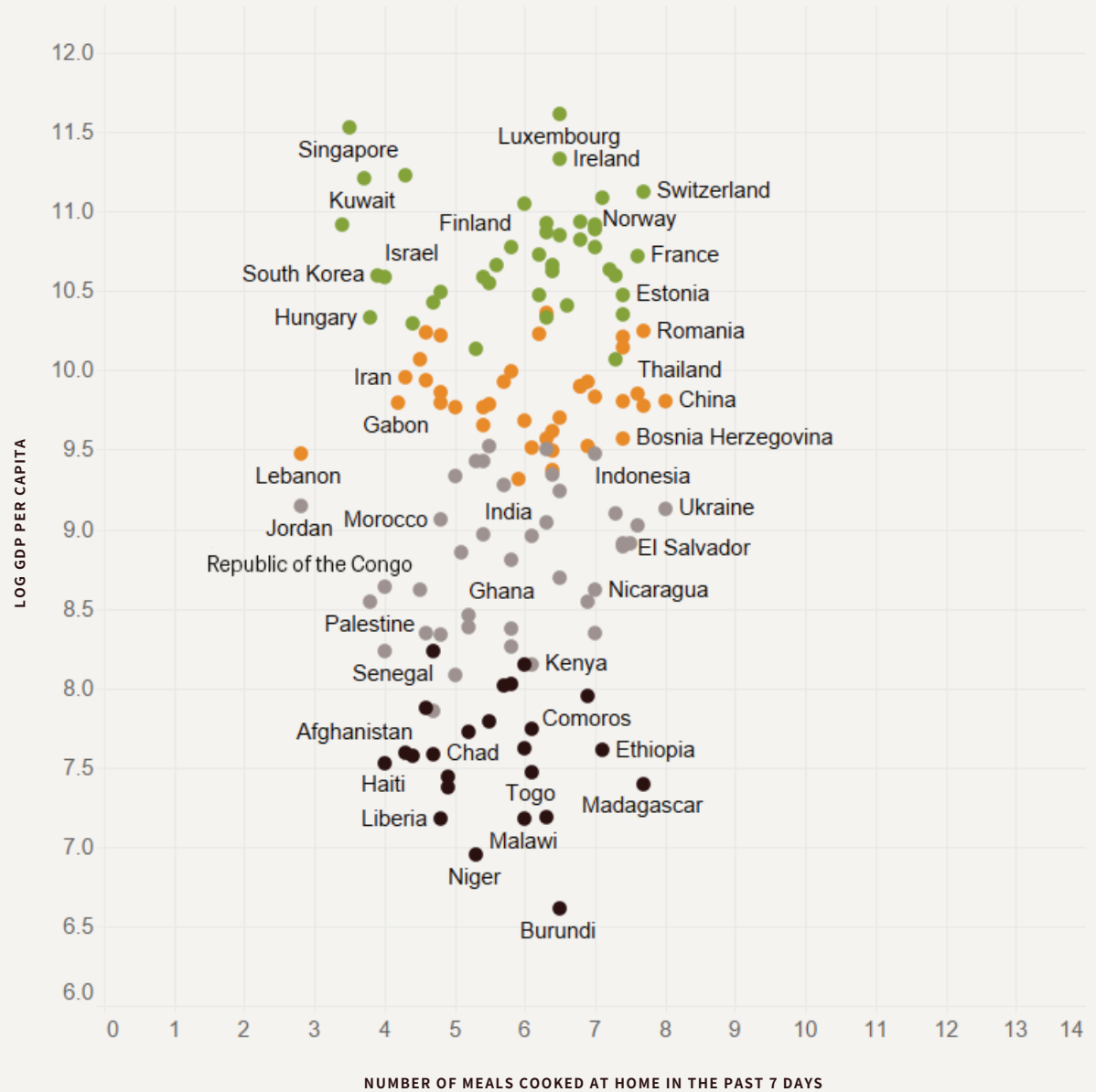
## GDP and Income Do Not Determine Cooking Frequencies

From the data, there is no correlation between Gross Domestic Product (GDP) per capita and home cooking, suggesting there is no relationship between how wealthy a country is and how often its residents cook. The same is true across income levels, as defined by the World Bank: Cooking frequencies vary by country across each of the four income levels. Two countries that rank near the top of the list in GDP per capita place on opposite ends in terms of how many meals residents cook per week: Residents in Luxembourg (6.5) cook nearly twice as much as residents in Singapore (3.5). Meanwhile, two countries with some of the lowest GDP per capita also rank on opposite ends of average meals cooked per week: Residents in Madagascar (7.7) cook nearly twice as much as residents in Haiti (4.0).

## GDP and income do not determine cooking frequency

### Income level

- High income
- Upper-middle income
- Lower-middle income
- Low income





## Cooking and Household Size

Countries with the largest average household sizes tend to be countries where people on average cook less. This is likely because there are more household members to cook for the group, putting less cooking responsibility on individuals. For example, a household of six people is more likely to reflect more sharing of cooking responsibilities than a household of two people.

Looking at the 11 countries that fall into the “top 10” in terms of household size (two countries tie for the 10<sup>th</sup> spot), seven also fall into the bottom quartile of countries in terms of how many meals they cook on average per week. These include Afghanistan, Guinea, Senegal, Yemen, Liberia, Pakistan and Burkina Faso. Overall, household size has a moderately negative correlation with the number of meals cooked, at least at the country level, with the correlation between the two data series standing at  $-.378$ .



## Who Cooks for Whom?

Respondents were asked who cooked the meals they ate each week: themselves, their spouses or partners, a family member (child, parent or other family member) or a combination of these responses.

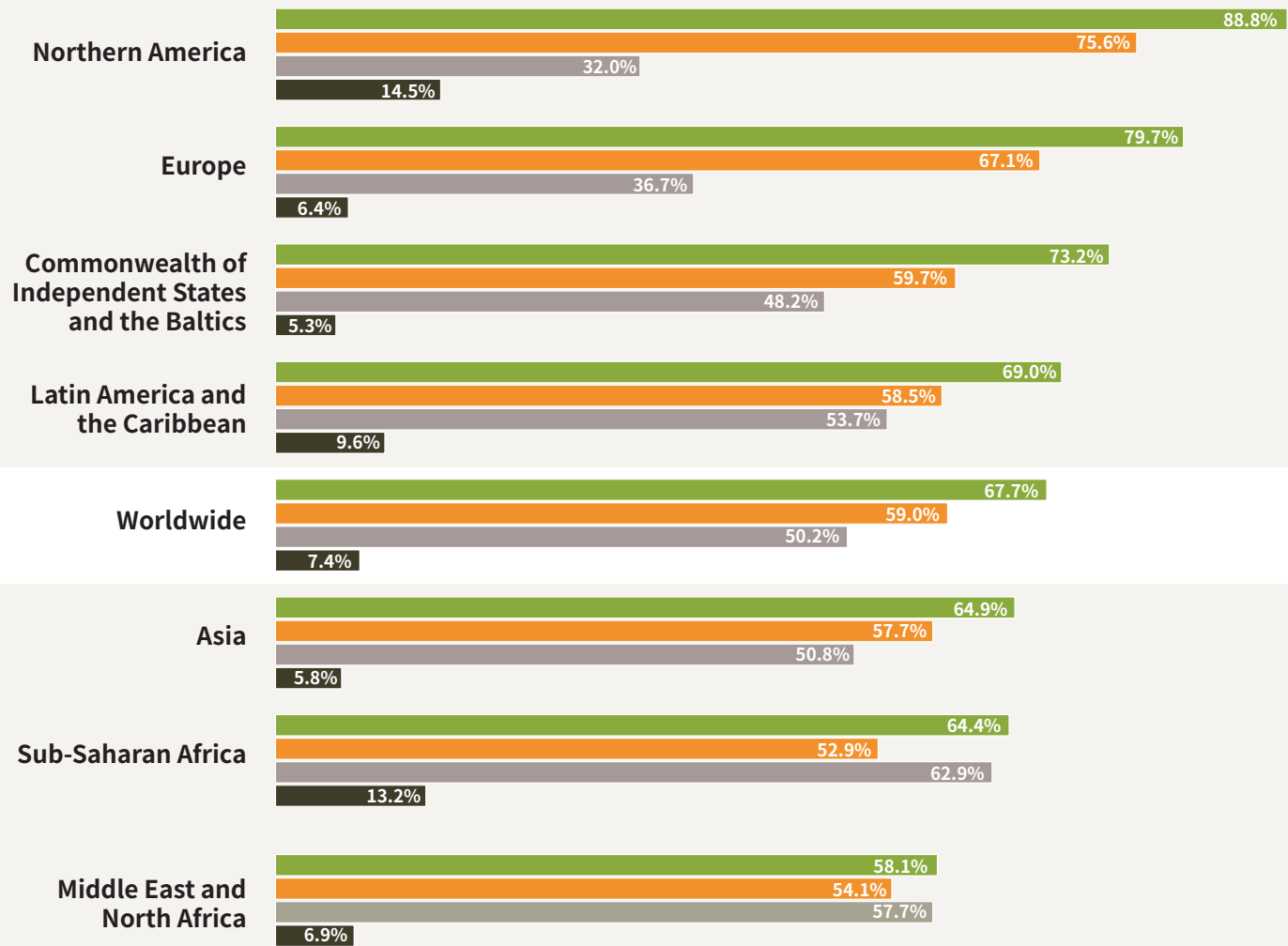
Globally, about two in three adults (67.7%) ate meals cooked by themselves in the past week, while most people ate a meal cooked by a spouse (59%) and half ate a meal cooked by another family member (50.2%). Few people (7.4%) ate meals cooked by non-family members — though non-family-cooked meals were eaten at a rate nearly twice the global average in sub-Saharan Africa (13.2%) and Northern America (14.5%).

The vast majority of women worldwide eat meals they cooked themselves (88.4%), and this is true across all regions, ranging from as high as 94.1% in Northern America to as low as 86.4% in Latin America.

Men (46.3%) are almost half as likely as women worldwide to have eaten a meal they cooked themselves. Regionally, Northern American men (83.5%) are most likely to have eaten a meal they cooked themselves — creating near gender parity with Northern American women — creating near gender parity with Northern American women. Meanwhile, men in MENA cook for themselves the least (30.1%) in a given week, creating the greatest gender disparity for this measure.

People are most likely to eat a meal cooked by a spouse in Northern America (75.6%) and Europe (67.1%), while roughly half of adults in SSA (52.9%) and MENA (54.1%) say they ate meals cooked by a spouse.

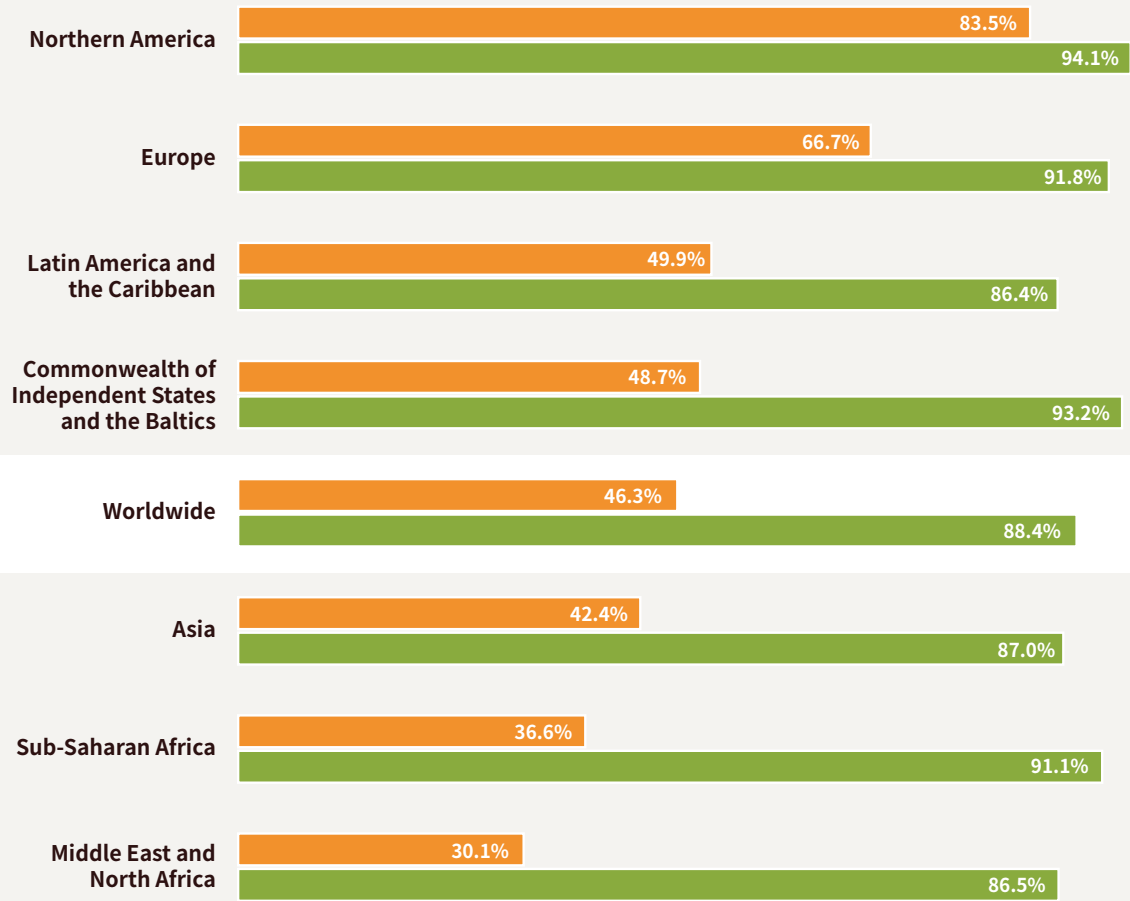




### Who cooks meals by region

■ Self ■ Spouse ■ Other family ■ Non-family

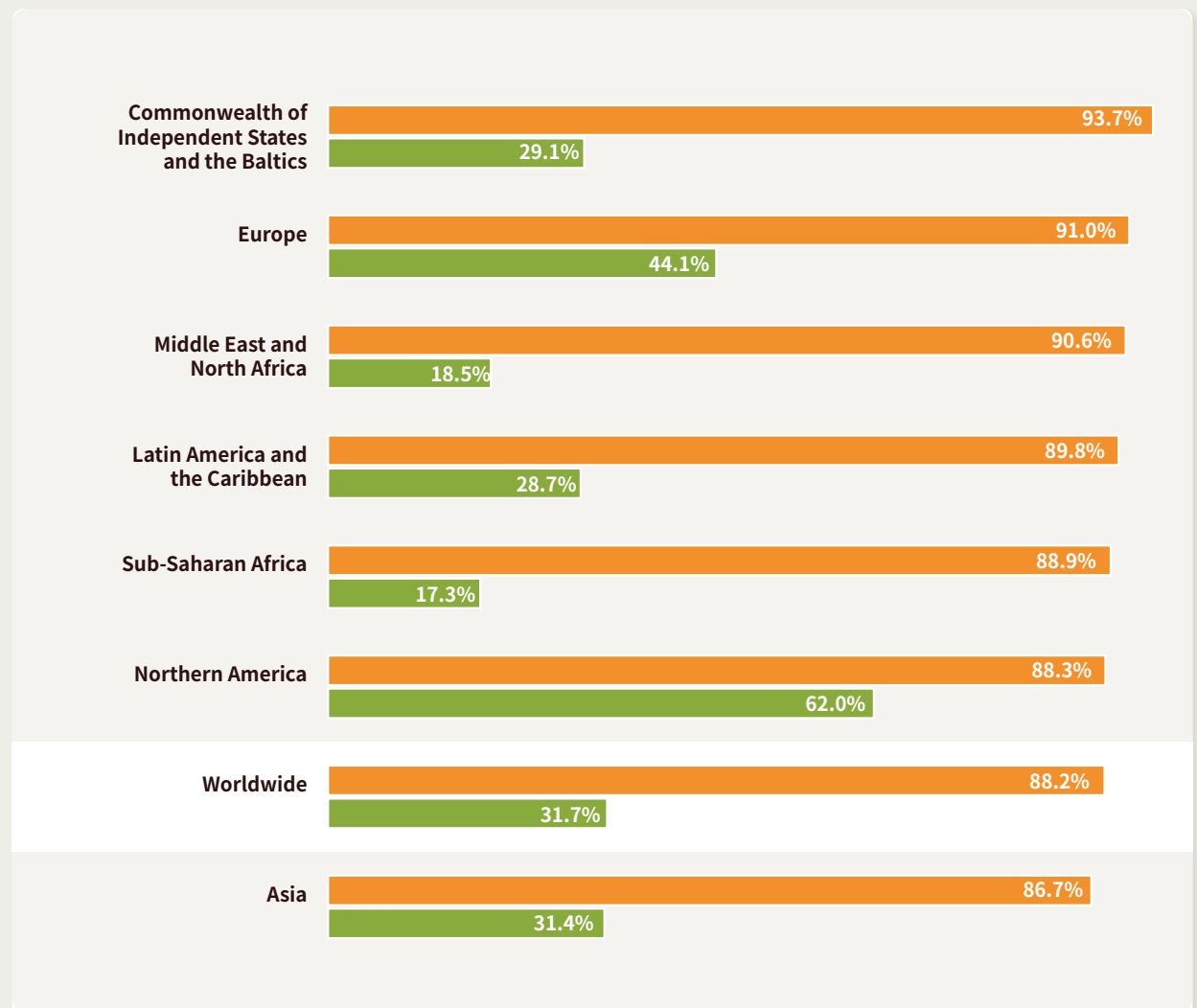




## Self-cooking by gender

■ Male: self-cooked
 ■ Female: self-cooked

Worldwide, men (88.2%) are much more likely than women (31.7%) to say they ate a meal cooked by a spouse — and men are more likely to have eaten a meal cooked by a spouse across all regions. The gender disparities are greatest in MENA (90.6% for men and 18.5% for women) and in SSA (88.9% for men and 17.3% for women), where men are about five times as likely as women to have eaten a meal prepared by their spouse. The gender disparity is smallest in Northern America, where 88.3% of men and 62% of women ate a meal that was cooked by their spouse in the past week.



### Meals cooked by a spouse by gender of the respondent

■ Male: spouse-cooked ■ Female: spouse-cooked

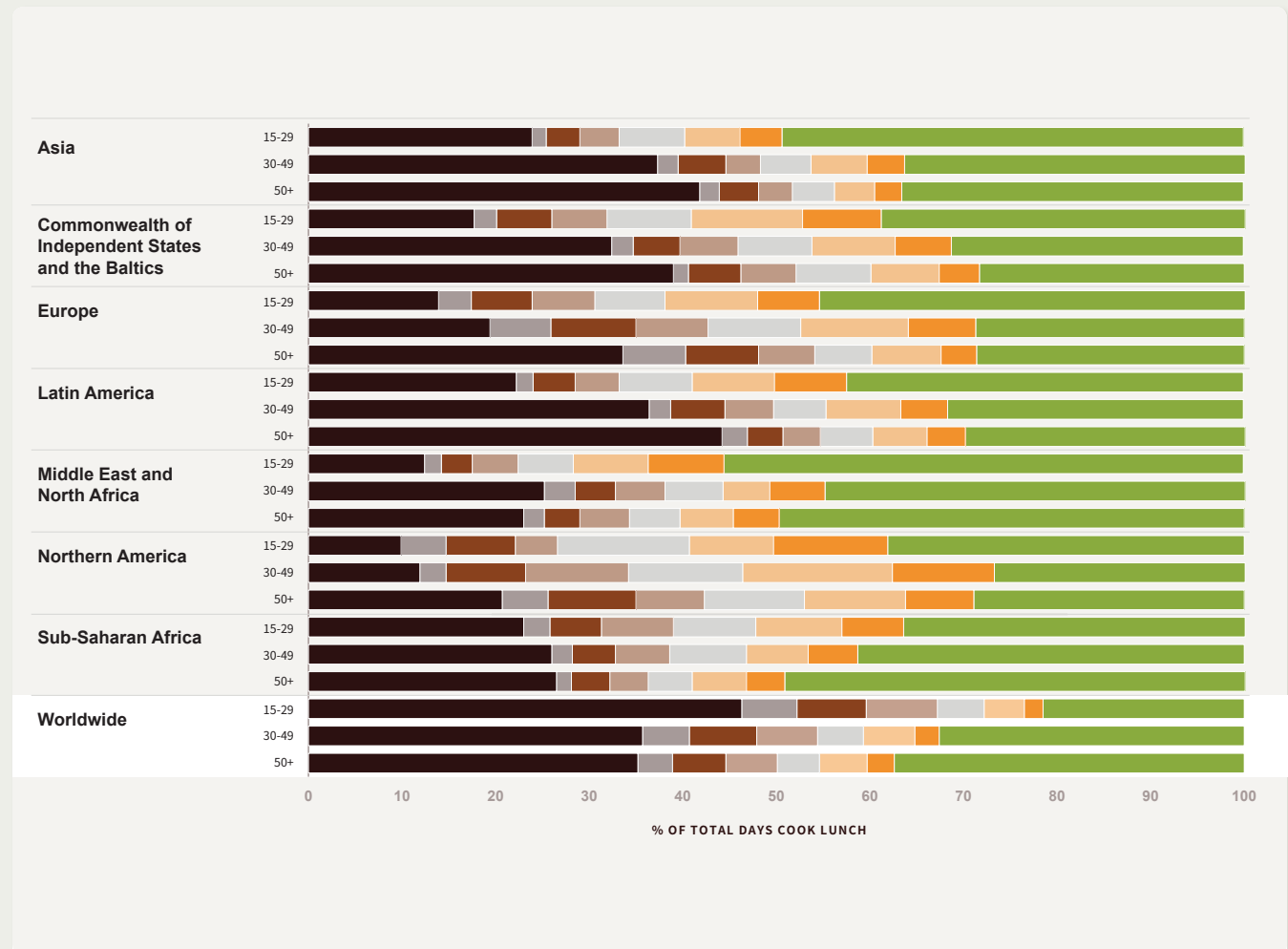


### Cooking by Age Group

Worldwide, adults under the age of 30 cook the least (5.3 meals), while cooking is greater among adults aged 30 to 49 (7 meals) and adults aged 50 and older (7.3 meals).

This pattern of cooking frequency increasing by age group is seen in Europe, CIS & the Baltics, Asia and the Americas. In MENA, however, the average number of cooked meals is highest among adults between the ages of 30 and 49, whereas in sub-Saharan Africa, cooking is done fairly equitably by the three age groups, with those over the age of 50 cooking slightly fewer meals on average than their younger counterparts.

In Lithuania, Japan and Italy, adults aged 50 and older cook at least four more meals on average than adults under the age of 30. But cooking performance skews younger



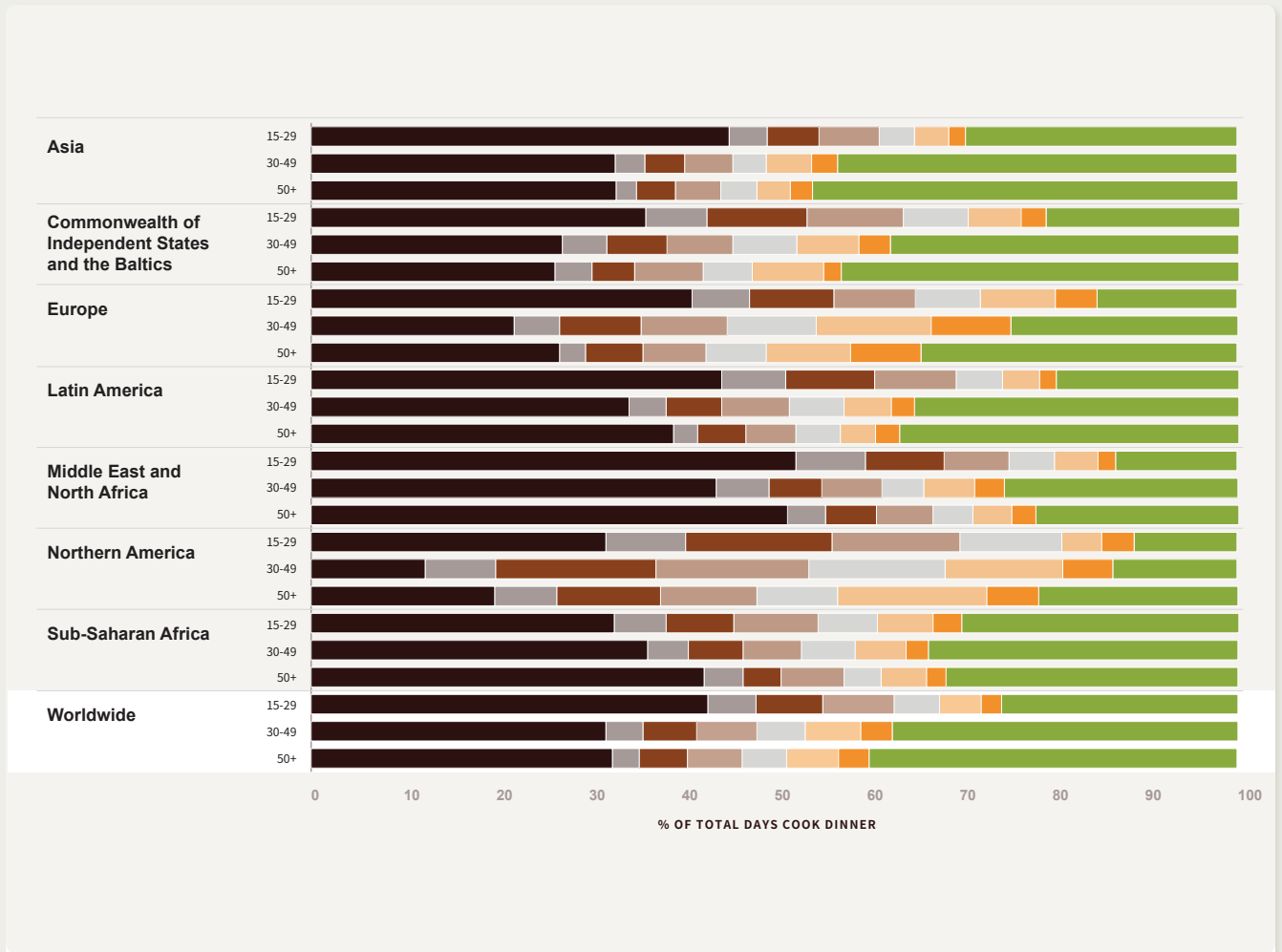
### Cook Lunch by Age

Days cook lunch



in other countries, such as Mauritania and Afghanistan, where young adults cook at least three more meals than the oldest age group.

The highest number of average meals cooked per week by adults under the age of 30 is in Madagascar (8.0), where the average for this age group is slightly greater than that of the two older age groups in this country. The most meals among the 30 to 49 age group are cooked in El Salvador (8.9). Adults aged 50 and older cook 9.3 meals per week in China – the highest average for any age group of any country.



### Cook Dinner by Age

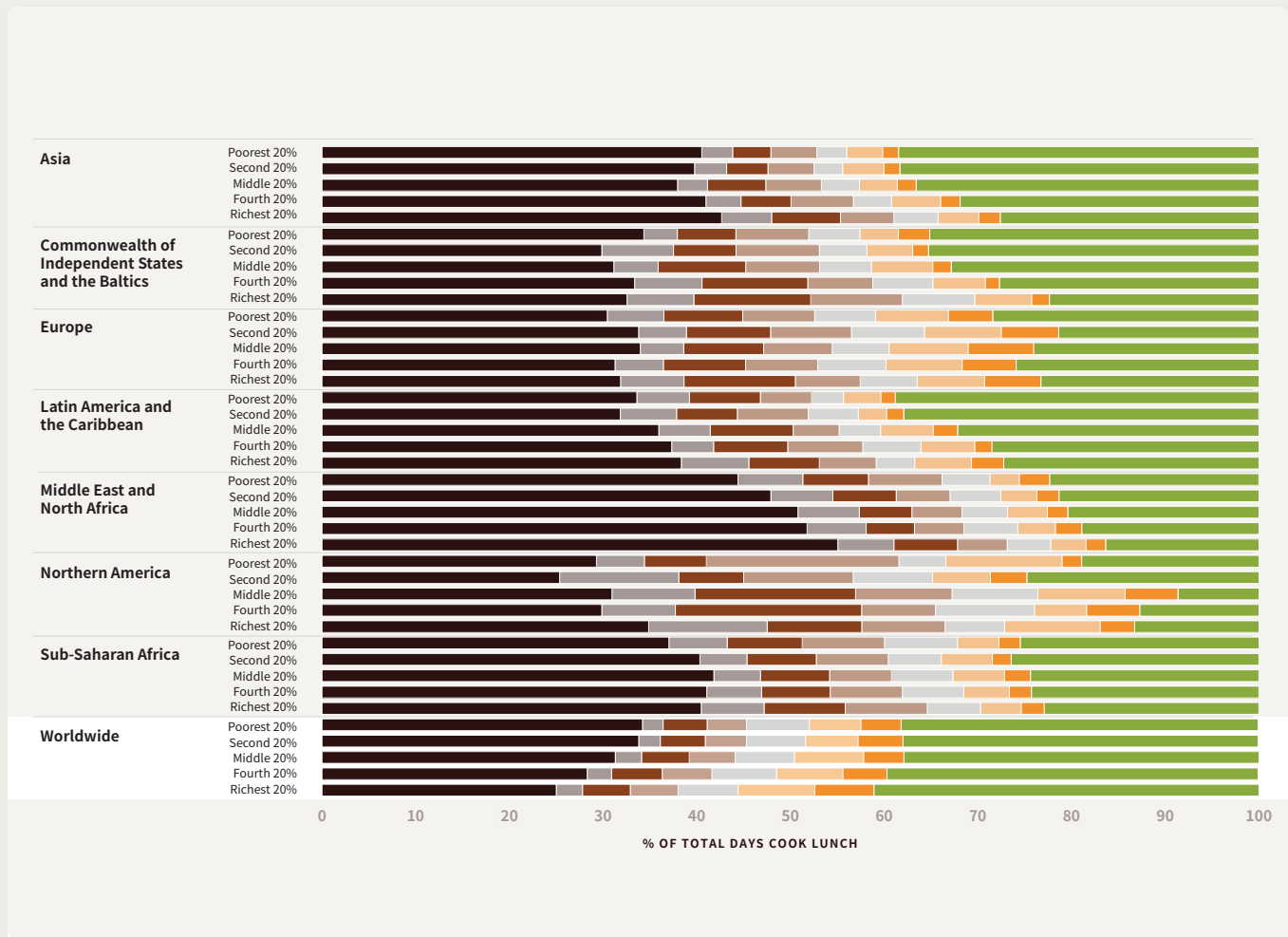
Days cook dinner



### Cooking Across Income Levels

The average number of home-cooked meals per week decreases slightly as respondents' relative income group increases, so that people in the world's poorest and second-poorest economic quintiles cook the most (6.8 meals each) and people in the richest quintile cook the least (6).

In most regions, people in the richest quintiles cook less than people in the lower quintiles. Cooking frequencies vary less in Europe and in sub-Saharan Africa.



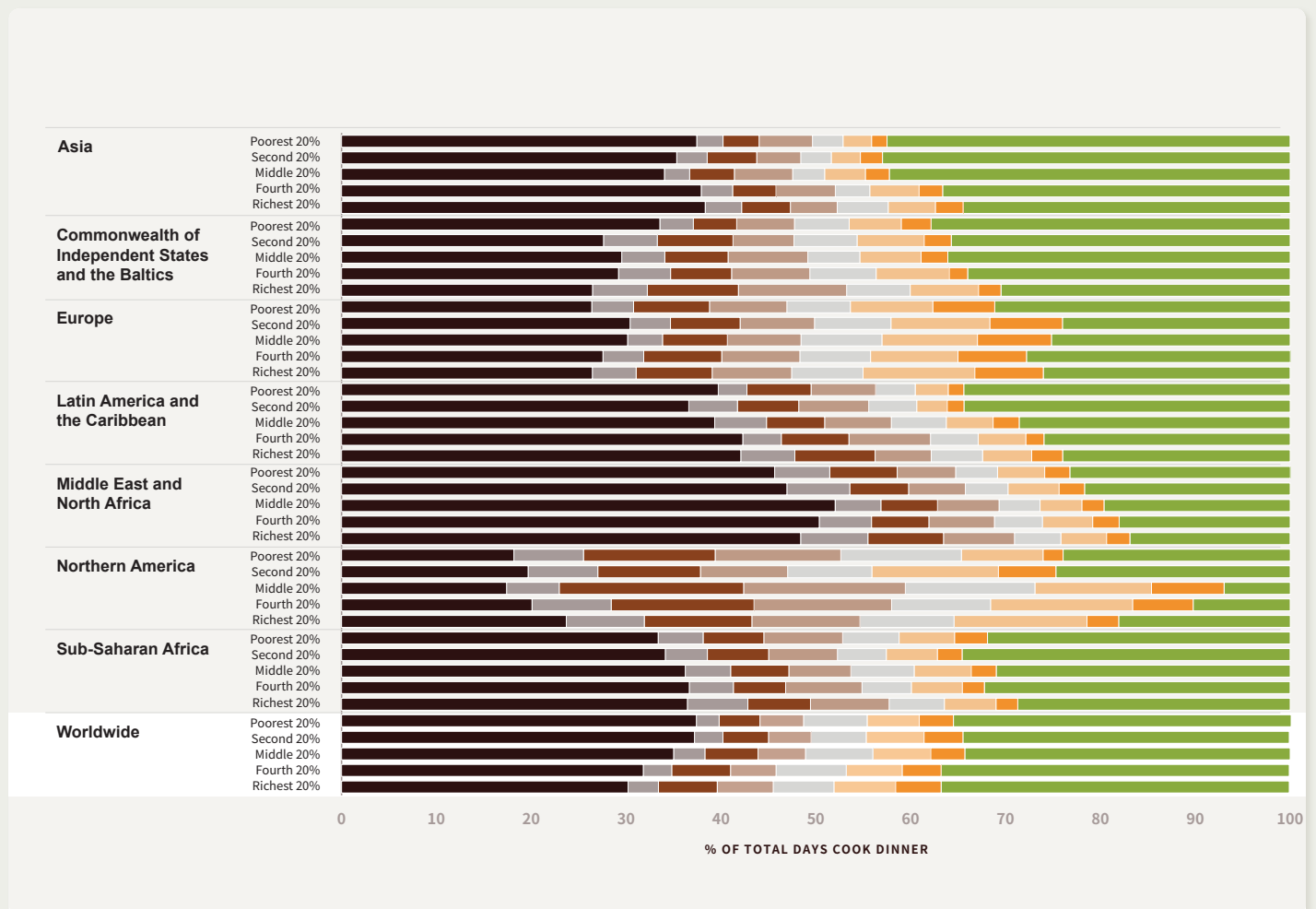
### Cook Lunch by Income

Days cook lunch



The largest difference between cooking among the lowest and highest economic quintiles is in Thailand, where people in the lowest quintile cook more than any other income group of any country: They cook an average of 9.2 meals per week compared with the 5.4 meals cooked by the richest quintile.

In a handful of countries — Northern Cyprus, the United Kingdom, Ireland, Uzbekistan and Nepal — the richest citizens cook an average of at least one more meal per week than the poorest citizens.

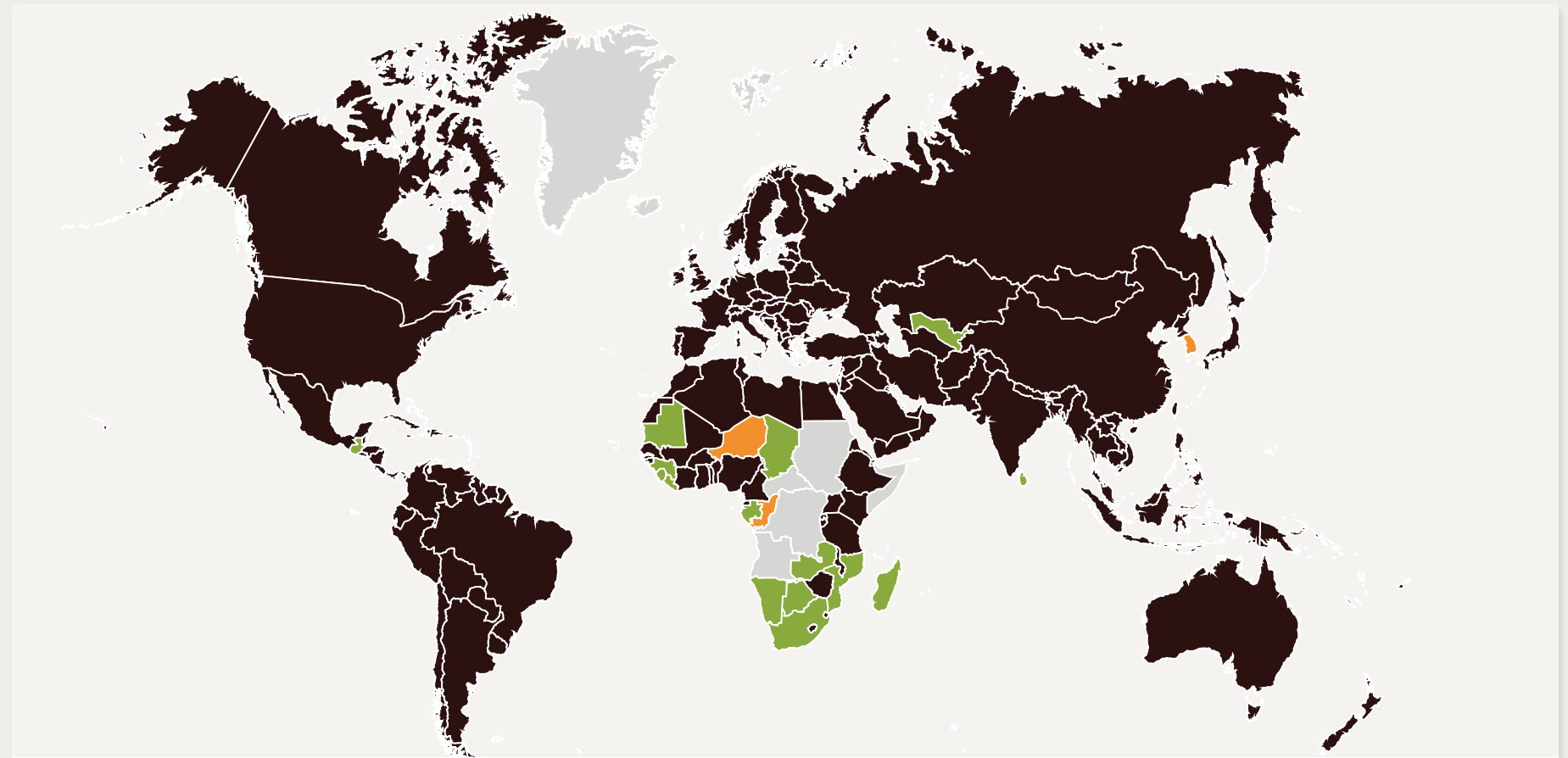


### Cook Dinner by Income

Days cook dinner



# Cooking and Eating Frequency



## Eating fewer home-cooked meals than cooked

% of people who ate fewer home-cooked meals than cooked

0.00  27.20



The data allow for an analysis of individuals who are cooking more meals than they are eating per week. In this case, the respondent may be cooking meals for other members of the household and then purchasing pre-prepared food for themselves or may be skipping meals and going hungry due to a scarcity of food.

The countries with the highest percentages of people who are cooking more meals per week than they are eating include a variety of sub-Saharan African countries. The country with the highest incidence is the Republic of the Congo, where one in four people cooked more meals than they ate in the past week. Besides the Republic of the Congo, the majority of countries with at least 10% of people having cooked more meals than they ate are low-income countries, including Niger, Benin, Chad, Haiti, Burundi, Madagascar and Malawi. However, South Korea — a high-income country — has the second-highest percentage of people who report cooking more than they eat, with 18%.

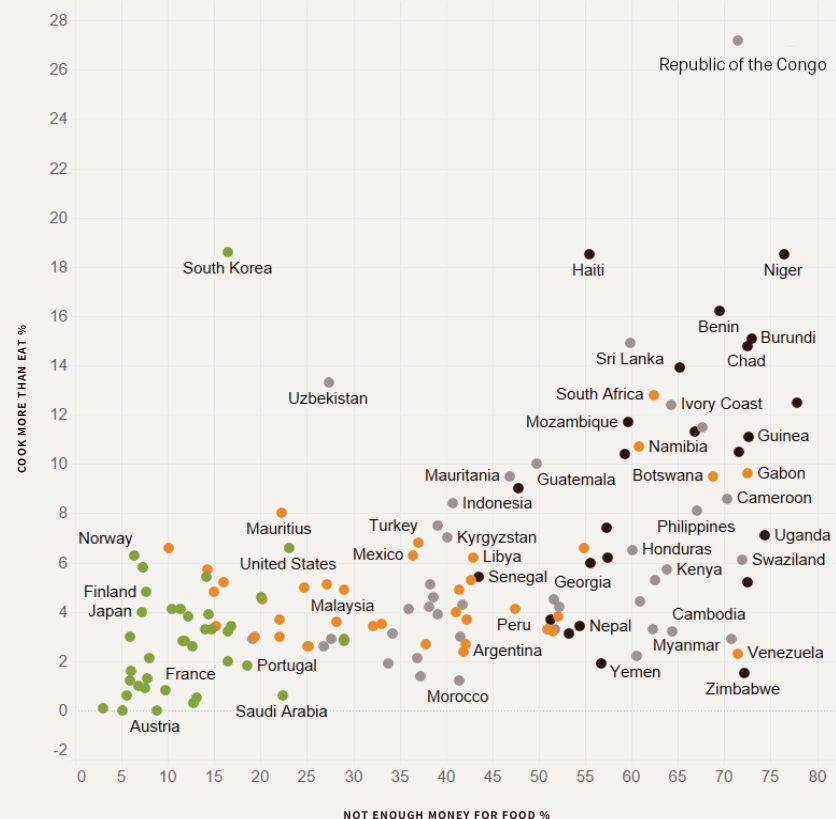


South Korea has the second-highest percentage of people who report cooking more than they eat, with 18%.

### Struggling to Afford Food

Nearly two in three sub-Saharan Africans (64.6%) report having struggled with food affordability. This is the only region where a majority say there were times they did not have enough money to buy food in the past year. Roughly four in 10 report having struggled with food affordability in Latin America and the Caribbean (40.1%) and in the MENA region (37.5%), while about three in 10 struggle with food affordability in CIS & the Baltics (29.9%) and in Asia (29.3%). Food affordability is less of a reported problem for people living in Northern America (22.2%) and Europe (10.6%).

Not being able to afford food and cooking more home-cooked meals than were eaten in the past week appear to have a close relationship in certain countries. The countries that emerge as being most affected by both situations include many of the same low-income countries where at least 10% of the population had cooked more home-cooked meals than they had eaten in the past week: the Republic of the Congo, Niger, Benin, Chad, Haiti, Burundi, Madagascar and Malawi. This points to how, in low-income countries, an individual cooking more home-cooked meals than have been eaten in the previous week could be an indicator of food scarcity in the household.



### Relationship between eating fewer home-cooked meals than cooked in the past week and not having money for food in the past year

Income level

- High income
- Upper-middle income
- Lower-middle income
- Low income

# Methodology

The typical Gallup World Poll survey includes at least 1,000 surveys of individuals in each country. In some countries, Gallup collects oversamples in major cities or areas of special interest. Additionally, in some large countries, such as China and Russia, sample sizes include at least 2,000 adults. Although rare, in some instances, the sample size falls between 500 and 1,000.

Samples are probability-based and nationally representative of the resident adult population. In all countries, the coverage area is the entire country including rural areas, and the sampling frame represents the entire civilian, non-institutionalized, aged 15 and older population. Exceptions include areas where the safety of interviewing staff is threatened, or areas that are difficult to access.

## Questionnaire Design

The Cookpad survey module was first conducted in 2018 (Year 1). In Year 2 (i.e., 2019), Gallup and Cookpad evaluated the efficacy and length of the questions based on feedback from the field and the results of Year 1, and this led to some changes in the order of the questions and the number of response options. This was prompted by feedback from some respondents who indicated that the questions appeared repetitive and the information could be obtained faster and more easily.

In Year 1, respondents were first asked about the number of home-cooked meals they ate (Q1 and Q4), then asked whether they had cooked a meal that they ate (yes or no response in Q2 and Q5) and finally asked how many times they had cooked a meal during the

week (Q3 and Q6). While this appeared to be a logical progression, there was some confusion and respondents sometimes answered differently based on how the question about cooking was asked. When respondents were asked the question about how many times they had cooked rather than simply yes or no (Q3 and Q6 vs. Q2 and Q5), this improved recall and led to respondents providing a more precise answer. For this reason, Gallup and Cookpad decided to consider the responses people provided in Q3 and Q6 regardless of previous responses to Q2 and Q5 in this report.

In Year 2, Gallup and Cookpad decided to change the question order to ask about the number of days a respondent cooked either lunch or dinner first, thus establishing the respondent's mindset to continue to ask about other information in the previous week. Having a respondent think about the meals they cooked in the past week first assisted recall when they were then asked about how many meals they ate that were cooked at home. They simply took the number of meals they cooked and added to it any meals someone else cooked that they ate.

In addition, Gallup and Cookpad decided to ask about the types of people who cooked meals they had eaten (Q2 and Q5) last and reduce the number of response options. In the 2019 version of the survey, respondents were only asked about a spouse (if married), another family member or some other person who is not a family member. This helped respondents answer more easily because they weren't asked to repeat that they themselves had cooked the meals and so the response options were easier to understand.

The final questions used in 2019 are shown side by side with the questions from 2018 in the following table.

| 2018  | 2019  |
|---|---|
| <p>Q1. Thinking about the past 7 days, on how many days did YOU, personally, EAT LUNCH that was cooked AT YOUR HOME, either by you or someone else?</p>   | <p>Q1. Thinking about the past 7 days, on how many days did YOU, personally, COOK LUNCH AT YOUR HOME?</p>   |
| <p>Q2. Please tell me whether any of the following people COOKED any of those LUNCHES AT YOUR HOME in the past 7 days?</p> <ul style="list-style-type: none"> <li>• Yourself</li> <li>• (if married:) Your spouse/partner</li> <li>• Your child</li> <li>• Your parent</li> <li>• Some other family member</li> <li>• Some other person who is not related to you who cooks at your home</li> </ul> | <p>Q2. Thinking about the past 7 days, on how many days did YOU, personally, EAT LUNCH that was cooked AT YOUR HOME, either by you or someone else?</p>   |
| <p>Q3. Thinking about the past 7 days, on how many days did YOU, personally, COOK LUNCH AT YOUR HOME?</p>   | <p>Q3. Please tell me whether any of the following people COOKED any of those LUNCHES AT YOUR HOME in the past 7 days?</p> <ul style="list-style-type: none"> <li>• (if married:) Your spouse/partner</li> <li>• A family member/(if married:)Some other family member</li> <li>• Some other person who is not a family member</li> </ul> |
| <p>Q4. Thinking about the past 7 days, on how many days did YOU, personally, EAT DINNER that was cooked AT YOUR HOME, either by you or someone else?</p>  | <p>Q4. Thinking about the past 7 days, on how many days did YOU, personally, COOK DINNER AT YOUR HOME?</p>  |

| 2018   | 2019   |
|--|--|
| <p>Q5. Please tell me whether any of the following people COOKED those DINNERS AT YOUR HOME in the past 7 days?</p> <ul style="list-style-type: none"> <li>• Yourself</li> <li>• (if married:) Your spouse/partner</li> <li>• Your child</li> <li>• Your parent</li> <li>• Some other family member</li> <li>• Some other person who is not related to you who cooks at your home</li> </ul> | <p>Q5. Thinking about the past 7 days, on how many days did YOU, personally, EAT DINNER that was cooked AT YOUR HOME, either by you or someone else?</p>   |
| <p>Q6. Thinking about the past 7 days, on how many days did YOU, personally, COOK DINNER AT YOUR HOME?</p>   | <p>Q6. Please tell me whether any of the following people COOKED those DINNERS AT YOUR HOME in the past 7 days?</p> <ul style="list-style-type: none"> <li>• (if married:) Your spouse/partner</li> <li>• A family member/(if married:)Some other family member</li> <li>• Some other person who is not a family member</li> </ul> |

## Sampling

Gallup used a combination of face-to-face and computer-assisted telephone interviewing (CATI) and created random sampling plans for each approach.

### Face-to-face sampling

In countries where face-to-face surveys were conducted, sampling units were stratified by population size and/or geography and clustering was achieved through one or more stages of sampling. Where population information was available, sample selection was based on probabilities proportional to population size; otherwise, simple random sampling was used. Samples were drawn independently of any samples drawn for surveys conducted in previous years. The goal was to identify 100 to 125 ultimate clusters (sampling units), consisting of clusters of households.

Random-route procedures were used to select sampled households. In each ultimate cluster, the supervisor or field manager pre-selected a starting point/address for the interviewer. Once the interviewer reached the starting point, he or she followed strict rules to determine the households he or she would visit to attempt an interview.

The interviewer's next step was to randomly select the respondent within the household. The interviewer listed all household members aged 15 and older who lived in the household. The CAPI (Computer-Assisted Personal Interviewing) system then randomly selected the household member to be interviewed. If the country survey was collected using paper-and-pencil (PAPI), then selection of the household member to interview was performed using the KISH grid.

If the selected respondent was temporarily unavailable, the interviewer revisited the household at another time. If the selected respondent refused to take part in an interview or was unavailable for the remainder of the field period, the household was replaced with another household (following the random-route procedure).

### CATI samplings

In countries where interviews were conducted by telephone, a dual sampling frame was used (landline and mobile telephone), except for Finland and Libya which were mobile-telephone-only.

For respondents contacted by landline telephone, the respondent was randomly selected within the household (among eligible respondents aged 15 and older). In all Western Europe, Northern America and developed Asia, random selection of the respondent was performed by asking for the person aged 15 and older who had the next birthday. For Gulf Cooperation Council countries in the Middle East, the respondent was selected by first listing all household members aged 15 and older, and the CATI program randomly selected the household member to be interviewed.

Interviewers made at least five attempts to reach a potential respondent spread over different days and times of the day.

### Fieldwork

Gallup used two modes for data collection: face-to-face and telephone. Face-to-face interviews were between 30 minutes and one hour, while telephone interviews were between 15 and 30 minutes. All fieldwork took place between April 6, 2018, and Jan. 6, 2019.

In Central and Eastern Europe, much of Latin America, the Commonwealth of Independent States and the Baltics, nearly all of Asia, the Middle East and Africa, an area frame design was used for face-to-face interviewing. Using CAPI handheld devices, 103 country surveys were collected in person; three were conducted using PAPI (Afghanistan, Azerbaijan, Israel); and four were conducted using both CAPI and PAPI (portions of Iraq, Lithuania, Palestine and Yemen).

Gallup used telephone surveys in countries where telephone coverage represents at least 80% of the population or is the customary survey methodology. Thirty-four country surveys were conducted over the telephone using CATI, primarily in Western Europe, Northern America, developed Asia and GCC countries. Most countries included both landline and mobile telephone numbers. Two countries were mobile-phone-only: Finland and Libya.

### Data Weighting

Data weighting was used to ensure results were nationally representative for each country and was intended to be used for calculations within a country.

First, Gallup constructed base-sampling weights to account for household size. Weighting by household size (number of residents aged 18 and older) was used to adjust for the probability of selection, as

residents in large households have a disproportionately lower probability of being selected for the sample.

Second, to ensure the sample was projectable to the target population, post-stratification weights were constructed to correct for nonresponse. Population statistics were used to weight the data by gender, age and, where reliable data were available, education or socioeconomic status.

All results presented by country were weighted to enhance the representativeness of the data. Results that were aggregated across more than one country (for instance by region or country-income level) were weighted by the 15 or older population size of the countries included in the analysis. This gives larger countries more weight than smaller countries.

Projection weighting accounts for the differences in population sizes across countries so that respondents from bigger countries have more weight as they represent more people.

Simplifying the idea, the projection weighting is multiplying the within-country-level weights by a factor that will raise the sum of the weights to the population of a country.

### **Margin of Error**

Gallup calculated approximate study design effect and margin of error. The design effect calculation reflected the influence of data weighting and did not incorporate intra-class correlation coefficients. The maximum margin of error was calculated based on reported proportions for each country-level data set, assuming a 95% confidence level. Because these surveys were a clustered sample design, the margin of error varied by the question, and if the data user is making decisions based on the margin of error, he or she should consider inflating the margin of error.

Other errors that can affect survey validity include measurement error associated with the questionnaire, such as translation issues, and coverage error, where a part of the target population has a zero probability of being selected for the survey.



Regional Breaks by Country

| Asia        |
|-------------|
| Afghanistan |
| Australia   |
| Bangladesh  |
| Cambodia    |
| China       |
| India       |
| Indonesia   |
| Japan       |
| Laos        |
| Malaysia    |
| Mongolia    |
| Myanmar     |
| Nepal       |
| New Zealand |
| Pakistan    |
| Philippines |
| Singapore   |
| South Korea |
| Sri Lanka   |
| Taiwan      |
| Thailand    |
| Vietnam     |

| Commonwealth of Independent States and the Baltics |
|--|
| Armenia  |
| Azerbaijan   |
| Belarus  |
| Estonia  |
| Georgia  |
| Kazakhstan   |
| Kyrgyzstan   |
| Latvia   |
| Lithuania  |
| Moldova  |
| Russia   |
| Tajikistan   |
| Turkmenistan                                       |
| Ukraine  |
| Uzbekistan   |

| Europe             |
|--------------------|
| Albania            |
| Austria            |
| Belgium            |
| Bosnia Herzegovina |
| Bulgaria           |
| Croatia            |
| Cyprus             |
| Czech Republic     |
| Denmark            |
| Finland            |
| France             |
| Germany            |
| Greece             |
| Hungary            |
| Ireland            |
| Italy              |
| Kosovo             |
| Luxembourg         |
| Macedonia          |
| Malta              |
| Montenegro         |
| Netherlands        |
| Northern Cyprus    |
| Norway             |

| Europe         |
|----------------|
| Poland         |
| Portugal       |
| Romania        |
| Serbia         |
| Slovakia       |
| Slovenia       |
| Spain          |
| Sweden         |
| Switzerland    |
| United Kingdom |

| Latin America and the Caribbean |
|---------------------------------|
| Argentina                       |
| Bolivia                         |
| Brazil                          |
| Chile                           |
| Colombia                        |
| Costa Rica                      |
| Dominican Republic              |
| Ecuador                         |
| El Salvador                     |
| Guatemala                       |
| Haiti                           |
| Honduras                        |
| Mexico                          |
| Nicaragua                       |
| Panama                          |
| Paraguay                        |
| Peru                            |
| Uruguay                         |
| Venezuela                       |



| Middle East and North Africa |
|------------------------------|
| Algeria                      |
| Egypt                        |
| Iran                         |
| Iraq                         |
| Israel                       |
| Jordan                       |
| Lebanon                      |
| Libya                        |
| Morocco                      |
| Palestine                    |
| Saudi Arabia                 |
| Tunisia                      |
| Turkey                       |
| United Arab Emirates         |
| Yemen                        |

| Northern America |
|------------------|
| Canada           |
| United States    |

| Sub-Saharan Africa |
|--------------------|
| Benin              |
| Botswana           |
| Burkina Faso       |
| Burundi            |
| Cameroon           |
| Chad               |
| Comoros            |
| Ethiopia           |
| Gabon              |
| Gambia             |
| Ghana              |
| Guinea             |
| Ivory Coast        |
| Kenya              |
| Liberia            |
| Madagascar         |
| Malawi             |
| Mali               |
| Mauritania         |
| Mauritius          |
| Mozambique         |
| Namibia            |
| Niger              |

| Sub-Saharan Africa    |
|-----------------------|
| Nigeria               |
| Republic of the Congo |
| Rwanda                |
| Senegal               |
| Sierra Leone          |
| South Africa          |
| Swaziland             |
| Tanzania              |
| Togo                  |
| Uganda                |
| Zambia                |
| Zimbabwe              |

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