



Diet Compositions

Data Analysis

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Business Analytics

Diet



Do you know how many calories an adult consumes in a day?

Have you noticed a gradual increase in the number of people suffering from the disease?

Analysis Process

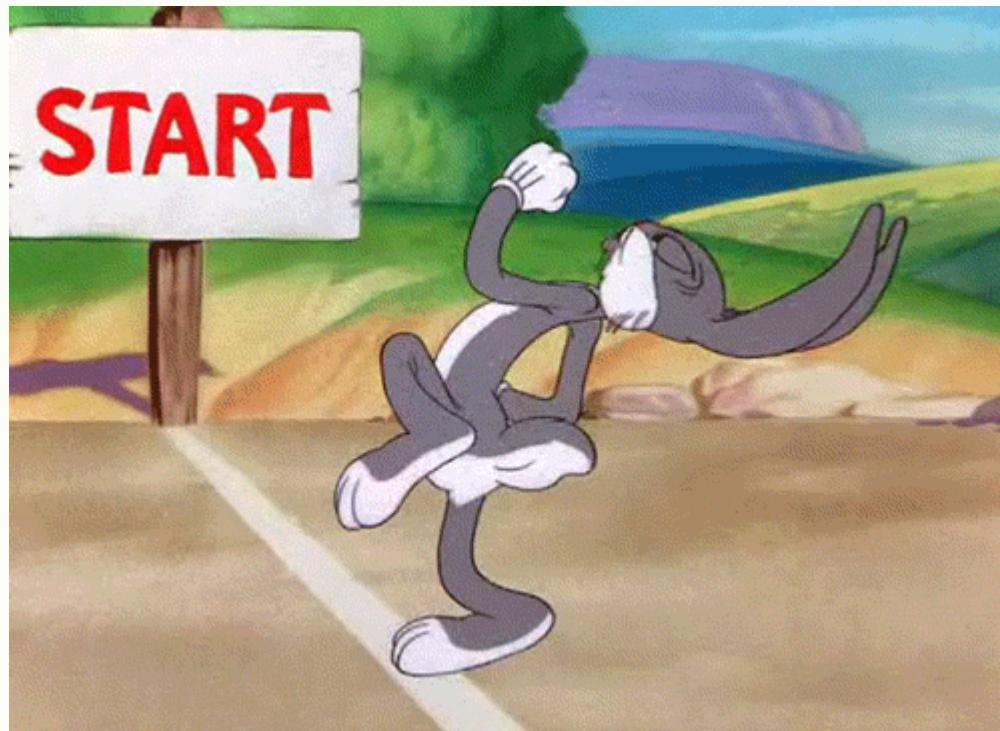
- Introduction

- Research Questions

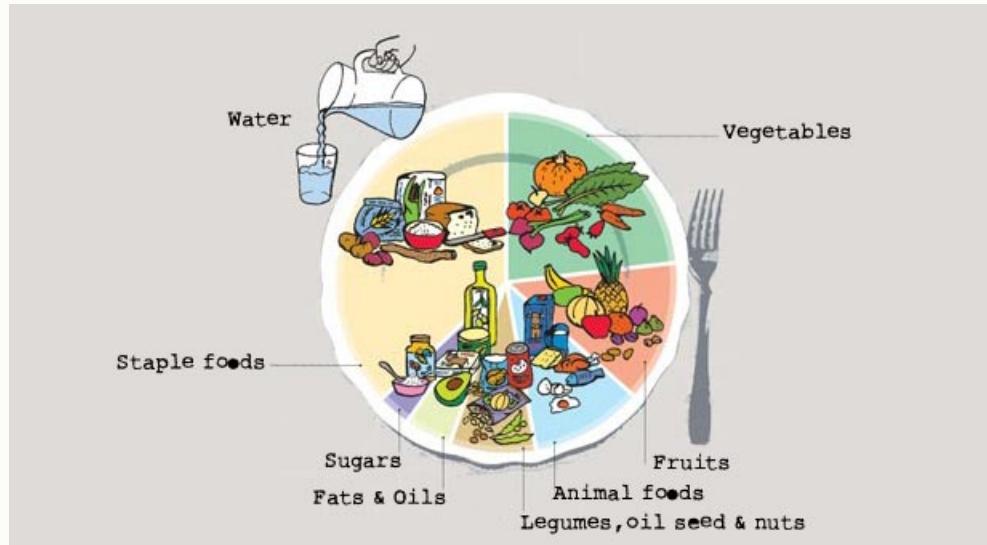
- Analysis

- Conclusion

Let's start!



Introduction



- Human is iron as if the meal is steel,you will be hungry if you don't eat.
- Cereals and grains, animal proteins, fats and other elements are essential for the maintenance of the body's vital characteristics.
- Unhealthy diet is the culprit of many diseases.

Introduction

Data Sources

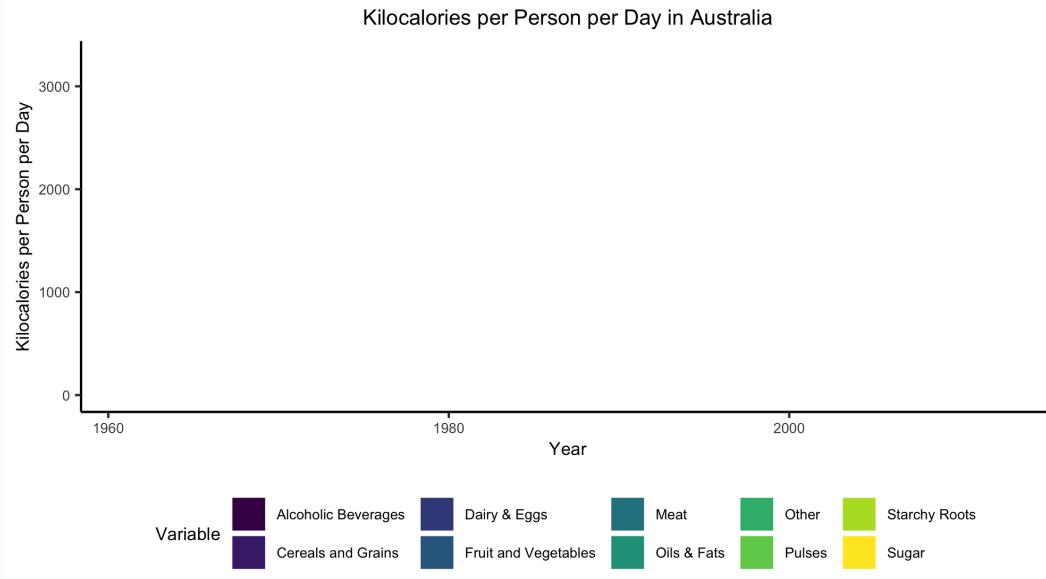
The screenshot shows the homepage of Our World in Data. The header features the site's name "Our World in Data" and a search bar with a magnifying glass icon and placeholder text "Search...". Below the search bar are links for "Latest", "About", and "Donate". A red horizontal bar contains the text "COVID-19 vaccinations, cases, excess mortality, and much more" and a button labeled "Explore our COVID-19 data". The main content area displays a large, bold title "Diet Compositions" and a subtitle "by Hannah Ritchie and Max Roser".

<https://ourworldindata.org/diet-compositions>

Analysis Part1

Research Question1

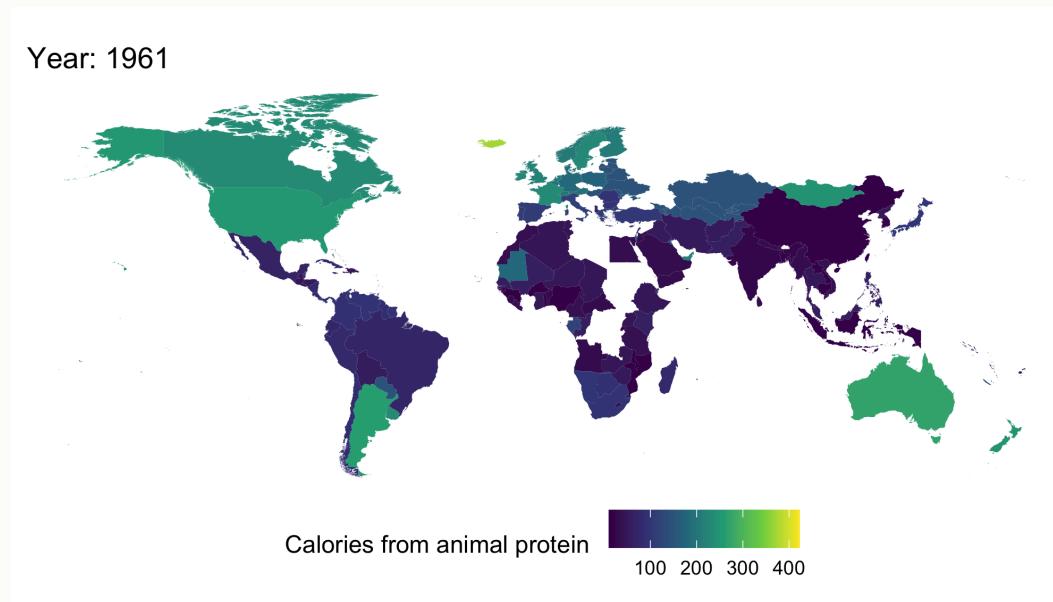
- How the proportion of various food groups in the Australian diet changed over time?



More choices of cereals, meat, fats and sugary foods

Research Question2

- How the intake of animal protein varies around the world?



North America, Oceania and Europe consume the most energy from animal protein

Overall, energy is provided worldwide by consuming more animal protein

Research Question3

- In Australia, Brazil, China, South Africa, United Kingdom and United States, which country has the relatively best linear model of the relationship between overweight or obese and caloric supply since 2000?

Goodness_of_fit_measures			
Country	r.squared	AIC	BIC
Australia	0.9079612	40.73470	42.85885
Brazil	0.9232400	48.68766	50.81181
China	0.9727043	46.42461	48.54876
South_Africa	0.7375348	66.86584	68.98999
United_Kingdom	0.0040535	77.89588	80.02003
United States	0.3628869	69.38632	71.51047

This Chinese linear model has a maximum r.squared value around 0.97 and has the smallest AIC and BIC values.

Therefore, the linear model for China is relatively the best.

Analysis Part2

Research Question1

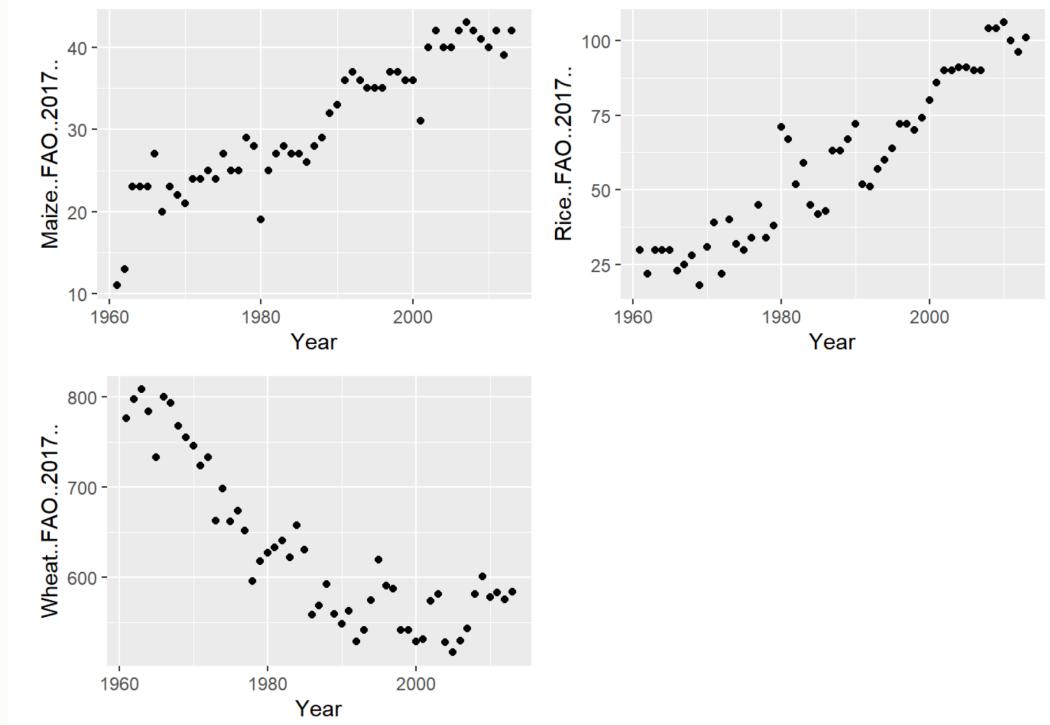
- How much FAO i.e. Fats Animal Oil is in Vegetable Oil in Australia that is consumed by people in different year?

```
##      Year Vegetable.Oils..FAO..2017..
## 1  2012                  569
## 2  2013                  550
## 3  2010                  547
## 4  2011                  530
## 5  2004                  524
## 6  2009                  522
## 7  2005                  516
## 8  2006                  508
## 9  2007                  488
## 10 2001                  479
```

Fat oil in vegetable oil is increasing in Australia, due to which people are purchasing less of vegetable oil.

Research Question2

- Checking FAO's individual figures for maize, rice and wheat over the years.



Maize, Rice and Vegetable FAO is higher in later years but the wheat growth becomes less in later years in Australia.

Analysis Part3

Research Question1

- What is the difference in the proportions of total Calories and the three major nutrients (protein, fat, carbohydrate) from 1970 in the American and Japanese diets?

Research Question1

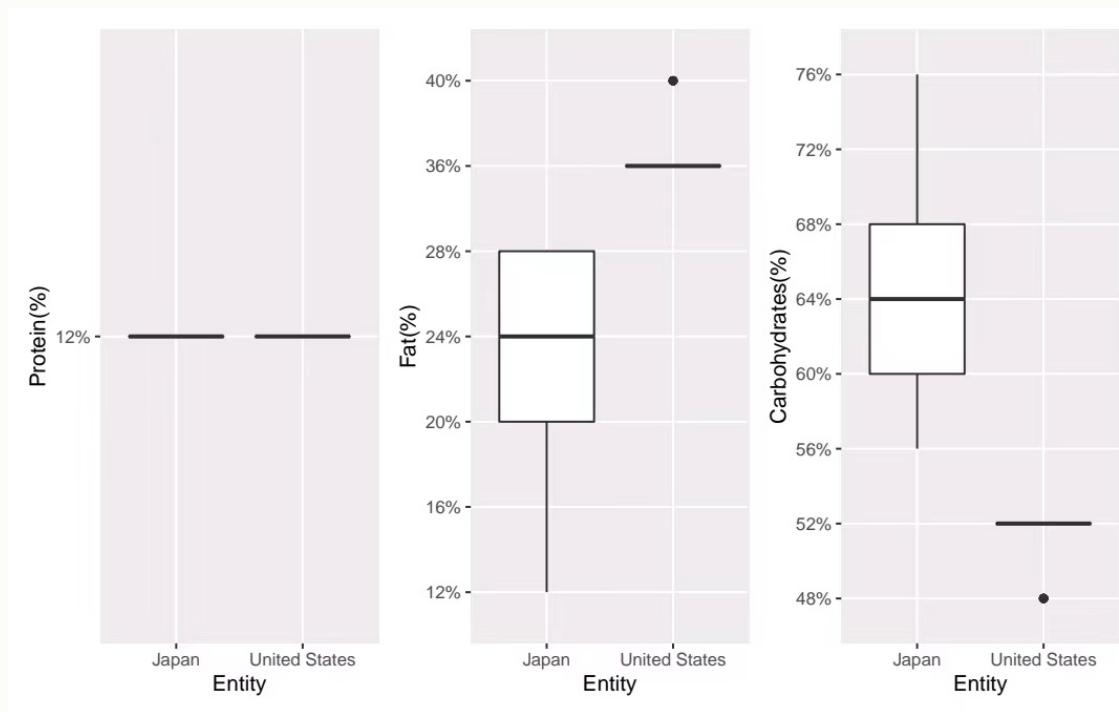
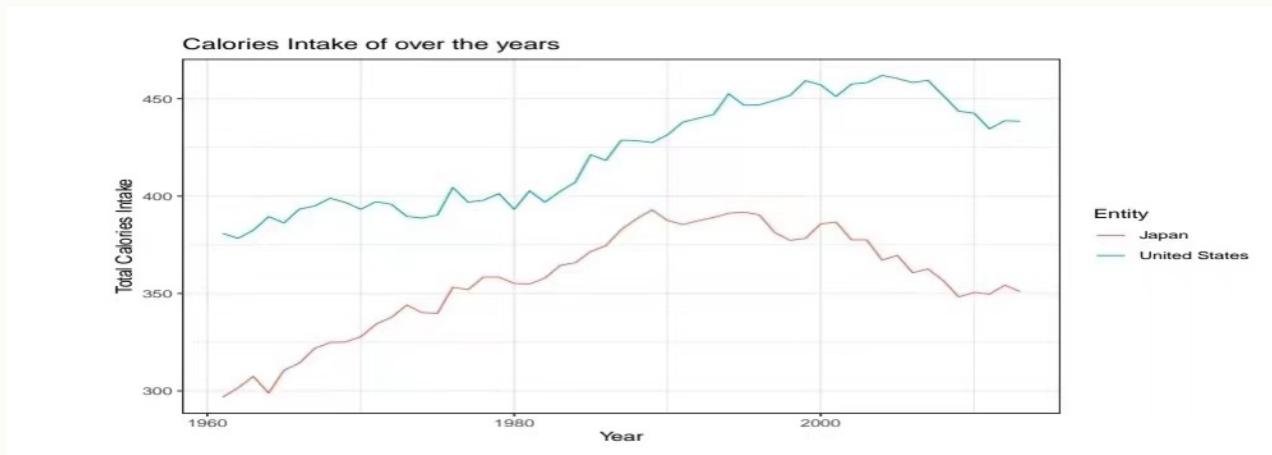


figure4 and figure5 show the change in the proportion of calorie, protein, fat and carbohydrate intake in the US and Japan from 1961 to 2010.

Research Question2

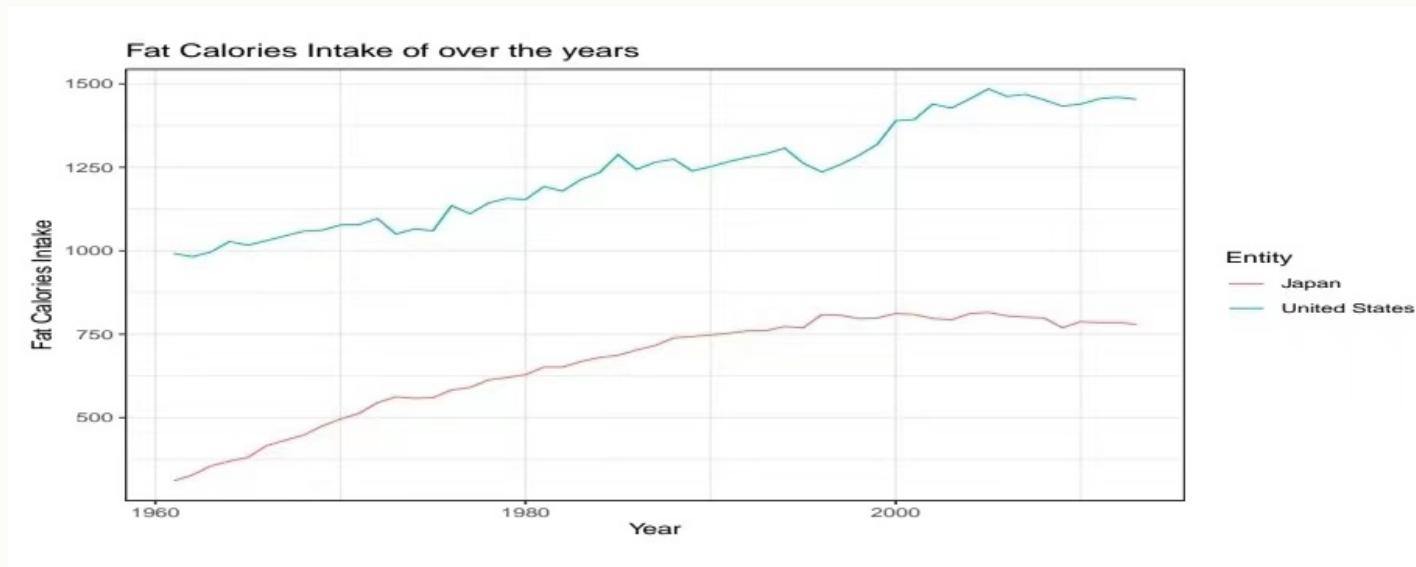
- What is the difference between the time trends of TotalCalories and Calories of Protein, Fat, Carbohydrates in the two countries?
- Calories Intake of over the years



The figure6 shows the trend of total calories intake in the United States and Japan over time.

Research Question2

- Fat Calories Intake of over the years



The figure7 shows the trend of fat calories intake in the United States and Japan over time.

Research Question2

- Calories Intake of United States

total_Cal	Protein_Cal	Fat_Cal	Carbohydrates_Cal
Min. :2858	Min. :378.3	Min. : 982.2	Min. :1481
1st Qu.:3043	1st Qu.:396.0	1st Qu.:1077.5	1st Qu.:1578
Median :3366	Median :419.8	Median :1237.6	Median :1680
Mean :3354	Mean :420.8	Mean :1221.4	Mean :1711
3rd Qu.:3650	3rd Qu.:448.5	3rd Qu.:1303.3	3rd Qu.:1863
Max. :3828	Max. :461.9	Max. :1484.9	Max. :1941

It can be seen from above table, that the mean Calories of United States is 3354 kcal.

Research Question2

- Calories Intake of Japan

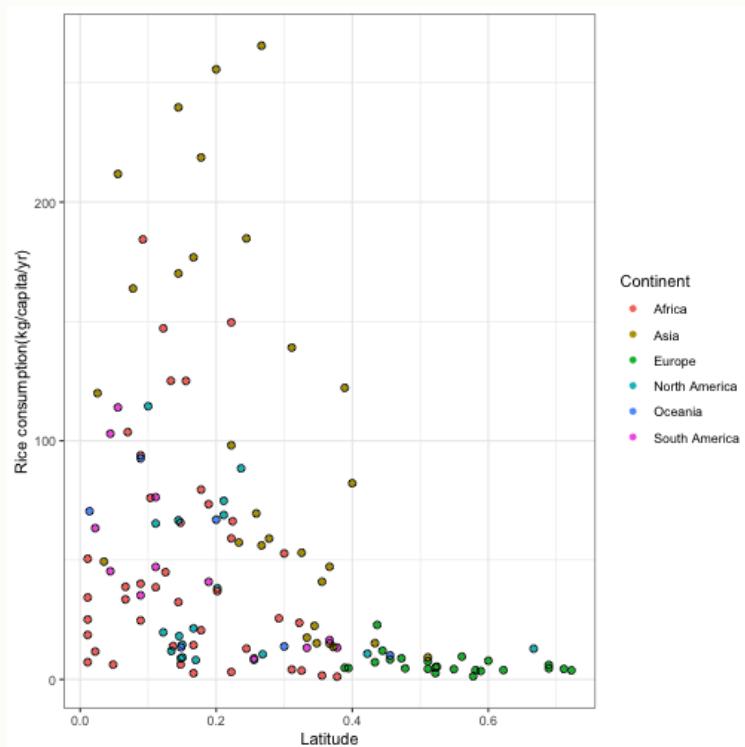
total_Cal	Protein_Cal	Fat_Cal	Carbohydrates_Cal
Min. :2525	Min. :296.8	Min. :310.4	Min. :1547
1st Qu.:2730	1st Qu.:339.9	1st Qu.:558.4	1st Qu.:1727
Median :2810	Median :359.5	Median :694.9	Median :1800
Mean :2800	Mean :357.2	Mean :652.0	Mean :1790
3rd Qu.:2895	3rd Qu.:380.6	3rd Qu.:791.8	3rd Qu.:1860
Max. :2969	Max. :392.9	Max. :815.5	Max. :1962

It can be seen from above table, that the mean Calories of Japan is 2800 kcal.

Analysis Part4

Research Question

- Rice consumption vs. latitude and region, 2015.



It is easy to notice the phenomenon that the countries with higher Annual per capita consumption of rice are mainly in the Latitude between 0 and 0.4.

Research Question

Rice consumption					
Entity	Code	Year	Rice consumption(kg/capita/yr)	Latitude	Continent
Bangladesh	BGD	2015	265.55	0.27	Asia
Laos	LAO	2015	255.64	0.20	Asia
Cambodia	KHM	2015	239.70	0.14	Asia
Vietnam	VNM	2015	218.73	0.18	Asia
Indonesia	IDN	2015	211.79	0.06	Asia
Myanmar	MMR	2015	184.80	0.24	Asia
Sierra Leone	SLE	2015	184.36	0.09	Africa
Thailand	THA	2015	176.85	0.17	Asia
Philippines	PHL	2015	170.10	0.14	Asia
Sri Lanka	LKA	2015	163.80	0.08	Asia

According to above table, the top 5 countries with the largest rice consumption are Bangladesh, Laos, Cambodia, Vietnam.

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