Report

Inflation Rate

Table 1: Inflation Key Stats

```python
import pandas as pd
import matplotlib.pyplot as plt
import seaborn as sns

wdi = pd.read_csv('wdi.csv')

inflation = wdi[['country','inflation_rate']].copy()
inflation.dropna(inplace=True)

inflation.sort_values(by='inflation_rate', ascending=False, inplace=True)

inflation.reset_index(drop=True, inplace=True)

inf_top_5 = inflation.head()
inf_bottom_5 = inflation.tail()
inflation_stats = pd.concat([inf_top_5, inf_bottom_5])
inflation_stats
```

	country	inflation_rate
0	Lebanon	171.205491
1	Sudan	138.808460
2	Zimbabwe	104.705171
3	Turkiye	72.308836
4	Suriname	52.446027
164	Hong Kong SAR, China	1.881367
165	Bolivia	1.746329

	country	inflation_rate
166	Benin	1.350779
167	Macao SAR, China	1.045028
168	South Sudan	-6.687321

Figure 1: Inflation Bar Chart

```python
top_10_inflation = inflation.head(10)

plt.figure(figsize=(12, 8))
plt.bar(top_10_inflation['country'], top_10_inflation['inflation_rate'], color='skyblue')
plt.xlabel('Country')
plt.ylabel('Inflation Rate')
plt.title('Top 10 Countries with Highest Inflation Rate')
plt.xticks(rotation=45)

plt.savefig('images/top_10_inflation.png')

plt.show()
```
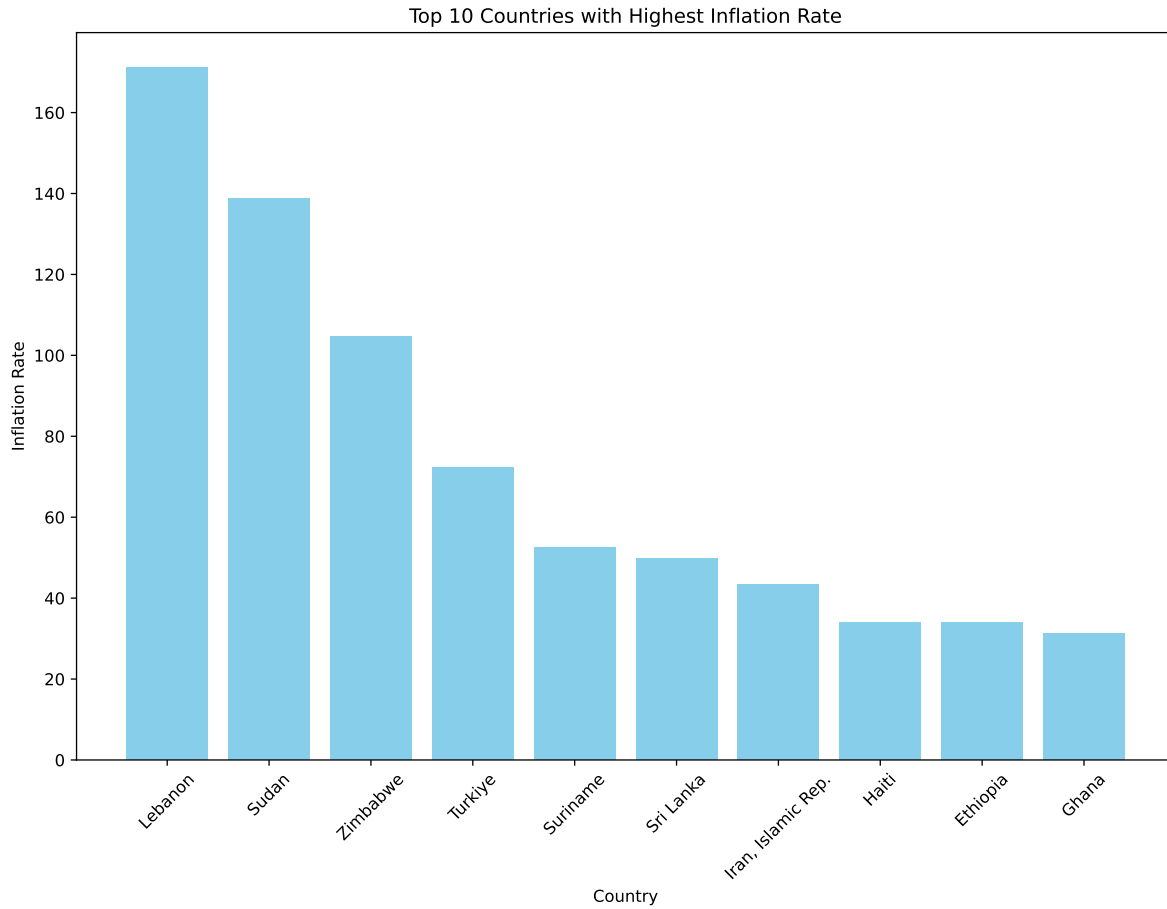
Top 10 Countries with Highest Inflation Rate

Table 2: Inflation Summary Statistics

```
inf_summary_stats = inflation['inflation_rate'].describe()

display(pd.DataFrame(inf_summary_stats))
```

	inflation_rate
count	169.000000
mean	12.493936
std	19.682433
min	-6.687321
25%	5.518129
50%	7.967574
75%	11.665567

3

	inflation_rate
max	171.205491

As shown in **Table 1** in The top 5 countries with the highest inflation rates are Lebanon, Sudan, Zimbabwe, Turkiye, and Suriname, with Lebanon experiencing the highest rate at 171.21%. This is a lot more than the mean of 12.49% which can be seen in **Table 2** Conversely, the countries with the lowest inflation rates include Hong Kong SAR, China; Bolivia; Benin; Macao SAR, China; and South Sudan, with South Sudan having a deflation rate of -6.69%.

GDP Growth Rate

Table 3: GDP Growth Key Stats

```
gdp_growth = wdi[['country','gdp_growth_rate']].copy()
gdp_growth.dropna(inplace=True)

gdp_growth.sort_values(by='gdp_growth_rate', ascending=False, inplace=True)

gdp_growth.reset_index(drop=True, inplace=True)

gdp_head = gdp_growth.head()

gdp_tail = gdp_growth.tail()
gdp_stats = pd.concat([gdp_head, gdp_tail])
gdp_stats
```

	country	gdp_growth_rate
0	Guyana	63.439864
1	Fiji	20.016464
2	St. Lucia	18.075380
3	Cabo Verde	17.439079
4	Seychelles	14.976851
197	Afghanistan	-6.240172
198	Sri Lanka	-7.346764
199	Timor-Leste	-20.541587
200	Macao SAR, China	-21.401951
201	Ukraine	-28.758591

Figure 2: GDP Growth Violin Chart

```python
plt.figure(figsize=(12, 8))
sns.violinplot(x=gdp_growth['gdp_growth_rate'])
plt.xlabel('GDP Growth Rate')
plt.title('Distribution of GDP Growth Rates')
plt.savefig('images/gdp_violinchart.png')
plt.show()
```
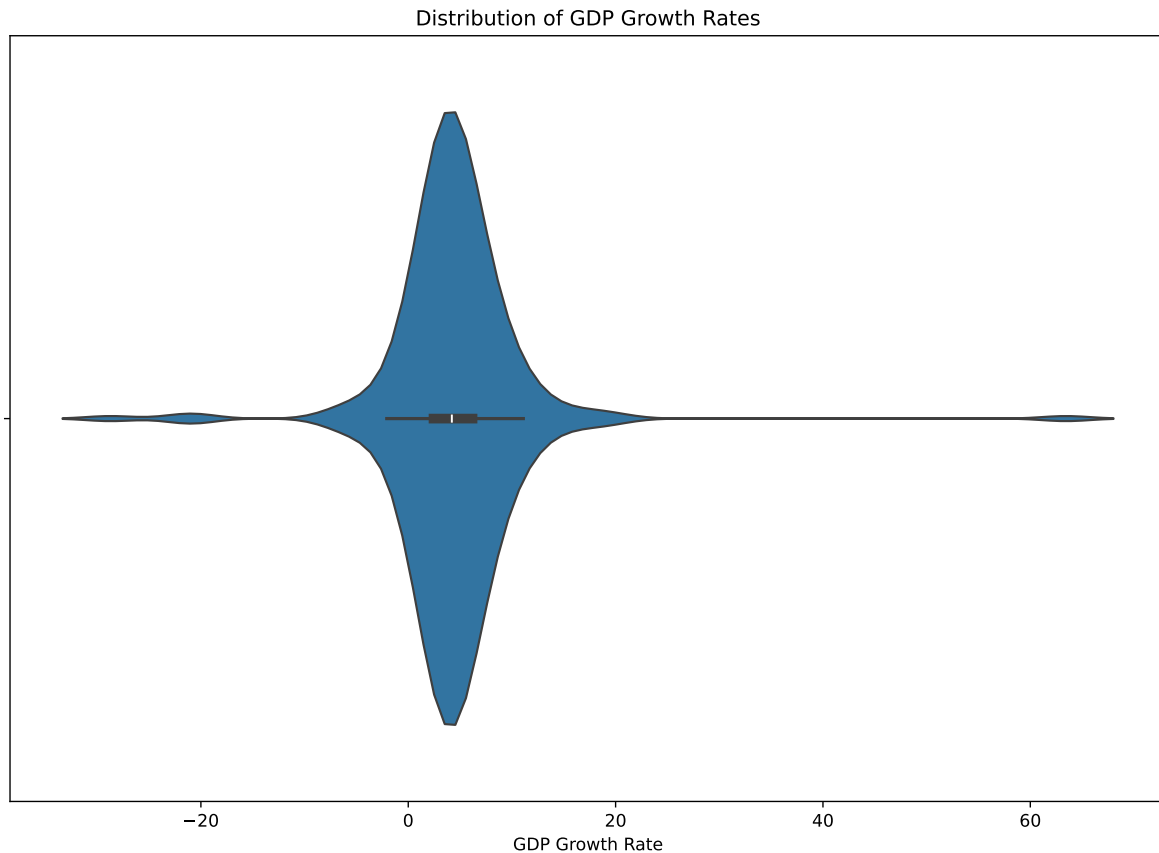
Distribution of GDP Growth Rates

GDP Growth Rate

Table 4: GDP Growth Summary Statistics

```python
growth_summary_stats = gdp_growth['gdp_growth_rate'].describe()

display(pd.DataFrame(growth_summary_stats))
```

	gdp_growth_rate
count	202.000000
mean	4.368901
std	6.626811
min	-28.758591
25%	2.438593
50%	4.204431
75%	6.200000
max	63.439864

In **Table 1** it can be seen that the top 5 countries with the highest GDP growth rates are Guyana, Fiji, St. Lucia, Cabo Verde, and Seychelles, with Guyana experiencing the highest growth rate at 63.44%. Conversely, the countries with the lowest GDP growth rates include Afghanistan, Sri Lanka, Timor-Leste, Macao SAR, China, and Ukraine, with Ukraine having the lowest growth rate at -28.76%. Most countries have a GDP growth rate between 0% and 20% as can be seen in **Figure 2**.

Primary School Enrollment Rate

Table 5: Primary School Enrollment Key Stats

```
schooling = wdi[['country','primary_school_enrolment_rate']].copy()
schooling.dropna(inplace=True)
schooling.sort_values(by='primary_school_enrolment_rate', ascending=False, inplace=True)

schooling.reset_index(drop=True, inplace=True)

school_top5 = schooling.head()

school_bottom5 = schooling.tail()

school_stats = pd.concat([school_top5, school_bottom5])
school_stats
```

	country	primary_school_enrolment_rate
0	Madagascar	138.192001
1	Rwanda	134.930344
2	Namibia	132.985992
3	Gibraltar	127.165352

	country	primary_school_enrolment_rate
4	Malawi	126.438004
109	Senegal	83.278702
110	Burkina Faso	82.356796
111	Syrian Arab Republic	74.367432
112	Niger	68.331413
113	Djibouti	64.395401

Figure 3: Primary School Enrollment Bar Chart
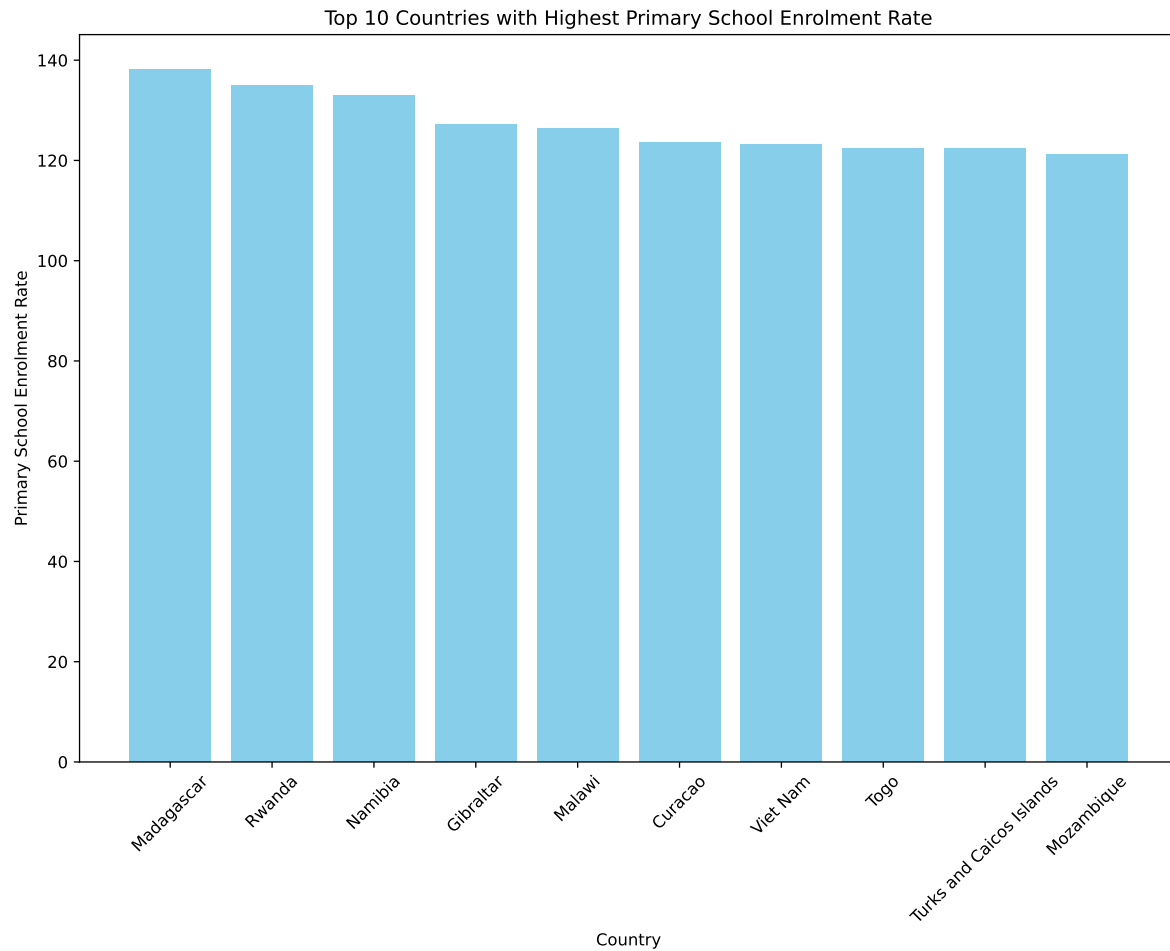
```
top_10_schooling = schooling.head(10)

plt.figure(figsize=(12, 8))
plt.bar(top_10_schooling['country'], top_10_schooling['primary_school_enrolment_rate'], colo
plt.xlabel('Country')
plt.ylabel('Primary School Enrolment Rate')
plt.title('Top 10 Countries with Highest Primary School Enrolment Rate')
plt.xticks(rotation=45)

plt.savefig('images/top_10_schooling.png')

plt.show()
```

Top 10 Countries with Highest Primary School Enrolment Rate

Primary School Enrollment Summary Statistics

```
school_summary_stats = schooling['primary_school_enrolment_rate'].describe()

display(pd.DataFrame(school_summary_stats))
```

	primary_school_enrolment_rate
count	114.000000
mean	100.874048
std	12.037532
min	64.395401
25%	94.191751
50%	100.022247

	primary_school_enrolment_rate
75%	105.035866
max	138.192001

In **Table 5** it can be seen that the top 5 countries with the highest primary school enrollment rates are Madagascar, Rwanda, Namibia, Gibraltar, and Malawi, with Madagascar having the highest rate at 138.19%. These all have similar rates which is visible in **Figure 3**. Conversely, the countries with the lowest primary school enrollment rates include Senegal, Burkina Faso, Syrian Arab Republic, Niger, and Djibouti, with Djibouti having the lowest rate at 64.40%.