```
import numpy as np
import pandas as pd
import matplotlib.pyplot as plt
import seaborn as sns
```

```
df =pd.read_csv(r'/content/drive/MyDrive/Prodigy-InfoTech/Task-1/API_SP.POP.TOTL_DS2_en_csv_v2_84031 - API_SP.POP.TOTL_DS2_en_csv_v2_84
```

```
df
```

	Country Name	Country Code	Indicator Name	Indicator Code	1960	1961	196
0	Aruba	ABW	Population, total	SP.POP.TOTL	54608.0	55811.0	56682.
1	Africa Eastern and Southern	AFE	Population, total	SP.POP.TOTL	130692579.0	134169237.0	137835590.
2	Afghanistan	AFG	Population, total	SP.POP.TOTL	8622466.0	8790140.0	8969047.
3	Africa Western and Central	AFW	Population, total	SP.POP.TOTL	97256290.0	99314028.0	101445032.
4	Angola	AGO	Population, total	SP.POP.TOTL	5357195.0	5441333.0	5521400.
...	...	...	...	...	...	...	.
261	Kosovo	XKX	Population, total	SP.POP.TOTL	947000.0	966000.0	994000.
262	Yemen, Rep.	YEM	Population, total	SP.POP.TOTL	5542459.0	5646668.0	5753386.
263	South Africa	ZAF	Population, total	SP.POP.TOTL	16520441.0	16989464.0	17503133.
264	Zambia	ZMB	Population, total	SP.POP.TOTL	3119430.0	3219451.0	3323427.
265	Zimbabwe	ZWE	Population, total	SP.POP.TOTL	3806310.0	3925952.0	4049778.

266 rows × 68 columns

```
df.head()
```

	Country Name	Country Code	Indicator Name	Indicator Code	1960	1961	1962
0	Aruba	ABW	Population, total	SP.POP.TOTL	54608.0	55811.0	56682.0
1	Africa Eastern and Southern	AFE	Population, total	SP.POP.TOTL	130692579.0	134169237.0	137835590.0
2	Afghanistan	AFG	Population, total	SP.POP.TOTL	8622466.0	8790140.0	8969047.0
3	Africa Western and Central	AFW	Population, total	SP.POP.TOTL	97256290.0	99314028.0	101445032.0
4	Angola	AGO	Population, total	SP.POP.TOTL	5357195.0	5441333.0	5521400.0

5 rows × 68 columns

```
df.tail()
```

	Country Name	Country Code	Indicator Name	Indicator Code	1960	1961	1962
261	Kosovo	XKX	Population, total	SP.POP.TOTL	947000.0	966000.0	994000.0
262	Yemen, Rep.	YEM	Population, total	SP.POP.TOTL	5542459.0	5646668.0	5753386.0
263	South Africa	ZAF	Population, total	SP.POP.TOTL	16520441.0	16989464.0	17503133.0
264	Zambia	ZMB	Population, total	SP.POP.TOTL	3119430.0	3219451.0	3323427.0
265	Zimbabwe	ZWE	Population, total	SP.POP.TOTL	3806310.0	3925952.0	4049778.0

5 rows × 68 columns

```
df.shape
```

```
(266, 68)
```

```
df.columns
```

```
Index(['Country Name', 'Country Code', 'Indicator Name', 'Indicator Code',
       '1960', '1961', '1962', '1963', '1964', '1965', '1966', '1967', '1968',
       '1969', '1970', '1971', '1972', '1973', '1974', '1975', '1976', '1977',
       '1978', '1979', '1980', '1981', '1982', '1983', '1984', '1985', '1986',
       '1987', '1988', '1989', '1990', '1991', '1992', '1993', '1994', '1995',
       '1996', '1997', '1998', '1999', '2000', '2001', '2002', '2003', '2004',
       '2005', '2006', '2007', '2008', '2009', '2010', '2011', '2012', '2013',
       '2014', '2015', '2016', '2017', '2018', '2019', '2020', '2021', '2022',
       '2023'],
      dtype='object')
```

```
df.dtypes
```

```
Country Name       object
Country Code       object
Indicator Name     object
Indicator Code     object
1960              float64
                   ...
2019              float64
2020              float64
2021              float64
2022              float64
2023              float64
Length: 68, dtype: object
```

```
df.info()
```

```
 12  1968            264 non-null    float64
 13  1969            264 non-null    float64
 14  1970            264 non-null    float64
 15  1971            264 non-null    float64
 16  1972            264 non-null    float64
 17  1973            264 non-null    float64
 18  1974            264 non-null    float64
 19  1975            264 non-null    float64
 20  1976            264 non-null    float64
 21  1977            264 non-null    float64
 22  1978            264 non-null    float64
 23  1979            264 non-null    float64
 24  1980            264 non-null    float64
 25  1981            264 non-null    float64
 43  1999            265 non-null    float64
 44  2000            265 non-null    float64
 45  2001            265 non-null    float64
 46  2002            265 non-null    float64
 47  2003            265 non-null    float64
 48  2004            265 non-null    float64
 49  2005            265 non-null    float64
 50  2006            265 non-null    float64
 51  2007            265 non-null    float64
 52  2008            265 non-null    float64
 53  2009            265 non-null    float64
 54  2010            265 non-null    float64
 55  2011            265 non-null    float64
 56  2012            265 non-null    float64
 57  2013            265 non-null    float64
 58  2014            265 non-null    float64
 59  2015            265 non-null    float64
 60  2016            265 non-null    float64
 61  2017            265 non-null    float64
 62  2018            265 non-null    float64
 63  2019            265 non-null    float64
 64  2020            265 non-null    float64
 65  2021            265 non-null    float64
 66  2022            265 non-null    float64
 67  2023            0 non-null      float64
dtypes: float64(64), object(4)
memory usage: 141.4+ KB
```

```
df.describe()
```

	1960	1961	1962	1963	1964	19
count	2.640000e+02	2.640000e+02	2.640000e+02	2.640000e+02	2.640000e+02	2.640000e+
mean	1.172860e+08	1.188956e+08	1.210661e+08	1.237484e+08	1.264530e+08	1.291965e+
std	3.695500e+08	3.740958e+08	3.808121e+08	3.895098e+08	3.982497e+08	4.071209e+
min	2.646000e+03	2.888000e+03	3.171000e+03	3.481000e+03	3.811000e+03	4.161000e+
25%	5.132212e+05	5.231345e+05	5.337595e+05	5.449288e+05	5.566630e+05	5.651150e+
50%	3.757486e+06	3.887144e+06	4.023896e+06	4.139356e+06	4.224612e+06	4.277636e+
75%	2.670606e+07	2.748694e+07	2.830289e+07	2.914708e+07	3.001684e+07	3.084892e+
max	3.031474e+09	3.072422e+09	3.126850e+09	3.193429e+09	3.260442e+09	3.328209e+

8 rows × 64 columns

```
df.duplicated().sum()
```

```
0
```

```
df.isna().sum().any()
```

```
True
```

```
df=df.fillna(method='ffill')
df.head()
```

	Country Name	Country Code	Indicator Name	Indicator Code	1960	1961	1962
0	Aruba	ABW	Population, total	SP.POP.TOTL	54608.0	55811.0	56682.0
1	Africa Eastern and Southern	AFE	Population, total	SP.POP.TOTL	130692579.0	134169237.0	137835590.0
2	Afghanistan	AFG	Population, total	SP.POP.TOTL	8622466.0	8790140.0	8969047.0
3	Africa Western and Central	AFW	Population, total	SP.POP.TOTL	97256290.0	99314028.0	101445032.0
4	Angola	AGO	Population, total	SP.POP.TOTL	5357195.0	5441333.0	5521400.0

5 rows × 68 columns

```
df.isna().sum().any()
```

```
True
```

```
df['Country Name'].unique()
```

```
       'Europe & Central Asia (excluding high income)',
       'Europe & Central Asia', 'Ecuador', 'Egypt, Arab Rep.',
       'Euro area', 'Eritrea', 'Spain', 'Estonia', 'Ethiopia',
       'European Union', 'Fragile and conflict affected situations',
       'Finland', 'Fiji', 'France', 'Faroe Islands',
       'Micronesia, Fed. Sts.', 'Gabon', 'United Kingdom', 'Georgia',
       'Ghana', 'Gibraltar', 'Guinea', 'Gambia, The', 'Guinea-Bissau',
       'Equatorial Guinea', 'Greece', 'Grenada', 'Greenland', 'Guatemala',
       'Guam', 'Guyana', 'High income', 'Hong Kong SAR, China',
       'Honduras', 'Heavily indebted poor countries (HIPC)', 'Croatia',
       'Haiti', 'Hungary', 'IBRD only', 'IDA & IBRD total', 'IDA total',
       'IDA blend', 'Indonesia', 'IDA only', 'Isle of Man', 'India',
       'Not classified', 'Ireland', 'Iran, Islamic Rep.', 'Iraq',
       'Iceland', 'Israel', 'Italy', 'Jamaica', 'Jordan', 'Japan',
       'Kazakhstan', 'Kenya', 'Kyrgyz Republic', 'Cambodia', 'Kiribati',
       'St. Kitts and Nevis', 'Korea, Rep.', 'Kuwait',
       'Latin America & Caribbean (excluding high income)', 'Lao PDR',
       'Lebanon', 'Liberia', 'Libya', 'St. Lucia',
       'Latin America & Caribbean',
       'Least developed countries: UN classification', 'Low income',
       'Liechtenstein', 'Sri Lanka', 'Lower middle income',
       'Low & middle income', 'Lesotho', 'Late-demographic dividend',
       'Lithuania', 'Luxembourg', 'Latvia', 'Macao SAR, China',
       'St. Martin (French part)', 'Morocco', 'Monaco', 'Moldova',
       'Madagascar', 'Maldives', 'Middle East & North Africa', 'Mexico',
       'Marshall Islands', 'Middle income', 'North Macedonia', 'Mali',
       'Malta', 'Myanmar',
       'Middle East & North Africa (excluding high income)', 'Montenegro',
       'Mongolia', 'Northern Mariana Islands', 'Mozambique', 'Mauritania',
       'Mauritius', 'Malawi', 'Malaysia', 'North America', 'Namibia',
       'New Caledonia', 'Niger', 'Nigeria', 'Nicaragua', 'Netherlands',
       'Norway', 'Nepal', 'Nauru', 'New Zealand', 'OECD members', 'Oman',
       'Other small states', 'Pakistan', 'Panama', 'Peru', 'Philippines',
       'Palau', 'Papua New Guinea', 'Poland', 'Pre-demographic dividend',
       'Puerto Rico', "Korea, Dem. People's Rep.", 'Portugal', 'Paraguay',
       'West Bank and Gaza', 'Pacific island small states',
       'Post-demographic dividend', 'French Polynesia', 'Qatar',
       'Romania', 'Russian Federation', 'Rwanda', 'South Asia',
       'Saudi Arabia', 'Sudan', 'Senegal', 'Singapore', 'Solomon Islands',
       'Sierra Leone', 'El Salvador', 'San Marino', 'Somalia', 'Serbia',
       'Sub-Saharan Africa (excluding high income)', 'South Sudan',
       'Sub-Saharan Africa', 'Small states', 'Sao Tome and Principe',
       'Suriname', 'Slovak Republic', 'Slovenia', 'Sweden', 'Eswatini',
       'Sint Maarten (Dutch part)', 'Seychelles', 'Syrian Arab Republic',
       'Turks and Caicos Islands', 'Chad',
       'East Asia & Pacific (IDA & IBRD countries)',
       'Europe & Central Asia (IDA & IBRD countries)', 'Togo', 'Thailand',
       'Tajikistan', 'Turkmenistan',
       'Latin America & the Caribbean (IDA & IBRD countries)',
       'Timor-Leste', 'Middle East & North Africa (IDA & IBRD countries)',
       'Tonga', 'South Asia (IDA & IBRD)',
       'Sub-Saharan Africa (IDA & IBRD countries)', 'Trinidad and Tobago',
       'Tunisia', 'Turkiye', 'Tuvalu', 'Tanzania', 'Uganda', 'Ukraine',
       'Upper middle income', 'Uruguay', 'United States', 'Uzbekistan',
       'St. Vincent and the Grenadines', 'Venezuela, RB',
       'British Virgin Islands', 'Virgin Islands (U.S.)', 'Viet Nam',
       'Vanuatu', 'World', 'Samoa', 'Kosovo', 'Yemen, Rep.',
       'South Africa', 'Zambia', 'Zimbabwe'], dtype=object)
```

```
df['Indicator Name'].unique()
```

```
array(['Population, total'], dtype=object)
```

```
df['Indicator Code'].unique()
```

```
array(['SP.POP.TOTL'], dtype=object)
```

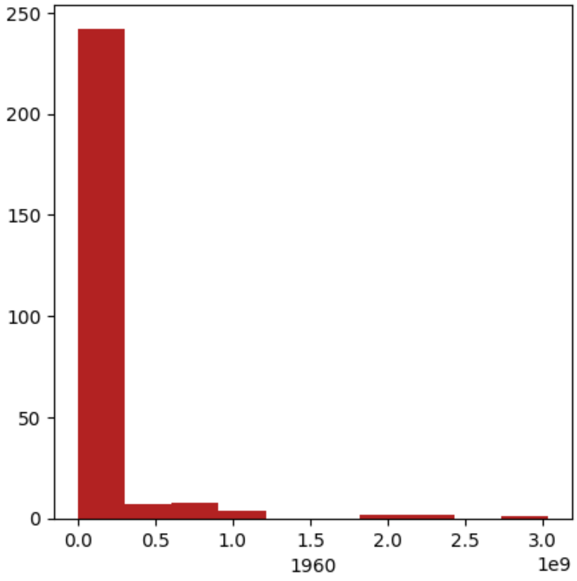
```
df.drop(['Indicator Name','Indicator Code','Country Code'],axis = 1,inplace = True)
```

```
df.columns
```

```
Index(['Country Name', '1960', '1961', '1962', '1963', '1964', '1965', '1966',
       '1967', '1968', '1969', '1970', '1971', '1972', '1973', '1974', '1975',
       '1976', '1977', '1978', '1979', '1980', '1981', '1982', '1983', '1984',
       '1985', '1986', '1987', '1988', '1989', '1990', '1991', '1992', '1993',
       '1994', '1995', '1996', '1997', '1998', '1999', '2000', '2001', '2002',
       '2003', '2004', '2005', '2006', '2007', '2008', '2009', '2010', '2011',
       '2012', '2013', '2014', '2015', '2016', '2017', '2018', '2019', '2020',
       '2021', '2022', '2023'],
      dtype='object')
```

```
cols = ['1960', '1961', '1962', '1963', '1964', '1965', '1966',
       '1967', '1968', '1969', '1970', '1971', '1972', '1973', '1974', '1975',
       '1976', '1977', '1978', '1979', '1980', '1981', '1982', '1983', '1984',
       '1985', '1986', '1987', '1988', '1989', '1990', '1991', '1992', '1993',
       '1994', '1995', '1996', '1997', '1998', '1999', '2000','2001', '2002', '2003', '2004', '2005', '2006', '2007',
       '2008', '2009', '2010', '2011', '2012', '2013', '2014', '2015', '2016',
       '2017', '2018', '2019', '2020', '2021', '2022']


for i in cols:
        fig = plt.figure(figsize=(5,5))
        plt.hist(df[i],color='#B22222',bins=10)
        plt.xlabel(i)
        plt.show()
```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200
150
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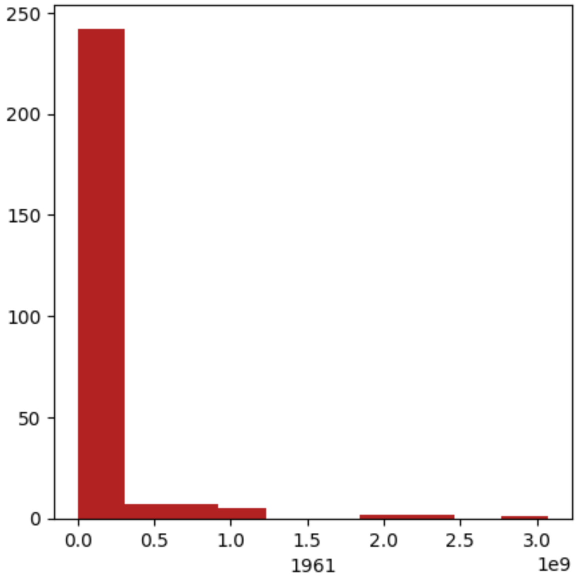
50
0
0.0
0.5
1.0
1.5
2.0
2.5
3.0
1960
1e9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200
150
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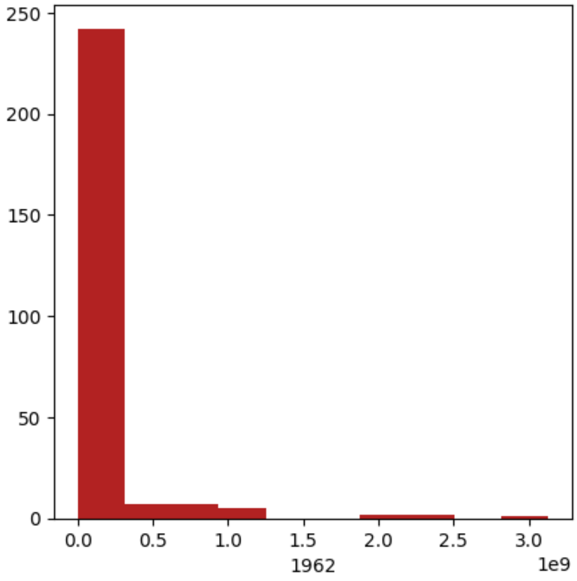
50
0
0.0
0.5
1.0
1.5
2.0
2.5
3.0
1961
1e9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200
150
100
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0
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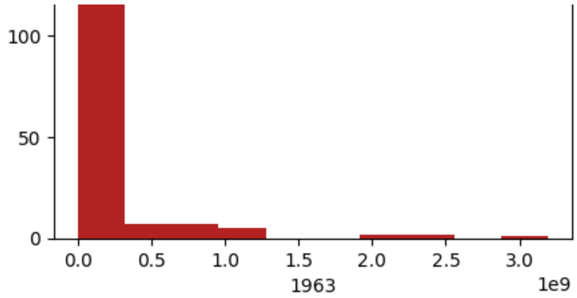
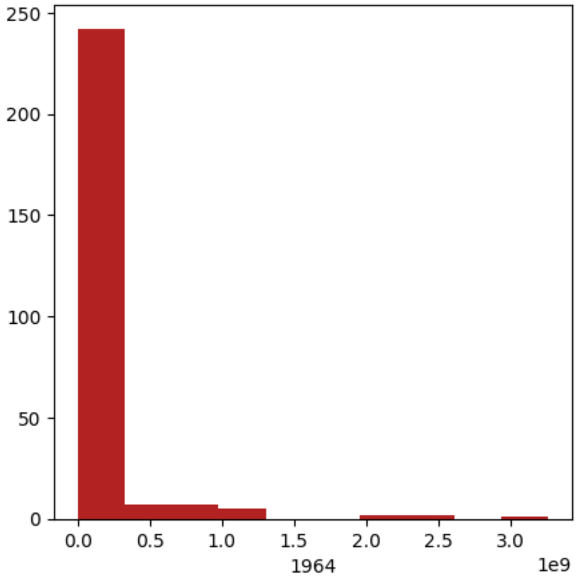
0.5
1.0
1.5
2.0
2.5
3.0
1962
1e9

250
200
150


100
50
0
0.0
0.5
1.0
1.5
2.0
2.5
3.0
1963
1e9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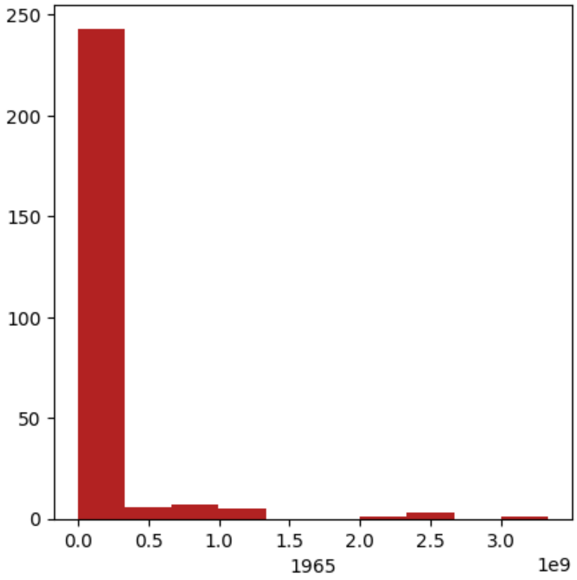
200
150
100
50
0
0.0
0.5
1.0
1.5
2.0
2.5
3.0
1964
1e9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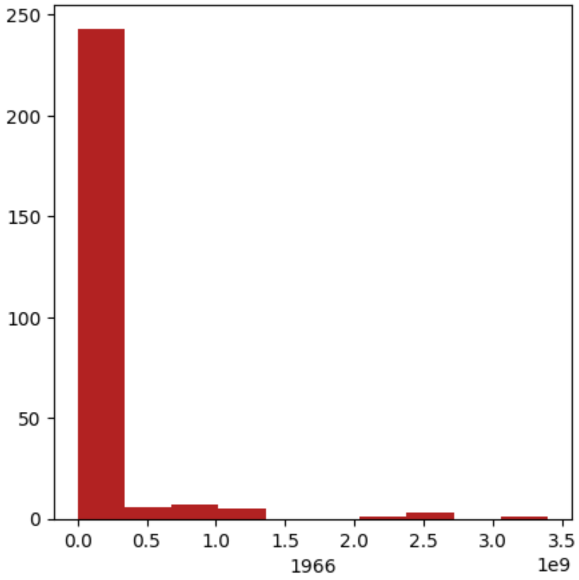
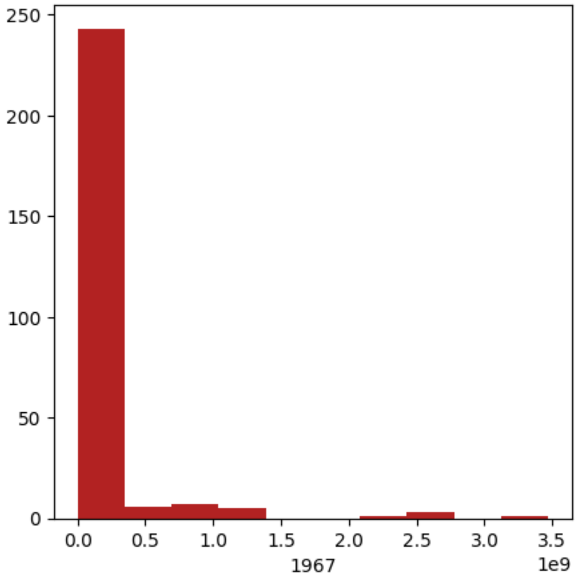
0
0.0
0.5
1.0
1.5
2.0
2.5
3.0
1965
1e9


250
200
150
100
50
0
0.0
0.5
1.0
1.5
2.0
2.5
3.0
3.5
1966
1e9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200
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100
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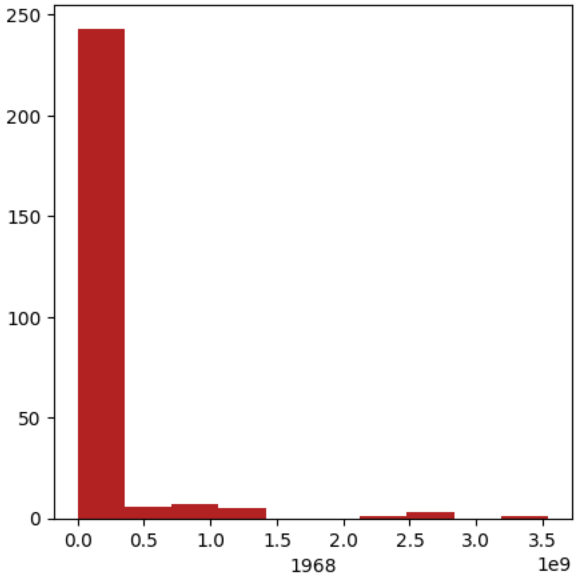
0
0.0
0.5
1.0
1.5
2.0
2.5
3.0
3.5
1e9
1967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200
150
100
50
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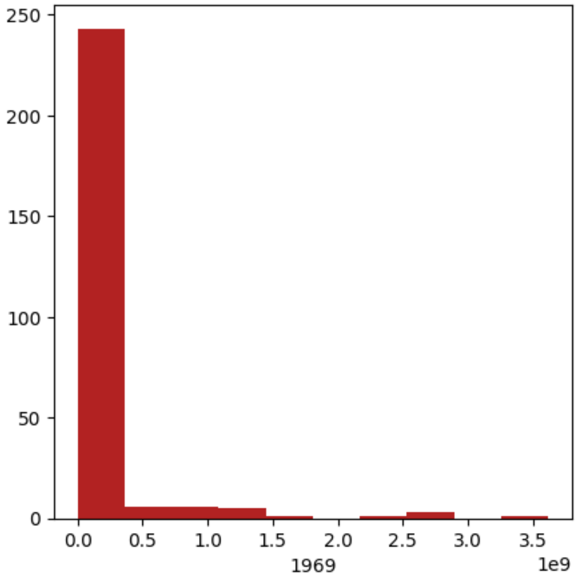
0.0
0.5
1.0
1.5
2.0
2.5
3.0
3.5
1e9
1968


250
200
150
100
50
0
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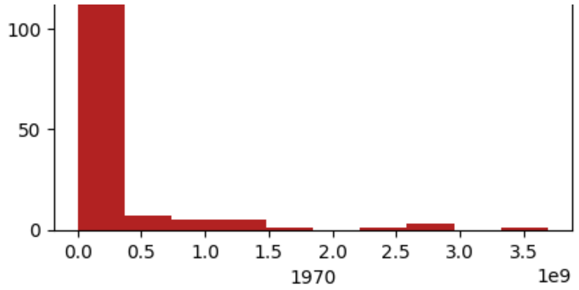
0.5
1.0
1.5
2.0
2.5
3.0
3.5
1e9
1969

250
200
150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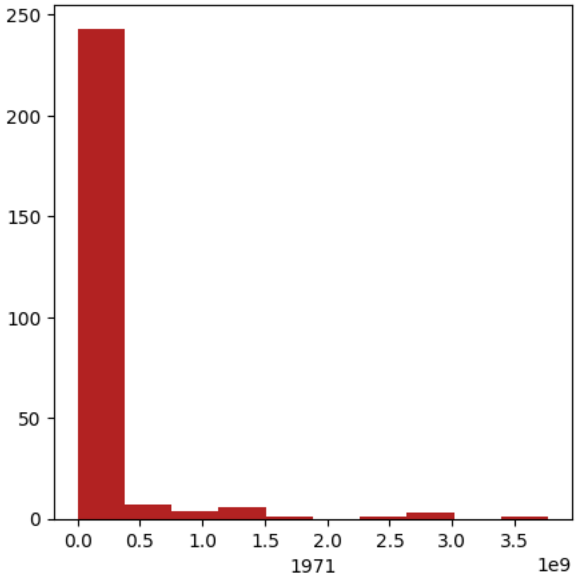
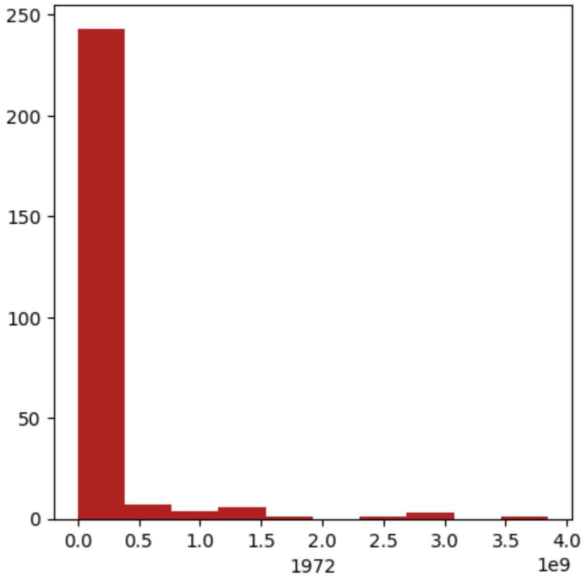
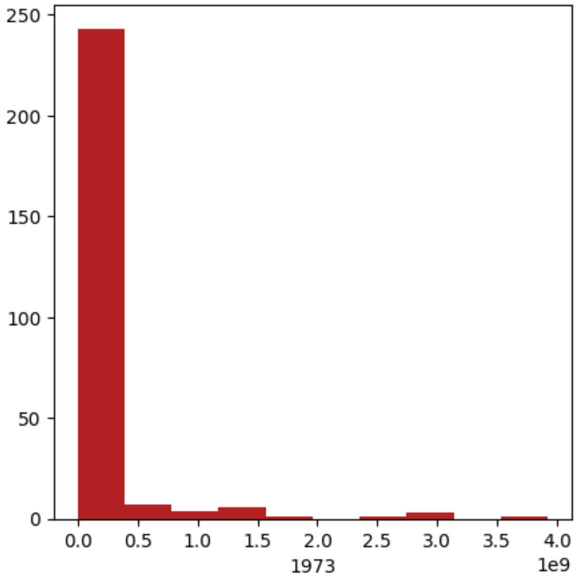
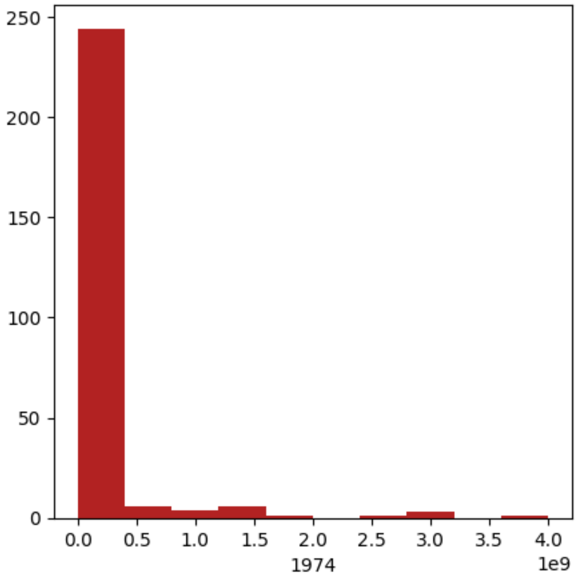
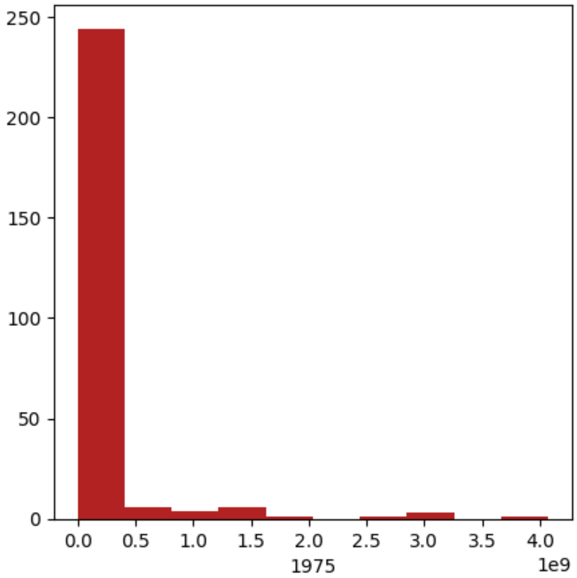
0
0.0
0.5
1.0
1.5
2.0
2.5
3.0
3.5
1970
1e9

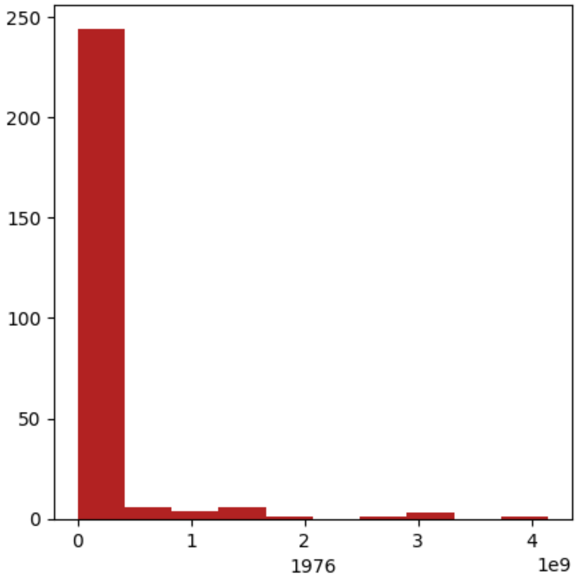

250
200
150
100
50
0
0.0
0.5
1.0
1.5
2.0
2.5
3.0
3.5
1971
1e9


250
200
150
100
50
0
0.0
0.5
1.0
1.5
2.0
2.5
3.0
3.5
4.0
1972
1e9

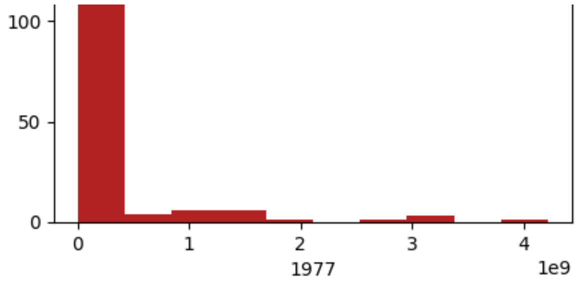

250
200
150
100
50
0
0.0
0.5
1.0
1.5
2.0
2.5
3.0
3.5
4.0
1973
1e9

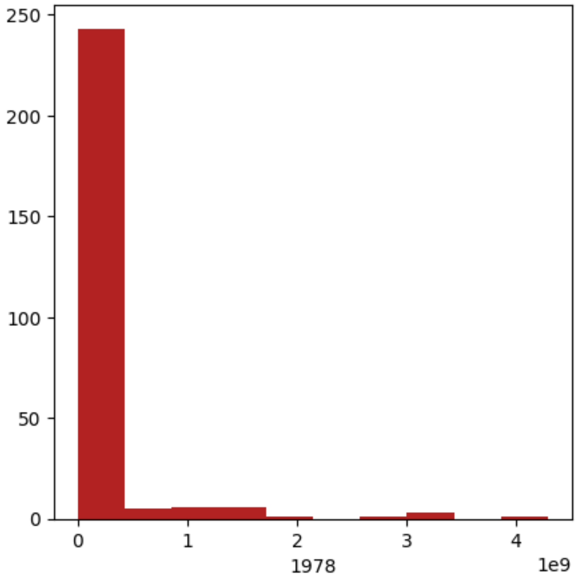

250
200
150
100
50
0
0.0
0.5
1.0
1.5
2.0
2.5
3.0
3.5
4.0
1974
1e9

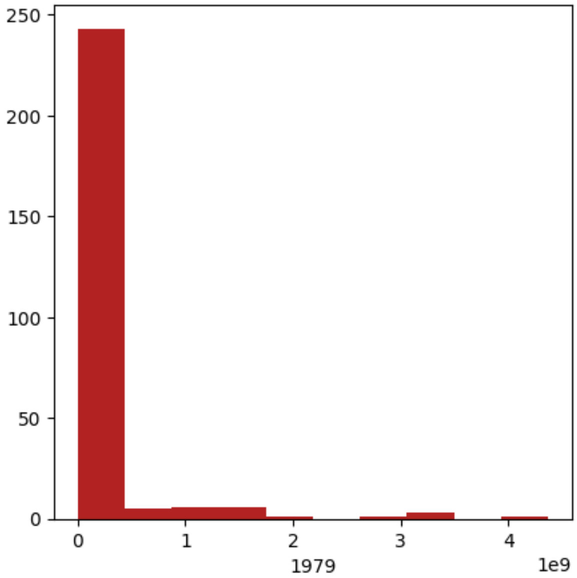

250
200
150
100
50
0
0.0
0.5
1.0
1.5
2.0
2.5
3.0
3.5
4.0
1975
1e9

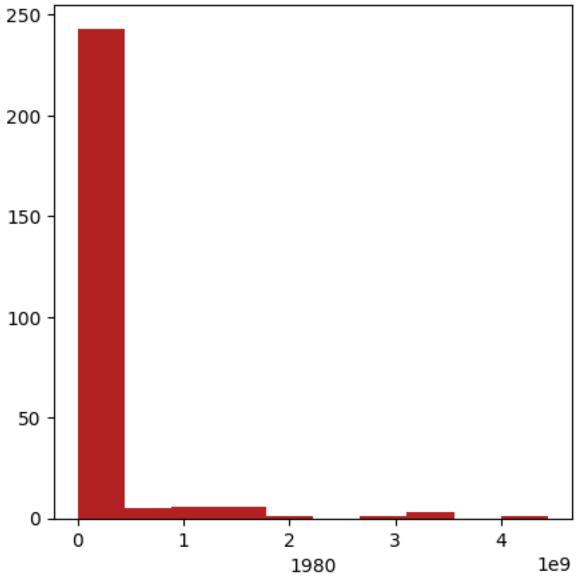

250
200
150
100
50
0
0
1
2
3
4
1976
1e9

250
200
150


100
50
0
0
1
2
3
4
1977
1e9


250
200
150
100
50
0
0
1
2
3
4
1978
1e9


250
200
150
100
50
0
0
1
2
3
4
1979
1e9


250
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100
50
0
0
1
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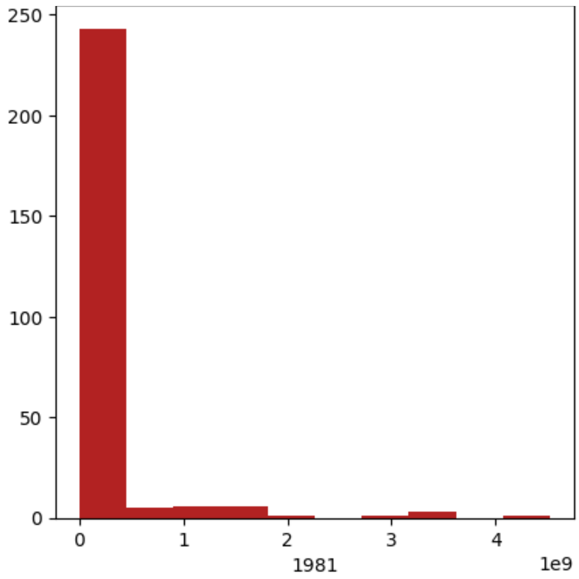
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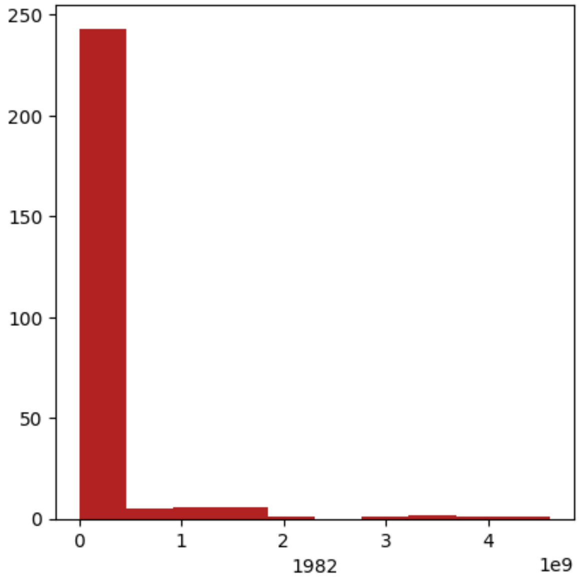
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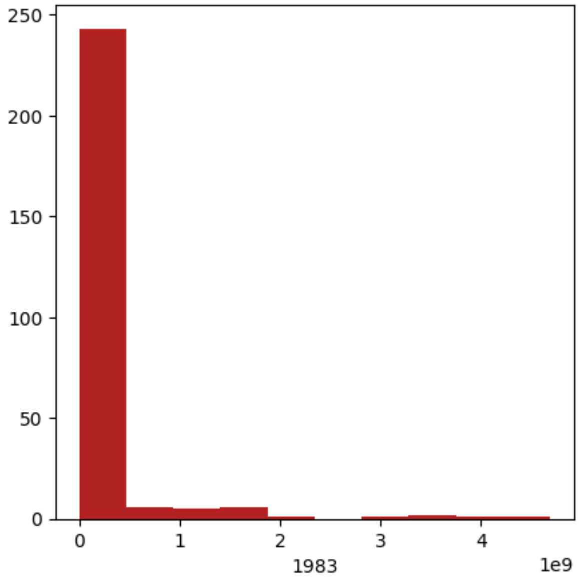
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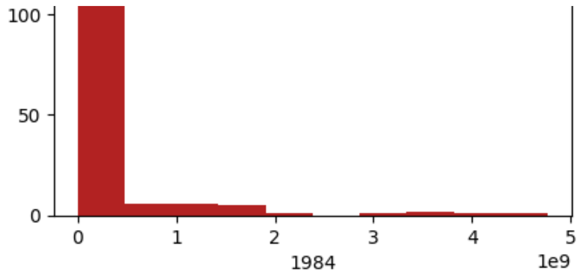
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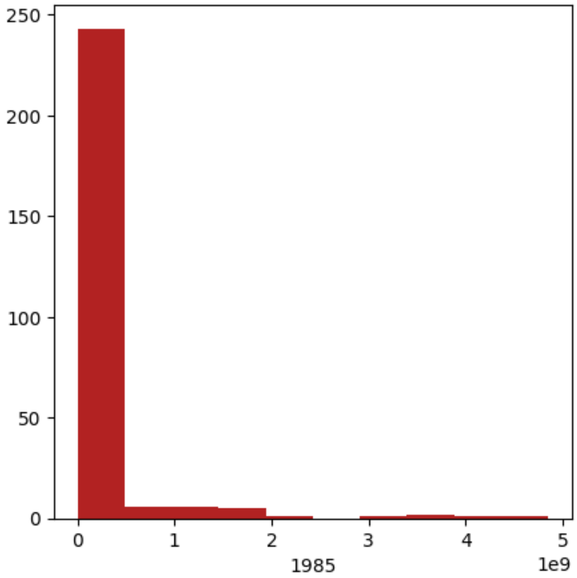
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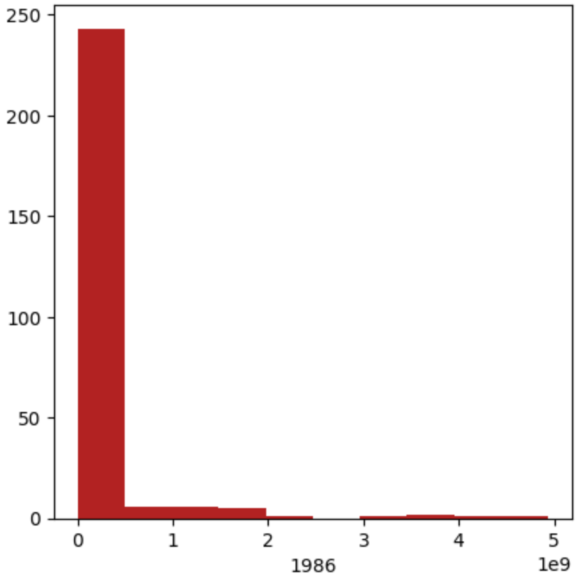
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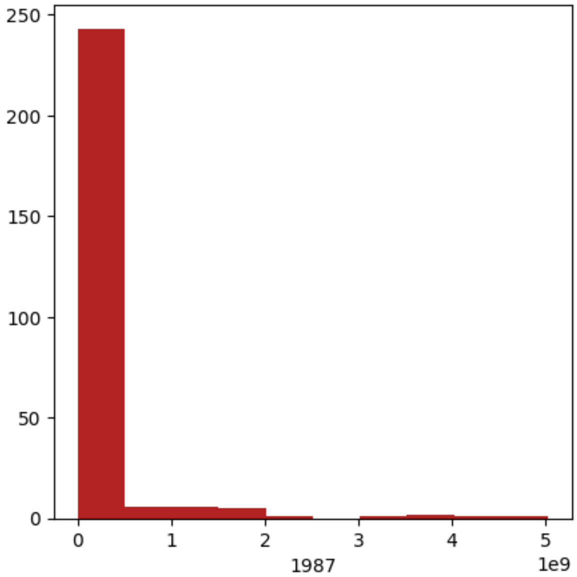
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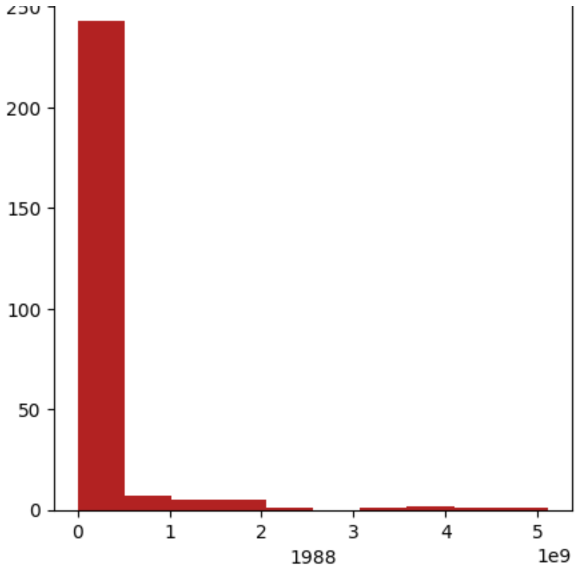
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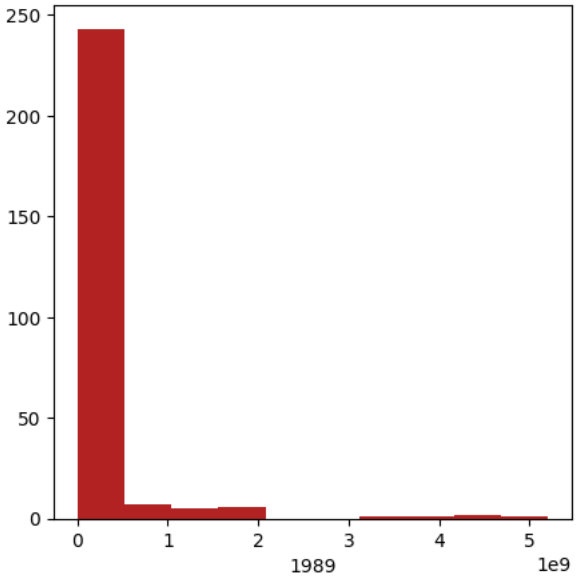
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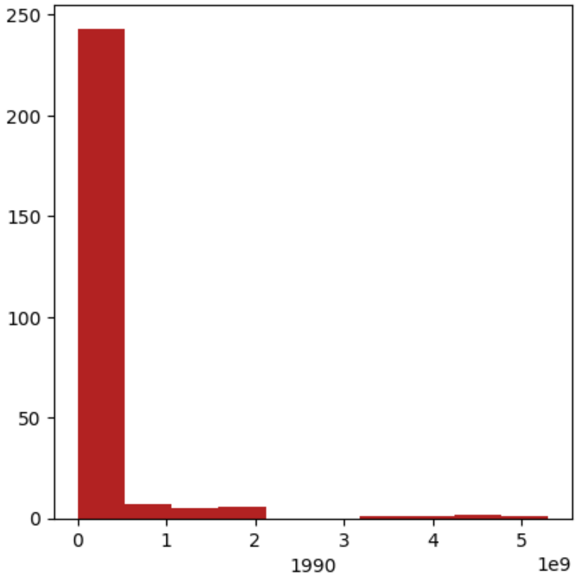
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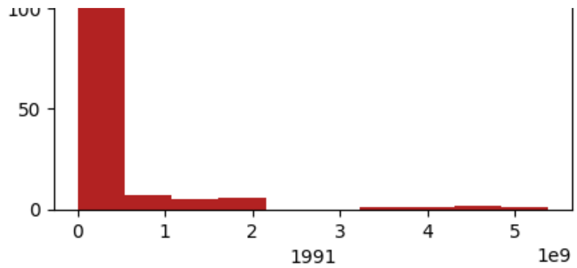
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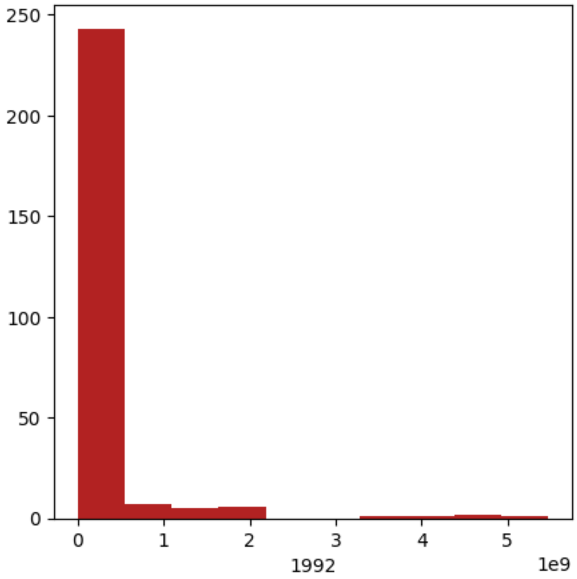
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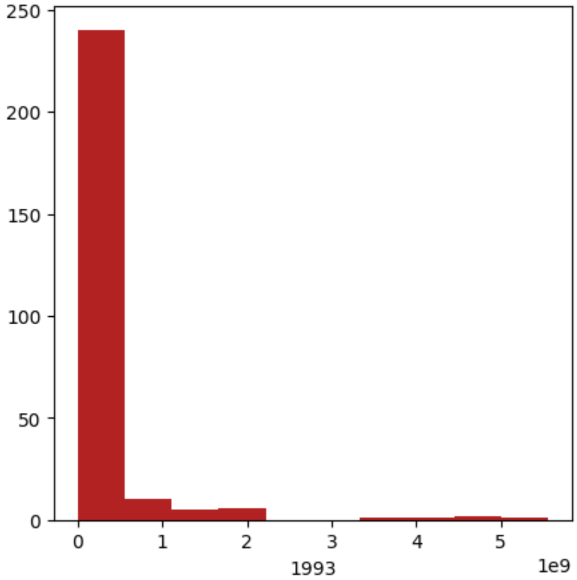
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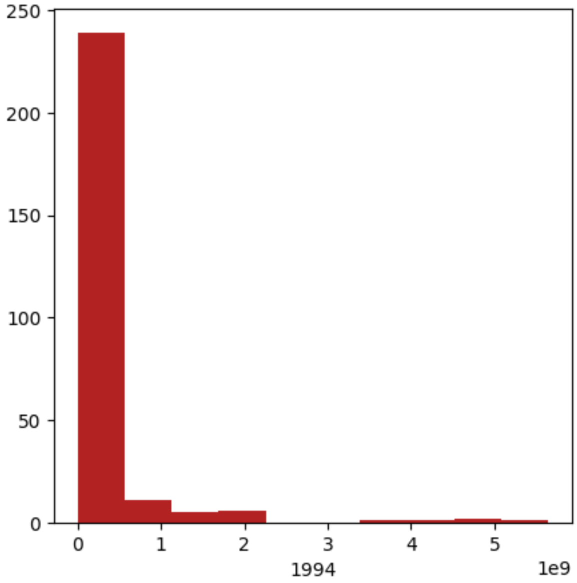
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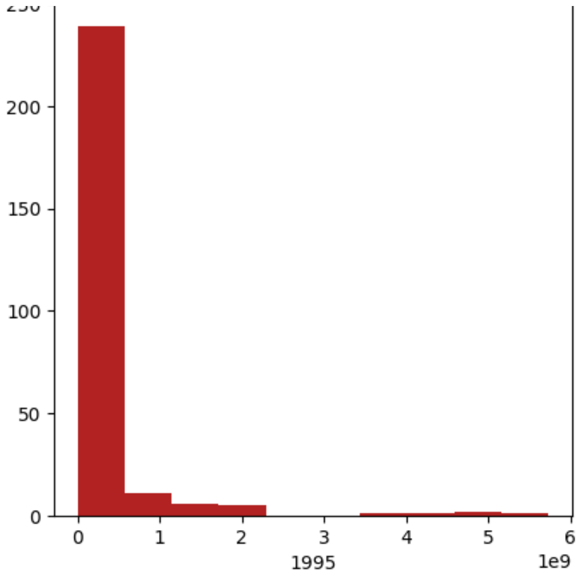
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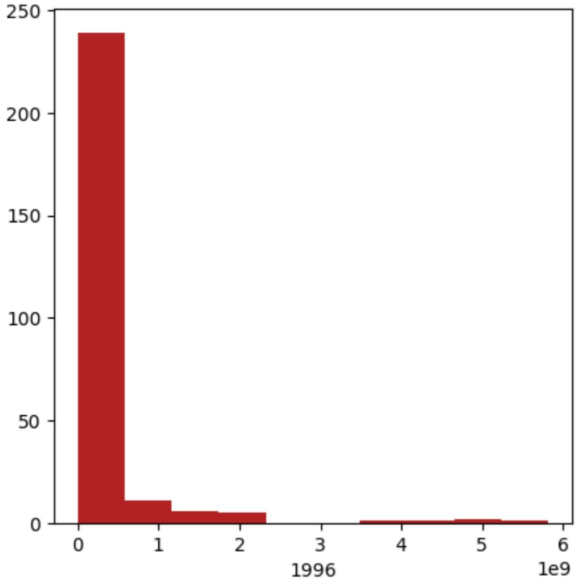
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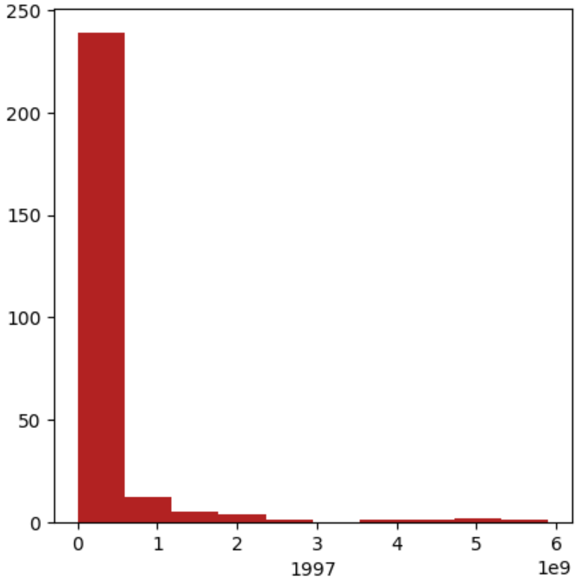
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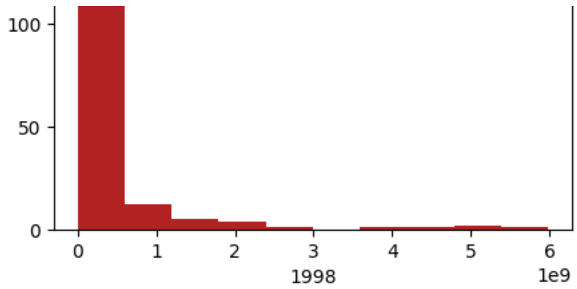
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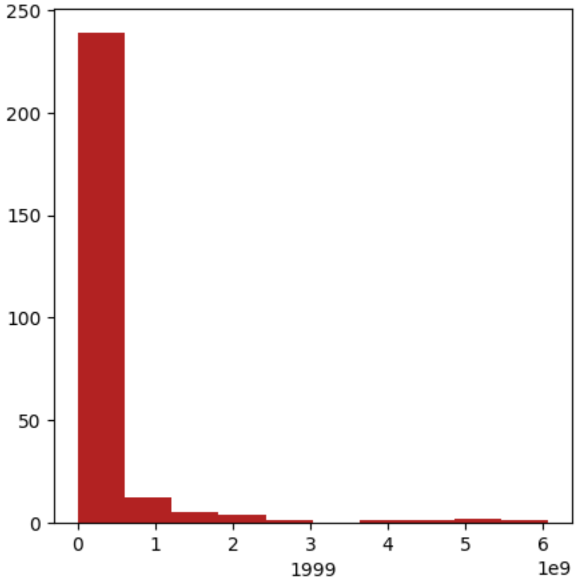
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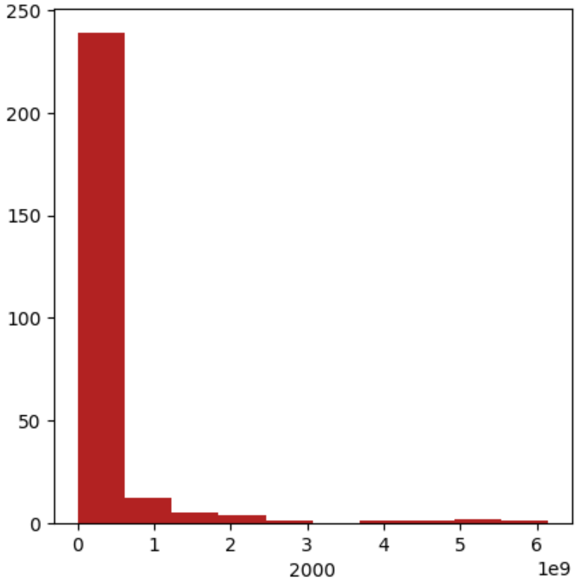
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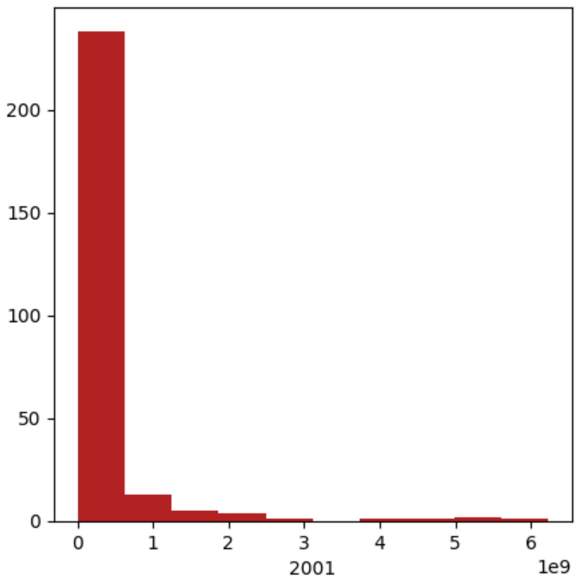
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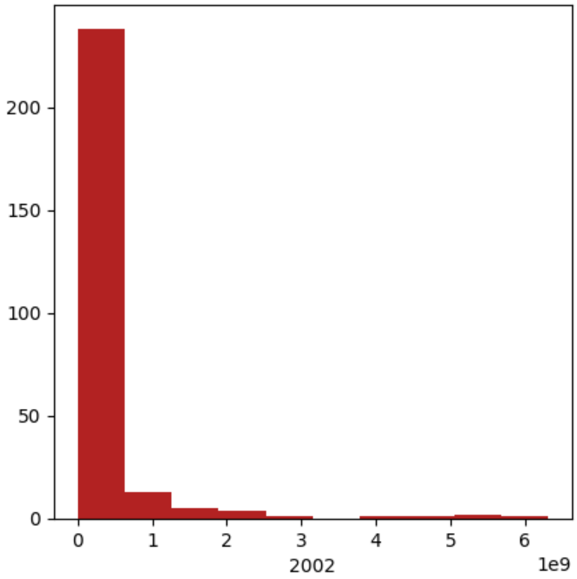
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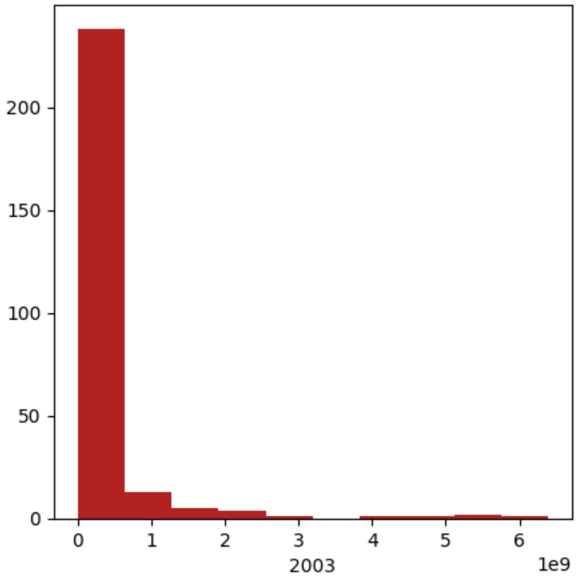
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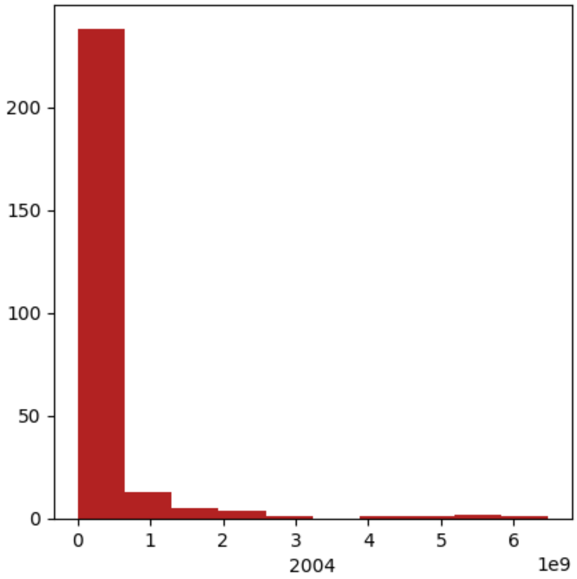
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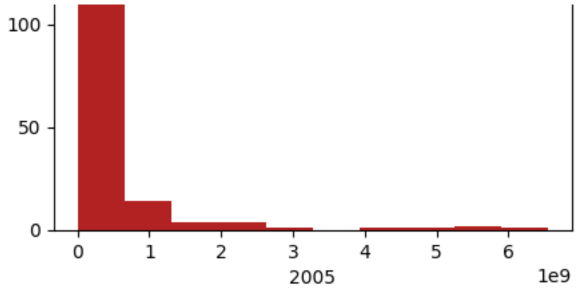
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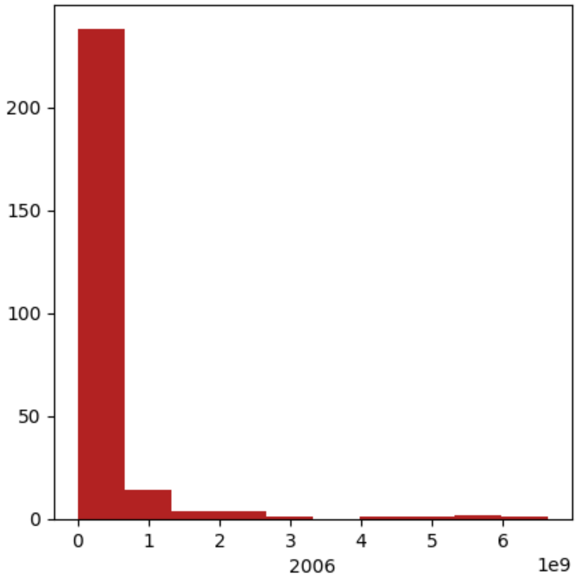
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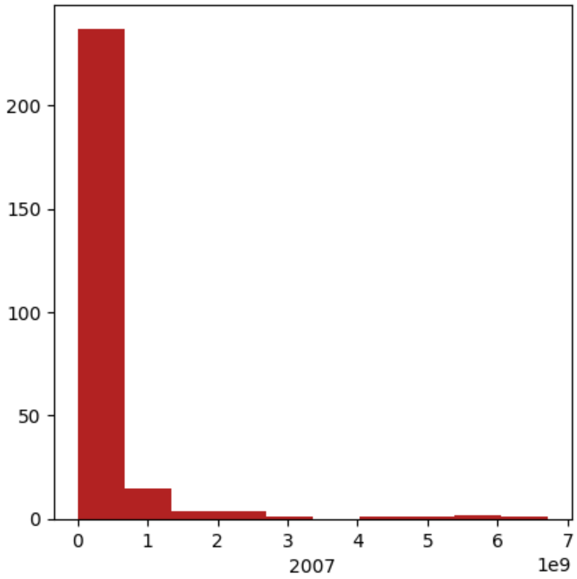
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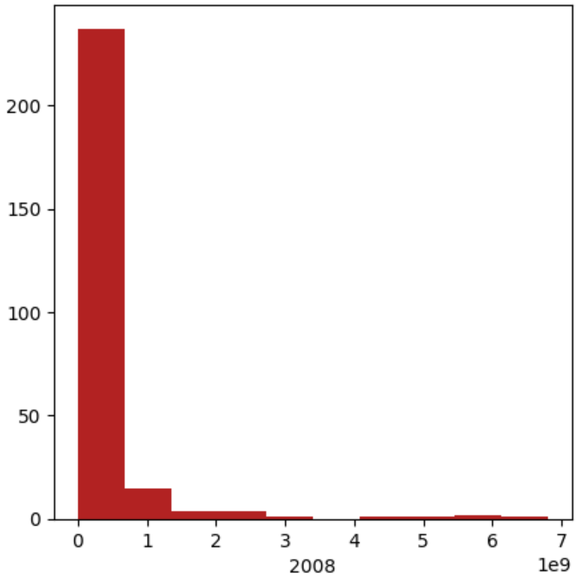
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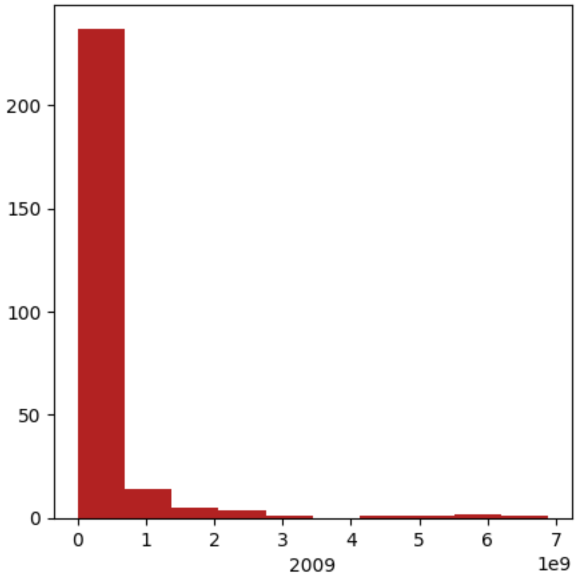
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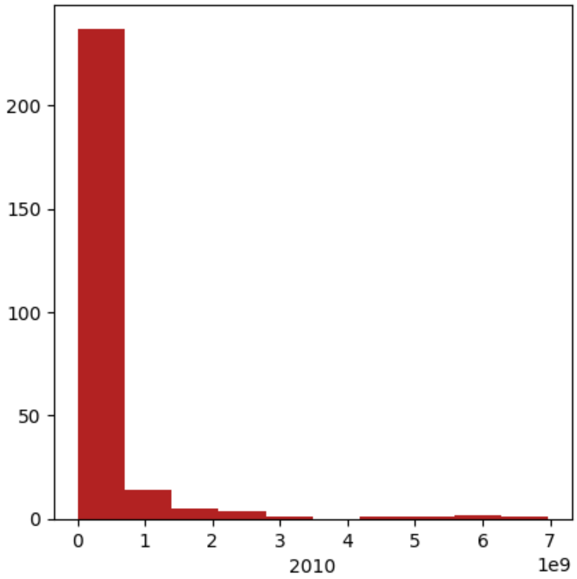
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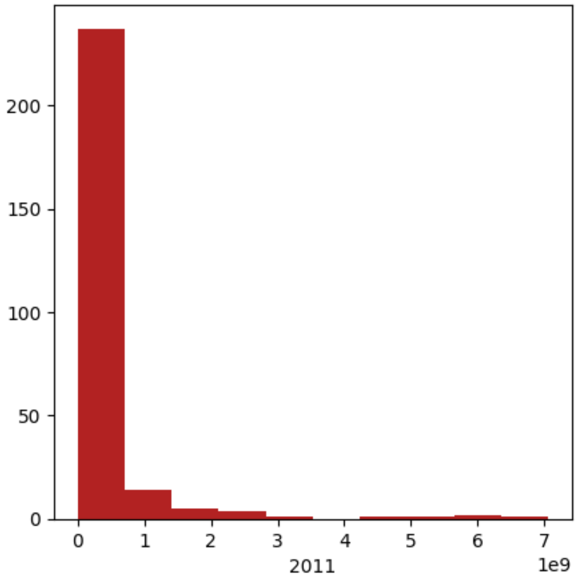
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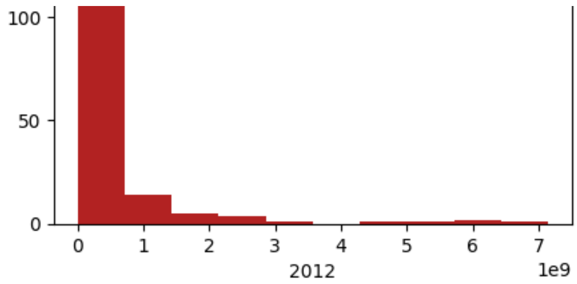
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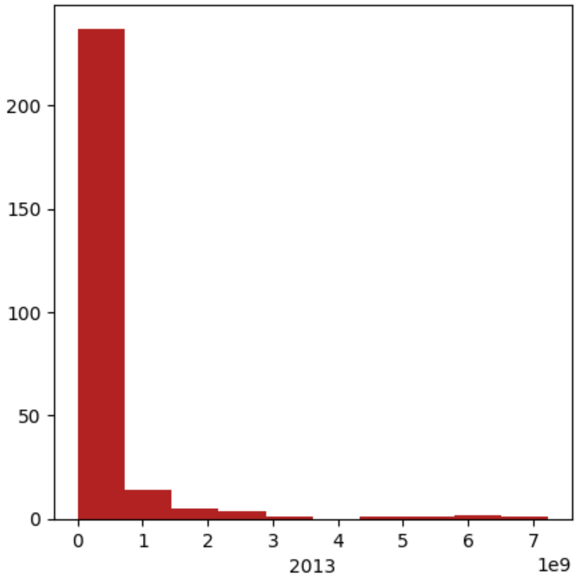
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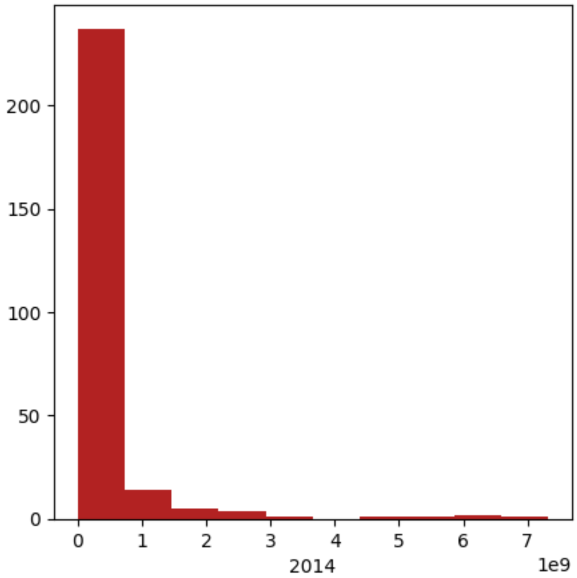
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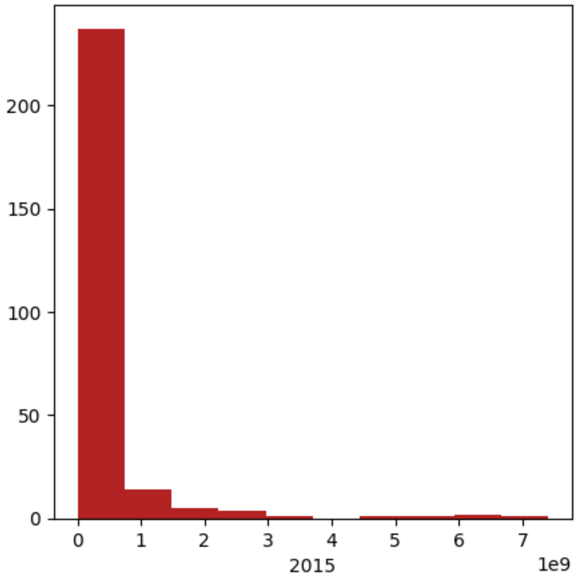
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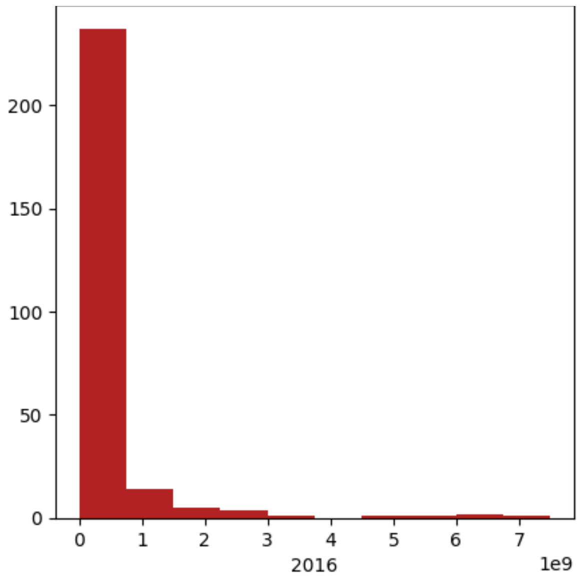
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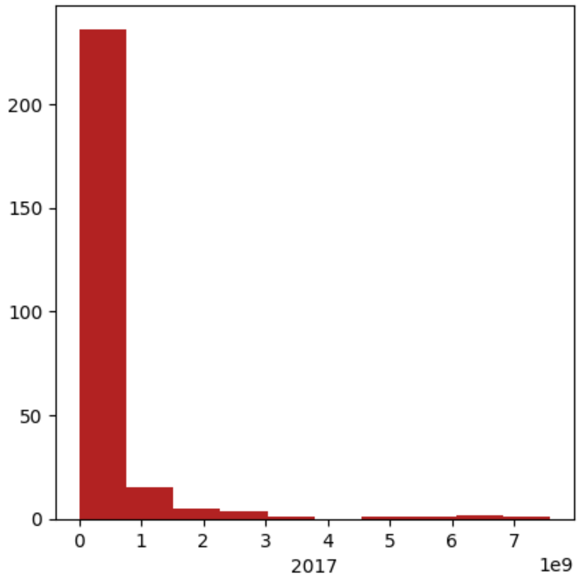
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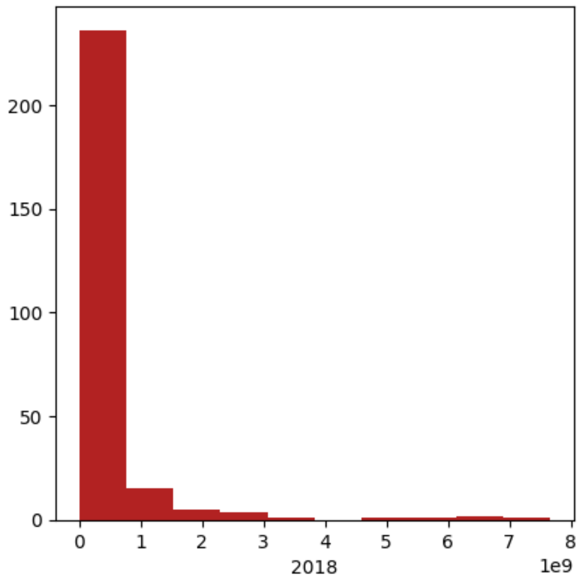
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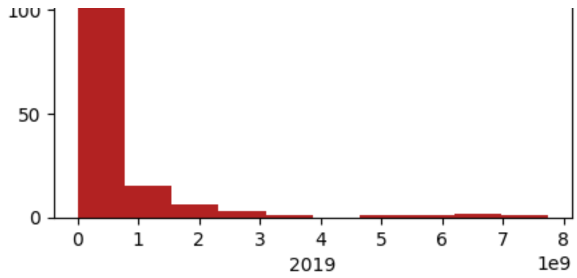
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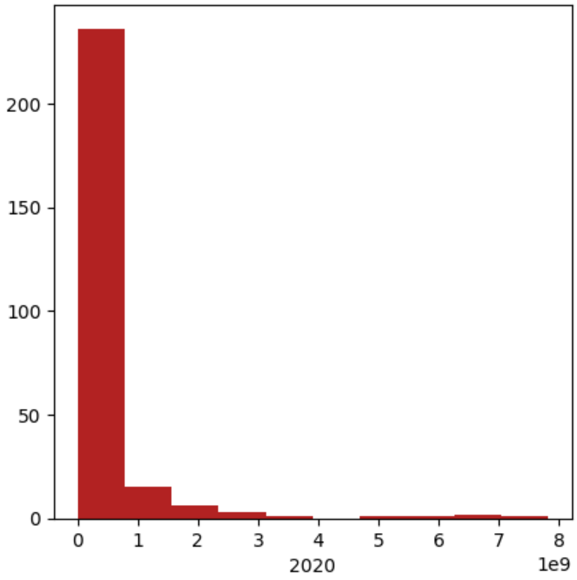
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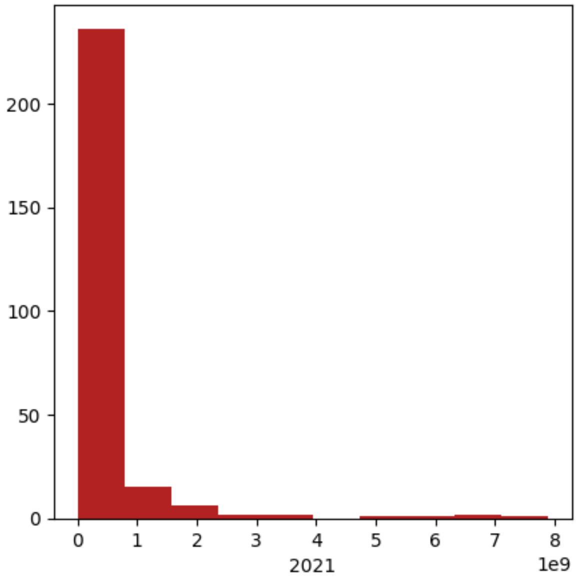
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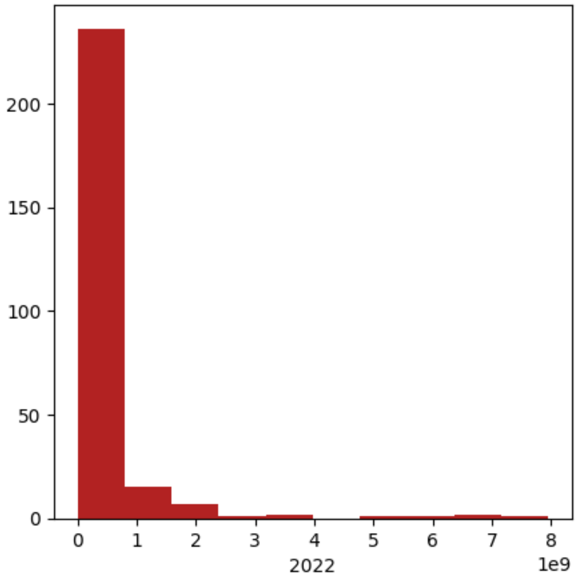
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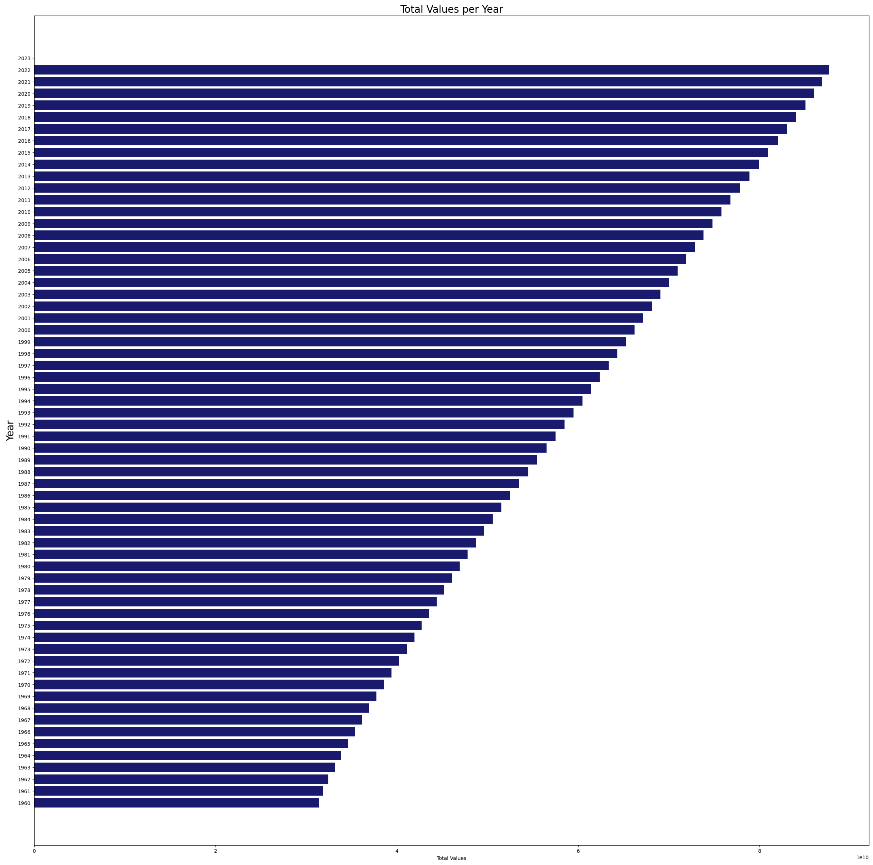
```
years = df.columns[1:]

total_values = df[years].sum()

plt.figure(figsize=(30, 30))
plt.barh(years, total_values,color='#191970')
plt.xlabel('Total Values')
plt.ylabel('Year', size=20)
plt.title('Total Values per Year', size=20)
plt.show()
```

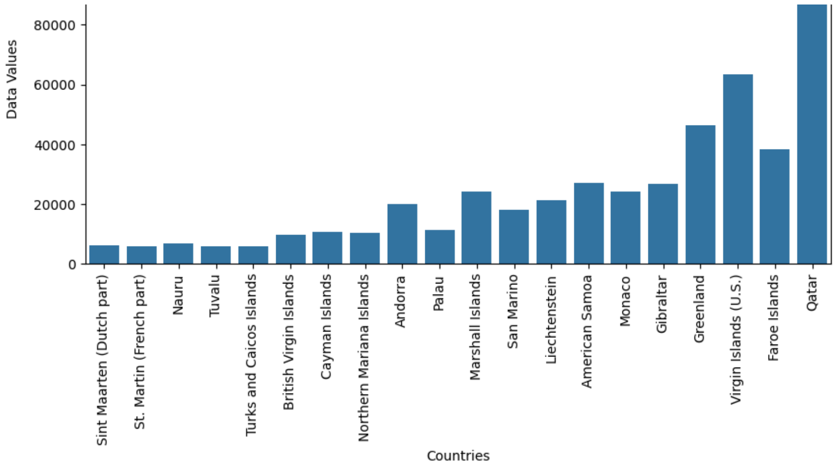


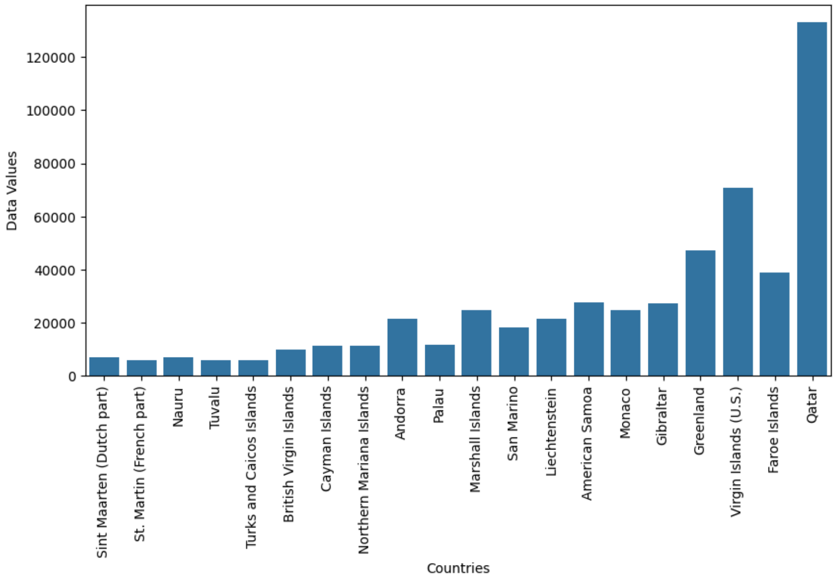
```
country_by_1960 = df.sort_values(by='1960').head(20)
country_by_1960
```

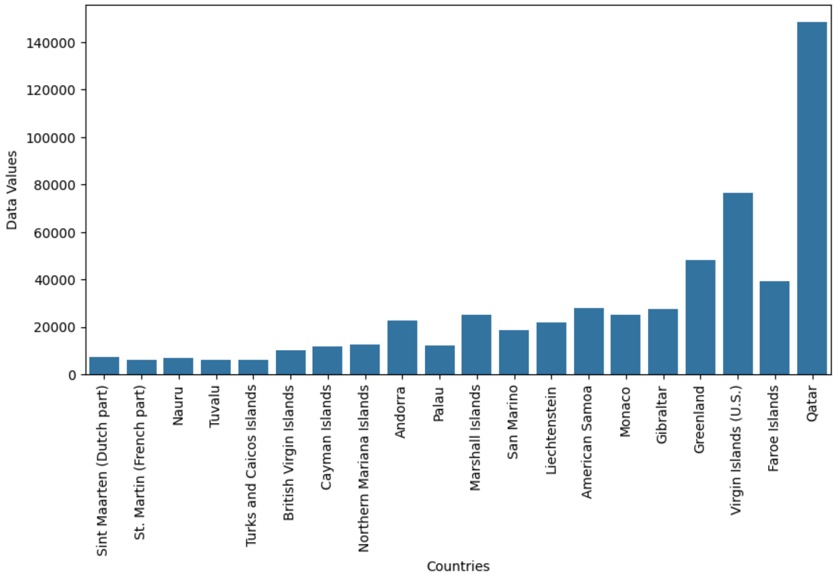
	Country Name	1960	1961	1962	1963	1964	1965	1966	1967
225	Sint Maarten (Dutch part)	2646.0	2888.0	3171.0	3481.0	3811.0	4161.0	4531.0	4930.0
147	St. Martin (French part)	4135.0	4258.0	4388.0	4524.0	4666.0	4832.0	5044.0	5294.0
179	Nauru	4582.0	4753.0	4950.0	5198.0	5484.0	5804.0	6021.0	6114.0
245	Tuvalu	5404.0	5436.0	5471.0	5503.0	5525.0	5548.0	5591.0	5657.0
228	Turks and Caicos Islands	5604.0	5625.0	5633.0	5634.0	5642.0	5650.0	5652.0	5662.0
255	British Virgin Islands	7850.0	7885.0	7902.0	7919.0	7949.0	8018.0	8139.0	8337.0
52	Cayman Islands	8473.0	8626.0	8799.0	8985.0	9172.0	9366.0	9566.0	9771.0
164	Northern Mariana Islands	8702.0	8965.0	9252.0	9561.0	9890.0	10229.0	10577.0	10720.0
6	Andorra	9443.0	10216.0	11014.0	11839.0	12690.0	13563.0	14546.0	15745.0
188	Palau	9446.0	9639.0	9851.0	10076.0	10318.0	10563.0	10813.0	10992.0
155	Marshall Islands	15374.0	15867.0	16387.0	16947.0	17537.0	18154.0	18794.0	19665.0
212	San Marino	15556.0	15895.0	16242.0	16583.0	16926.0	17273.0	17588.0	17907.0
137	Liechtenstein	16472.0	16834.0	17221.0	17625.0	18058.0	18500.0	18957.0	19467.0
11	American Samoa	20085.0	20626.0	21272.0	21949.0	22656.0	23391.0	24122.0	24848.0
149	Monaco	21797.0	21907.0	22106.0	22442.0	22766.0	23022.0	23198.0	23281.0
84	Gibraltar	21822.0	21907.0	22249.0	22796.0	23347.0	23910.0	24477.0	25047.0
91	Greenland	32500.0	33700.0	35000.0	36400.0	37600.0	39200.0	40500.0	41900.0
256	Virgin Islands (U.S.)	32500.0	34300.0	35000.0	39800.0	40800.0	43500.0	46200.0	49100.0
78	Faroe Islands	34154.0	34572.0	34963.0	35385.0	35841.0	36346.0	36825.0	37234.0
200	Qatar	36385.0	40111.0	45123.0	50950.0	57531.0	64843.0	73102.0	82517.0

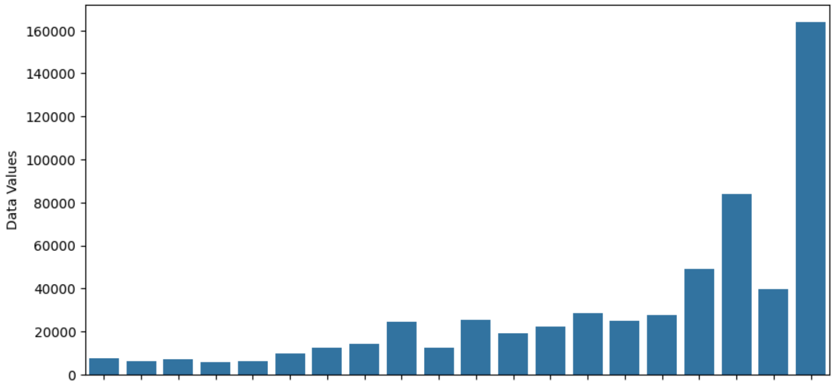
20 rows × 65 columns

```
country_by_1960_t = country_by_1960.set_index('Country Name').T
for country_name, data_values in country_by_1960_t.iterrows():
    fig = plt.figure(figsize=(10, 5))
    sns.barplot(x=data_values.index, y=data_values.values)
    plt.xlabel('Countries')
    plt.ylabel('Data Values')
    plt.title(f"{country_name} - Data Values from 1960 to 2022")
    plt.xticks(rotation=90)
    plt.show()
```

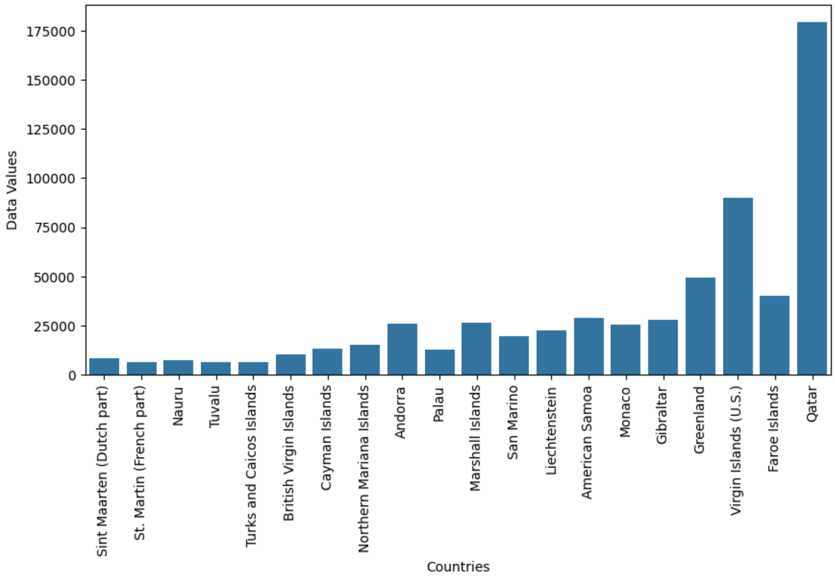



1971 - Data Values from 1960 to 2022

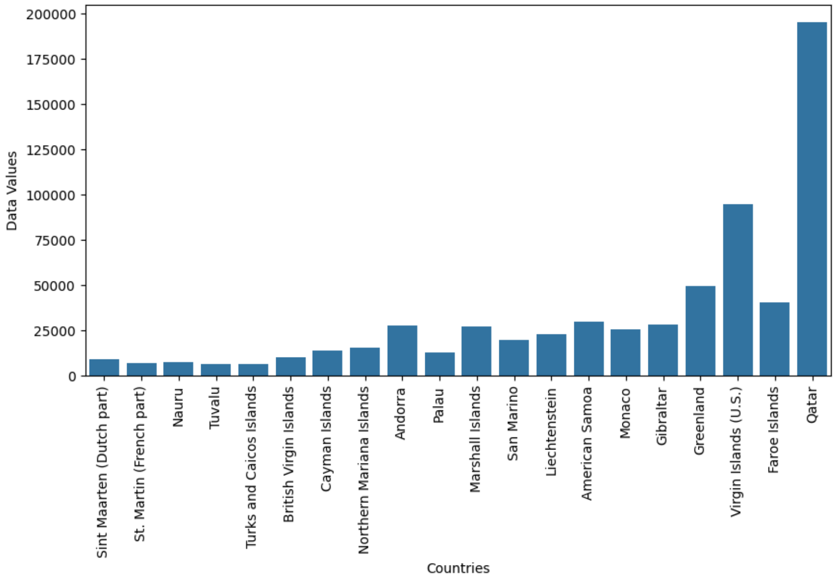

1972 - Data Values from 1960 to 2022


1973 - Data Values from 1960 to 2022

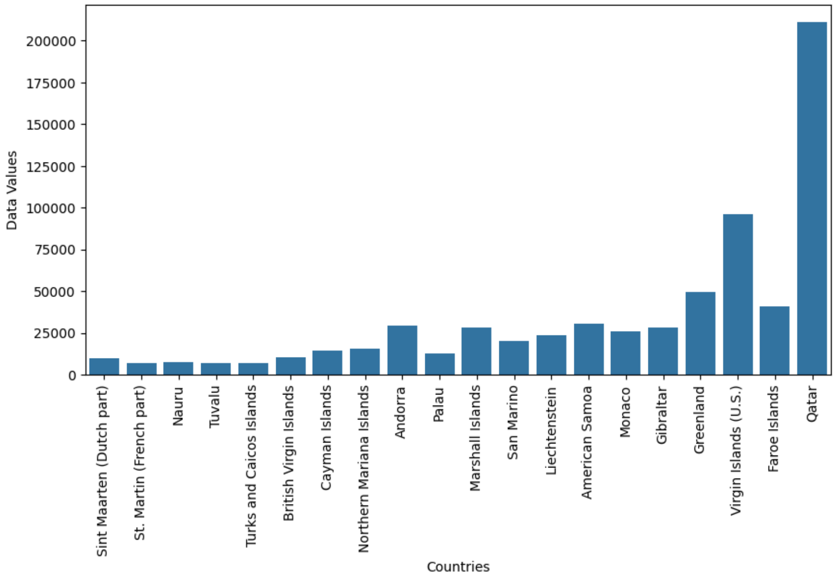
1974 - Data Values from 1960 to 2022



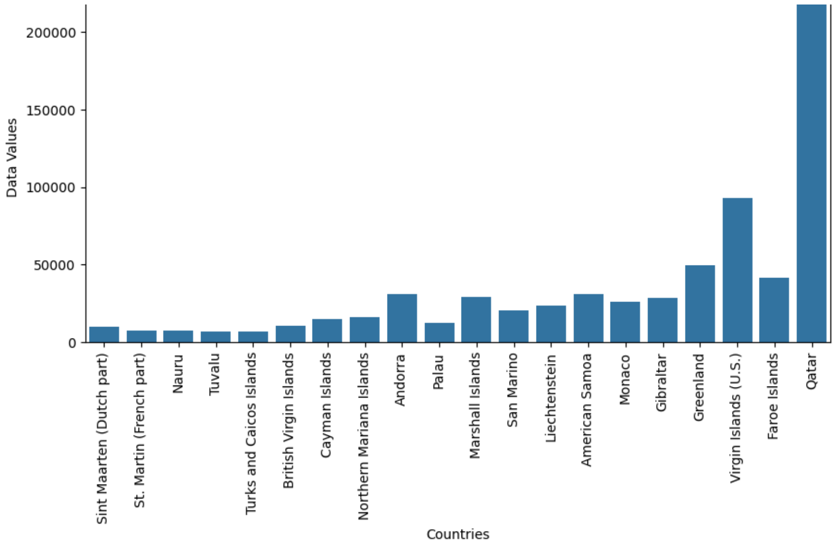
1975 - Data Values from 1960 to 2022



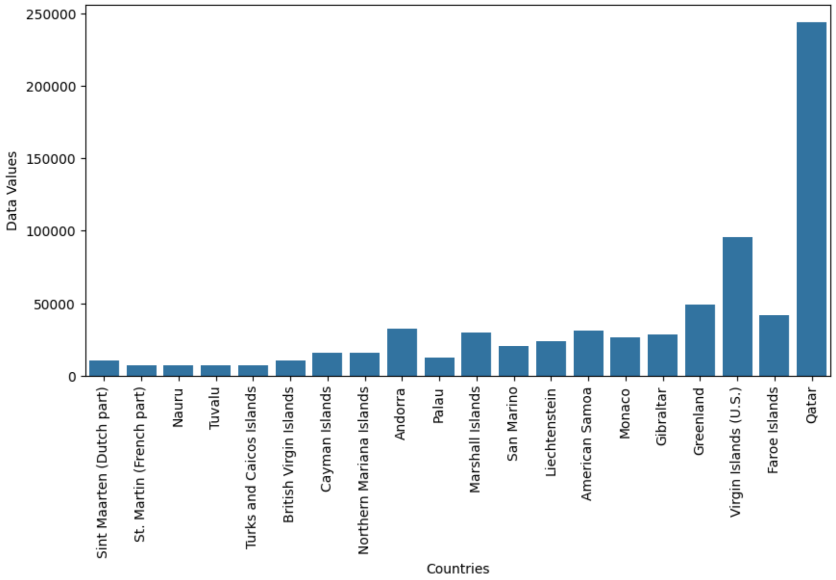
1976 - Data Values from 1960 to 2022



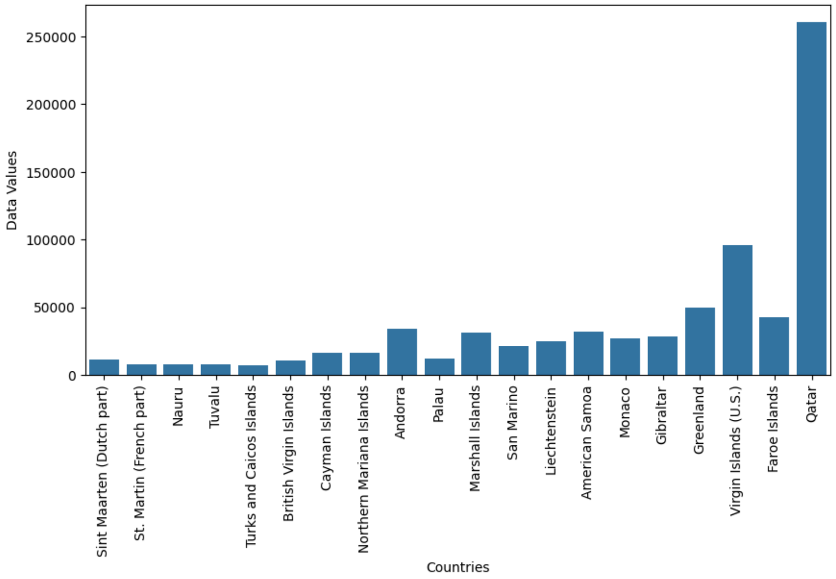
1977 - Data Values from 1960 to 2022



1978 - Data Values from 1960 to 2022

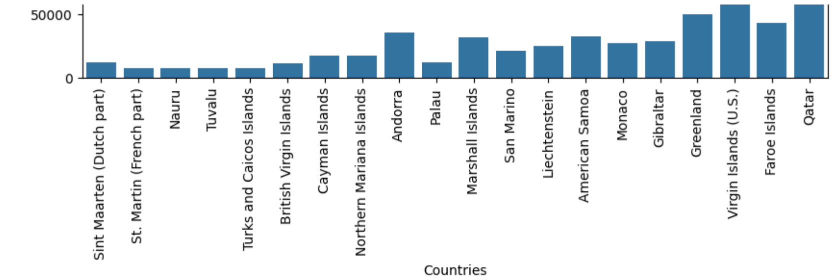


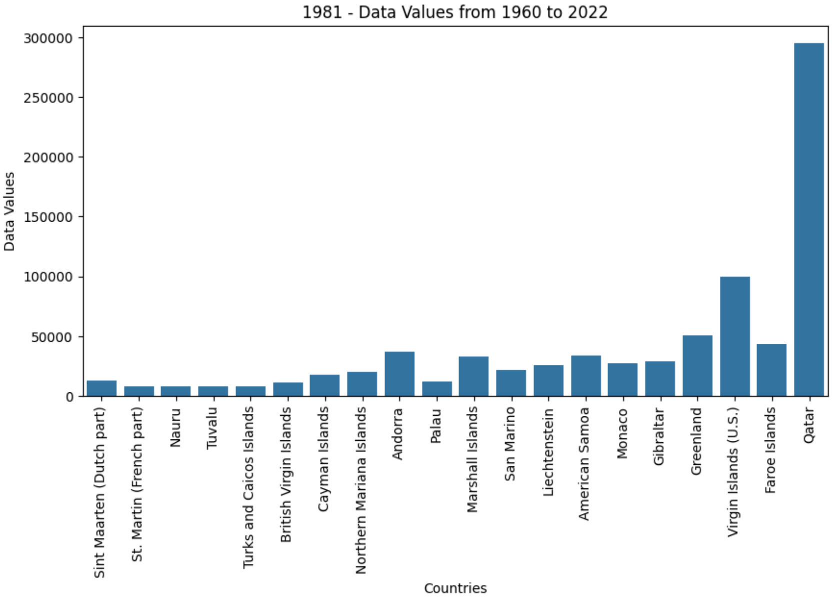
1979 - Data Values from 1960 to 2022

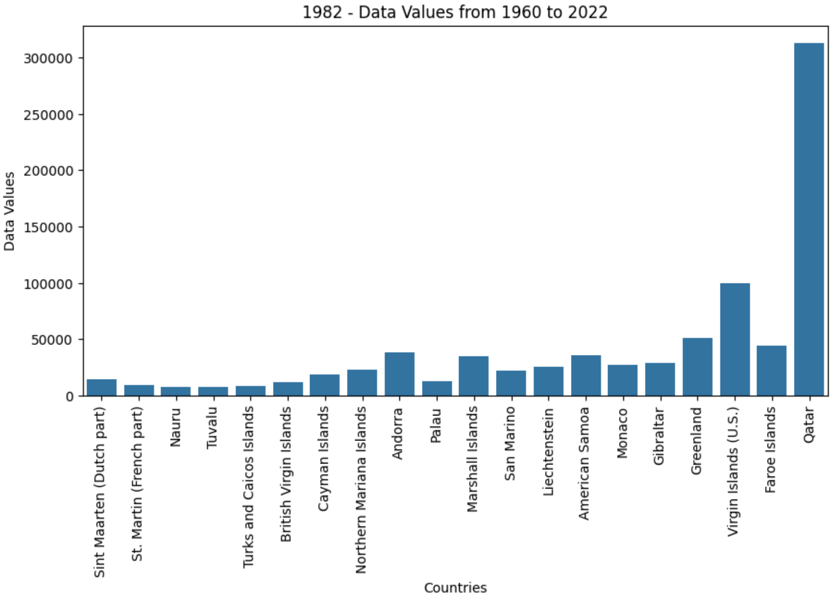


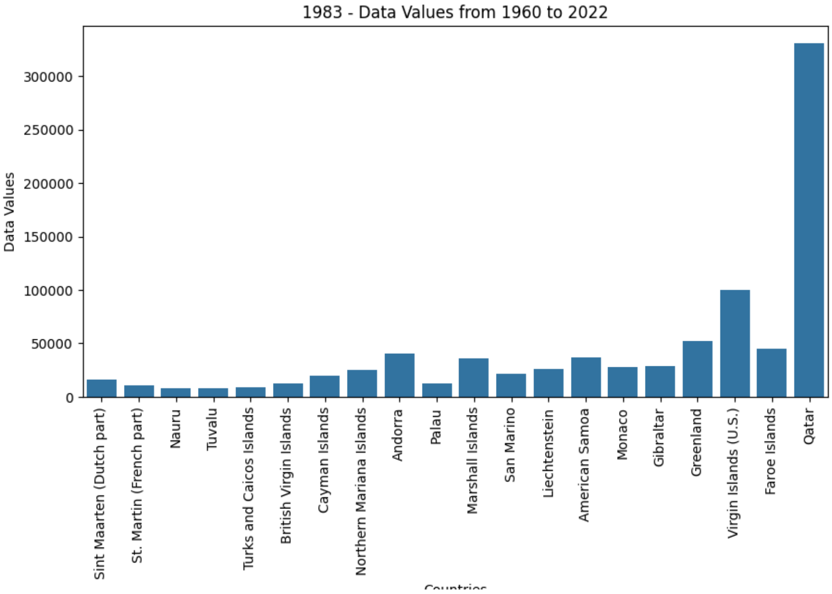
1980 - Data Values from 1960 to 2022

Data Values
100000
150000
200000
250000


50000
0
Sint Maarten (Dutch part)
St. Martin (French part)
Nauru
Tuvalu
Turks and Caicos Islands
British Virgin Islands
Cayman Islands
Northern Mariana Islands
Andorra
Palau
Marshall Islands
San Marino
Liechtenstein
American Samoa
Monaco
Gibraltar
Greenland
Virgin Islands (U.S.)
Faroe Islands
Qatar
Countries

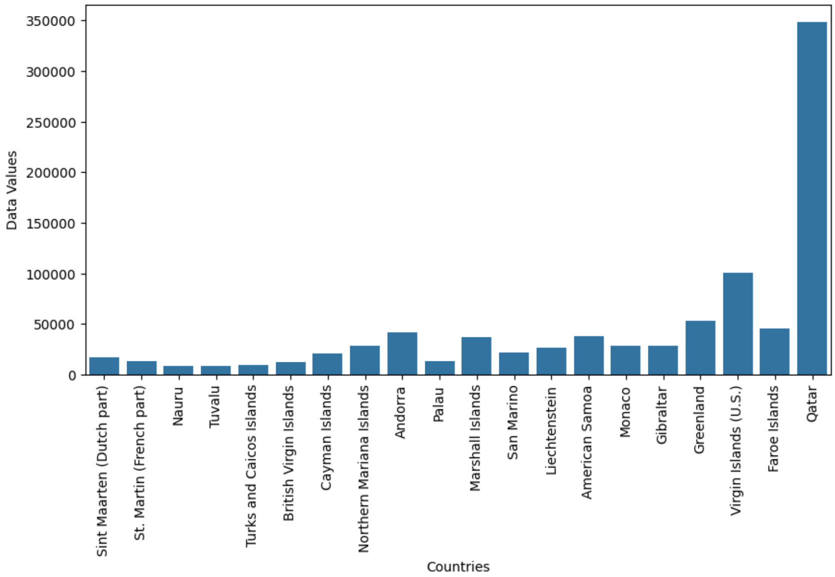

1981 - Data Values from 1960 to 2022
Data Values
300000
250000
200000
150000
100000
50000
0
Sint Maarten (Dutch part)
St. Martin (French part)
Nauru
Tuvalu
Turks and Caicos Islands
British Virgin Islands
Cayman Islands
Northern Mariana Islands
Andorra
Palau
Marshall Islands
San Marino
Liechtenstein
American Samoa
Monaco
Gibraltar
Greenland
Virgin Islands (U.S.)
Faroe Islands
Qatar
Countries


1982 - Data Values from 1960 to 2022
Data Values
300000
250000
200000
150000
100000
50000
0
Sint Maarten (Dutch part)
St. Martin (French part)
Nauru
Tuvalu
Turks and Caicos Islands
British Virgin Islands
Cayman Islands
Northern Mariana Islands
Andorra
Palau
Marshall Islands
San Marino
Liechtenstein
American Samoa
Monaco
Gibraltar
Greenland
Virgin Islands (U.S.)
Faroe Islands
Qatar
Countries

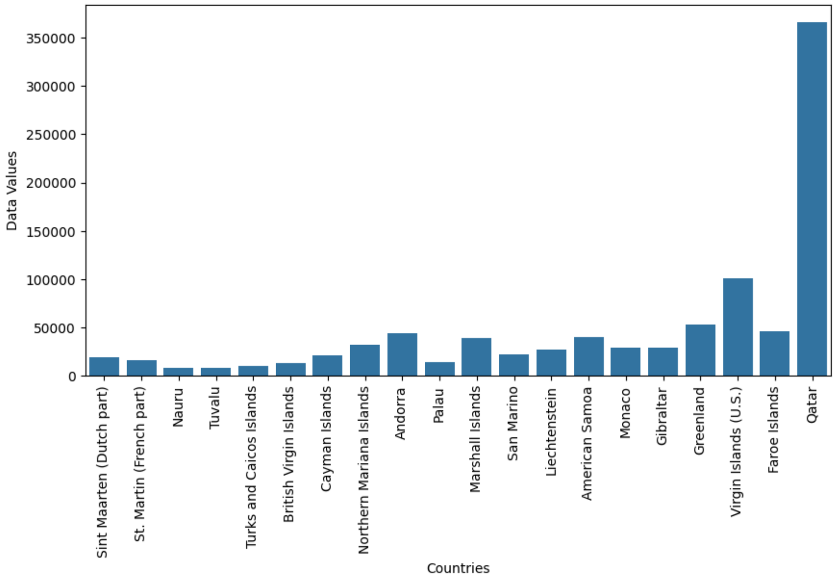

1983 - Data Values from 1960 to 2022
Data Values
300000
250000
200000
150000
100000
50000
0
Sint Maarten (Dutch part)
St. Martin (French part)
Nauru
Tuvalu
Turks and Caicos Islands
British Virgin Islands
Cayman Islands
Northern Mariana Islands
Andorra
Palau
Marshall Islands
San Marino
Liechtenstein
American Samoa
Monaco
Gibraltar
Greenland
Virgin Islands (U.S.)
Faroe Islands
Qatar

Countries

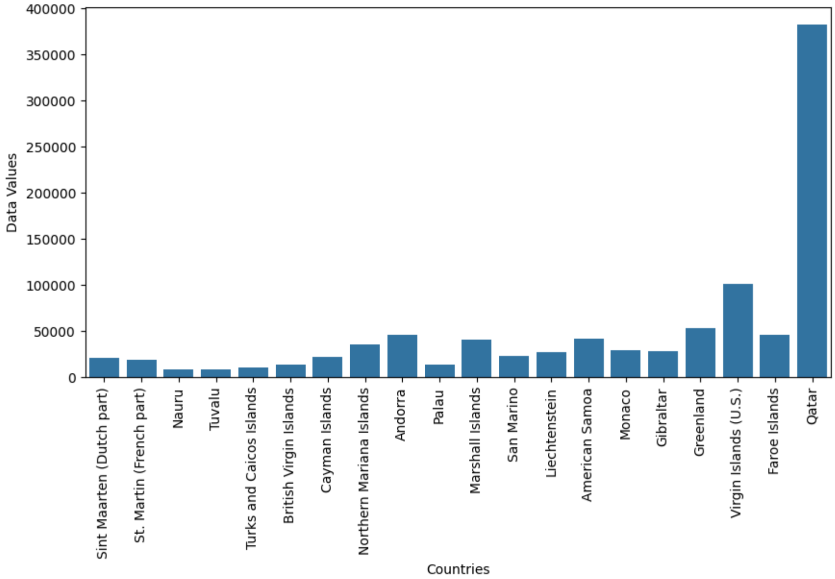
1984 - Data Values from 1960 to 2022



1985 - Data Values from 1960 to 2022

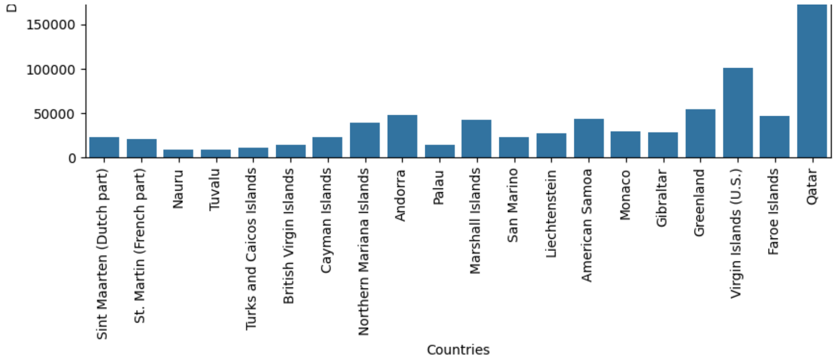


1986 - Data Values from 1960 to 2022

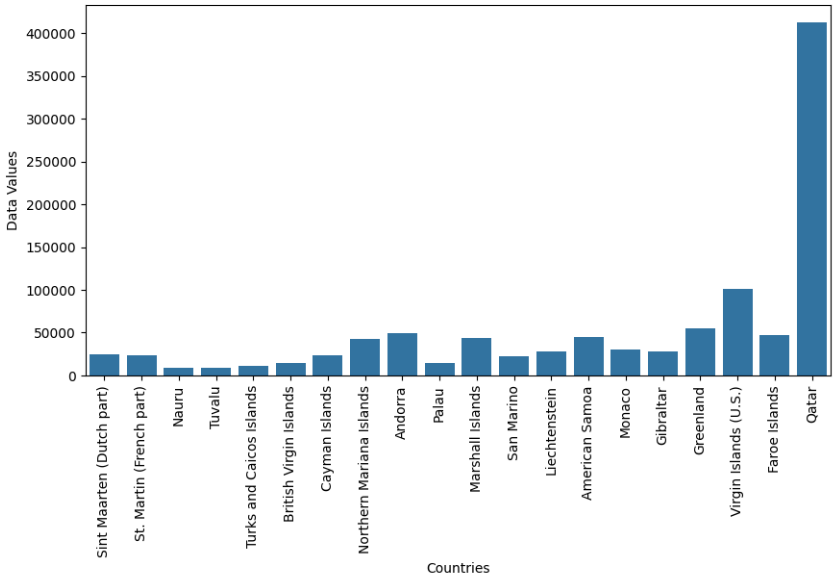


1987 - Data Values from 1960 to 2022

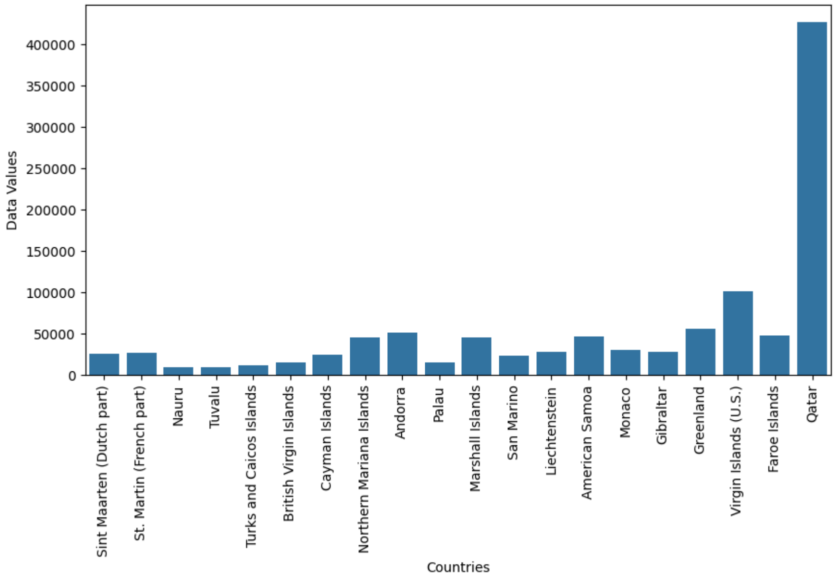
ata Values
400000
350000
300000
250000
200000



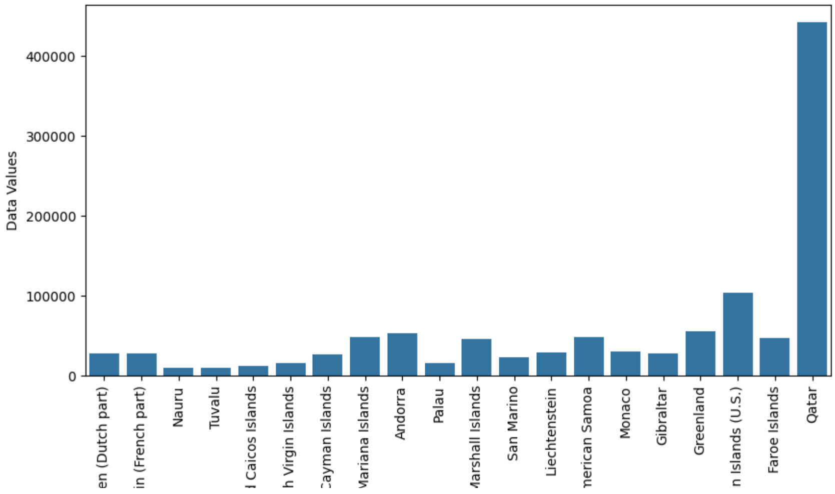
1988 - Data Values from 1960 to 2022

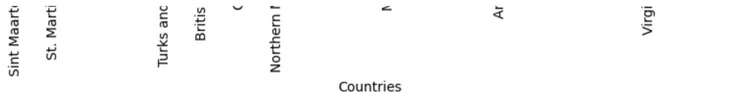


1989 - Data Values from 1960 to 2022



1990 - Data Values from 1960 to 2022




Sint Maarte
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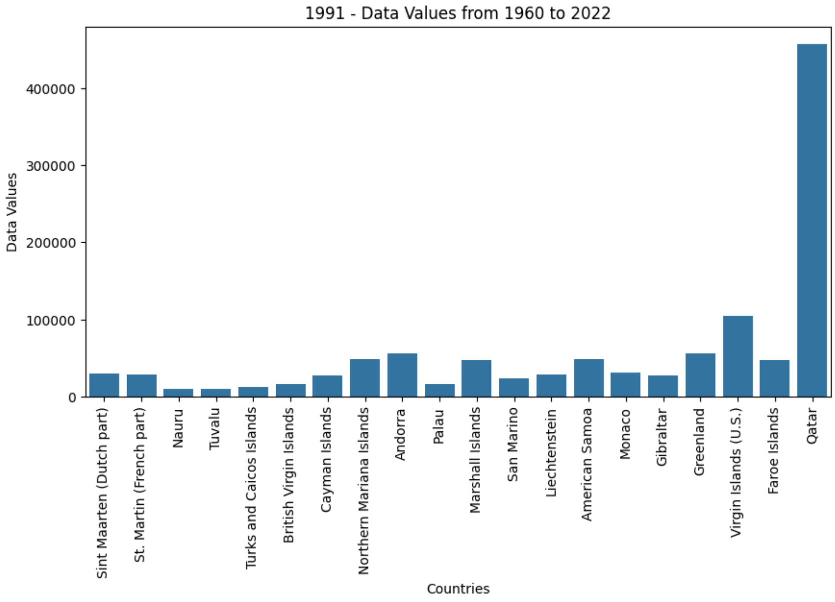
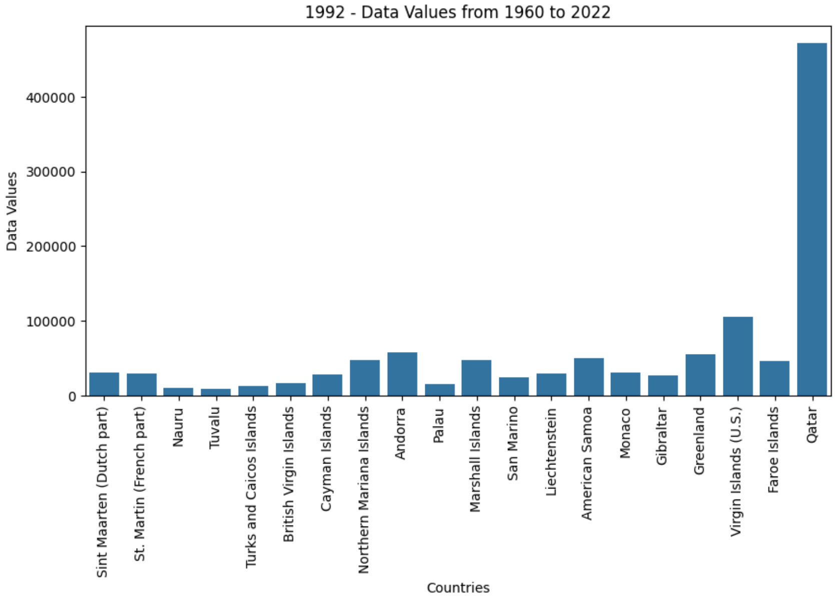
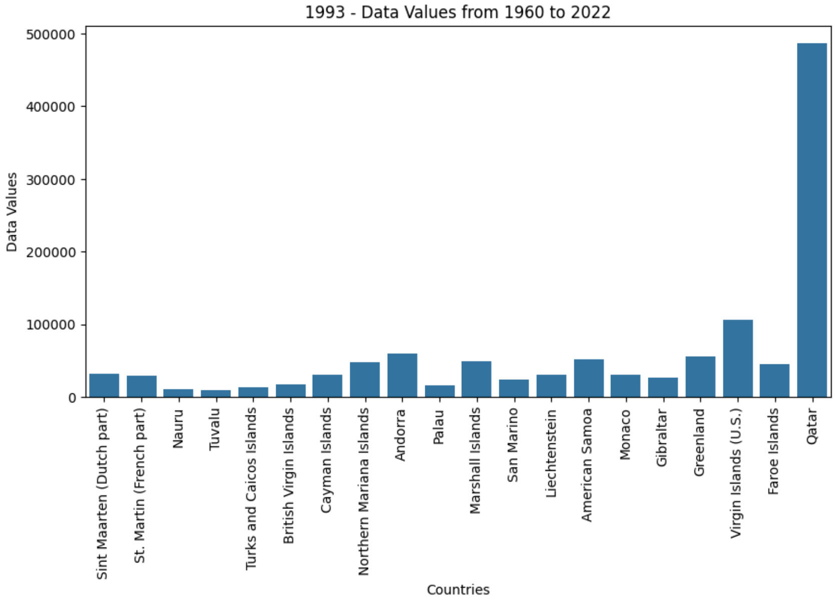
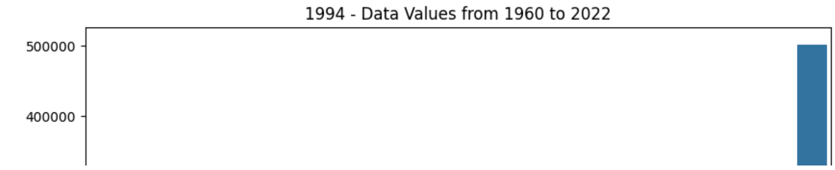
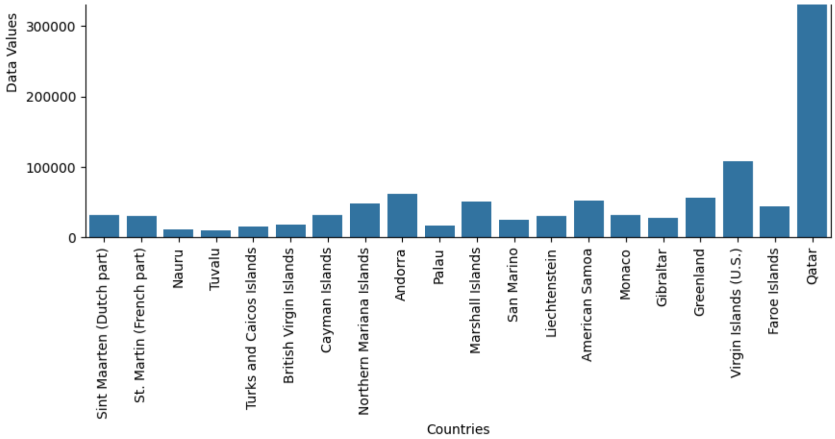

1991 - Data Values from 1960 to 2022
Data Values
0
100000
200000
300000
400000
Sint Maarten (Dutch part)
St. Martin (French part)
Nauru
Tuvalu
Turks and Caicos Islands
British Virgin Islands
Cayman Islands
Northern Mariana Islands
Andorra
Palau
Marshall Islands
San Marino
Liechtenstein
American Samoa
Monaco
Gibraltar
Greenland
Virgin Islands (U.S.)
Faroe Islands
Qatar
Countries


1992 - Data Values from 1960 to 2022
Data Values
0
100000
200000
300000
400000
Sint Maarten (Dutch part)
St. Martin (French part)
Nauru
Tuvalu
Turks and Caicos Islands
British Virgin Islands
Cayman Islands
Northern Mariana Islands
Andorra
Palau
Marshall Islands
San Marino
Liechtenstein
American Samoa
Monaco
Gibraltar
Greenland
Virgin Islands (U.S.)
Faroe Islands
Qatar
Countries


1993 - Data Values from 1960 to 2022
Data Values
0
100000
200000
300000
400000
500000
Sint Maarten (Dutch part)
St. Martin (French part)
Nauru
Tuvalu
Turks and Caicos Islands
British Virgin Islands
Cayman Islands
Northern Mariana Islands
Andorra
Palau
Marshall Islands
San Marino
Liechtenstein
American Samoa
Monaco
Gibraltar
Greenland
Virgin Islands (U.S.)
Faroe Islands
Qatar
Countries


1994 - Data Values from 1960 to 2022
400000
500000


Data Values
300000
200000
100000
0
Sint Maarten (Dutch part)
St. Martin (French part)
Nauru
Tuvalu
Turks and Caicos Islands
British Virgin Islands
Cayman Islands
Northern Mariana Islands
Andorra
Palau
Marshall Islands
San Marino
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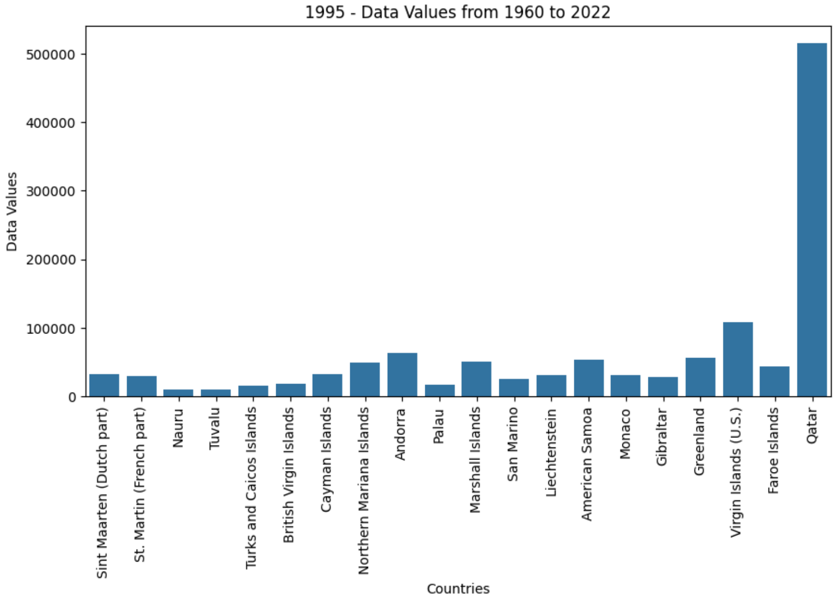
Virgin Islands (U.S.)
Faroe Islands
Qatar
Countries


1995 - Data Values from 1960 to 2022
Data Values
500000
400000
300000
200000
100000
0
Sint Maarten (Dutch part)
St. Martin (French part)
Nauru
Tuvalu
Turks and Caicos Islands
British Virgin Islands
Cayman Islands
Northern Mariana Islands
Andorra
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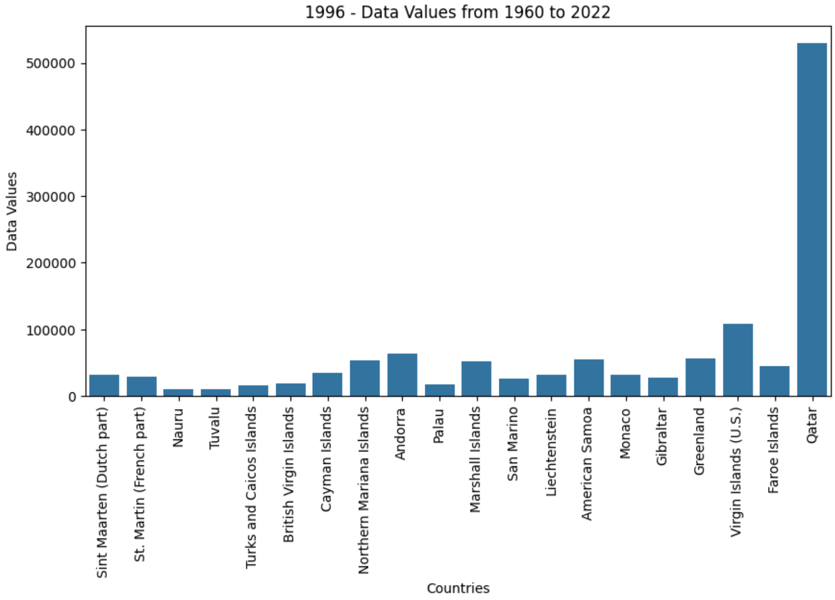
Virgin Islands (U.S.)
Faroe Islands
Qatar
Countries


1996 - Data Values from 1960 to 2022
Data Values
500000
400000
300000
200000
100000
0
Sint Maarten (Dutch part)
St. Martin (French part)
Nauru
Tuvalu
Turks and Caicos Islands
British Virgin Islands
Cayman Islands
Northern Mariana Islands
Andorra
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San Marino
Liechtenstein
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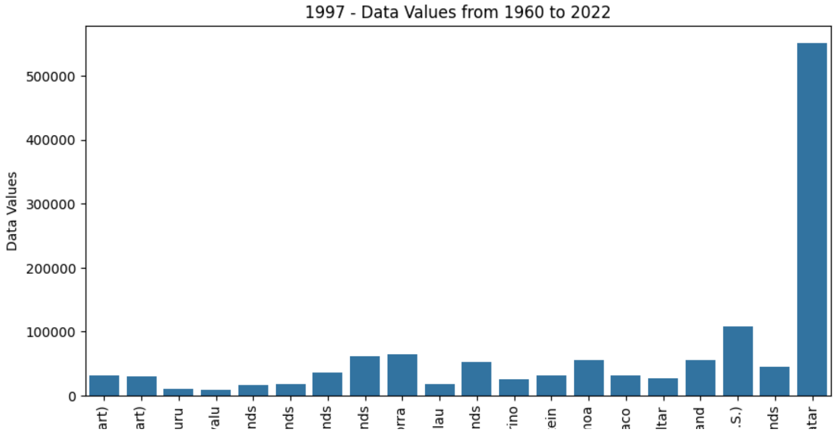
Faroe Islands
Qatar
Countries


1997 - Data Values from 1960 to 2022
Data Values
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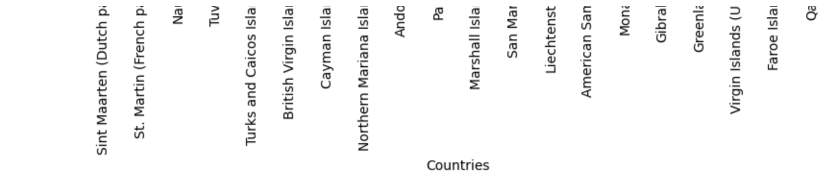
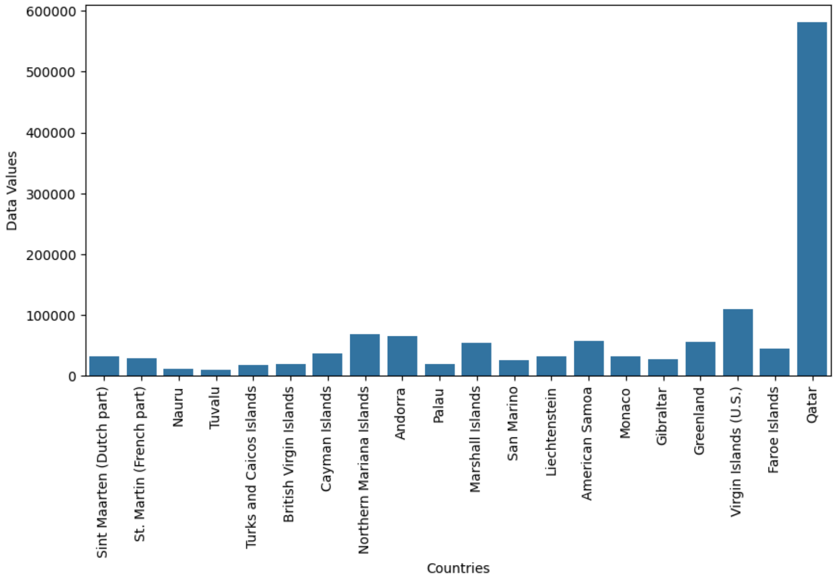
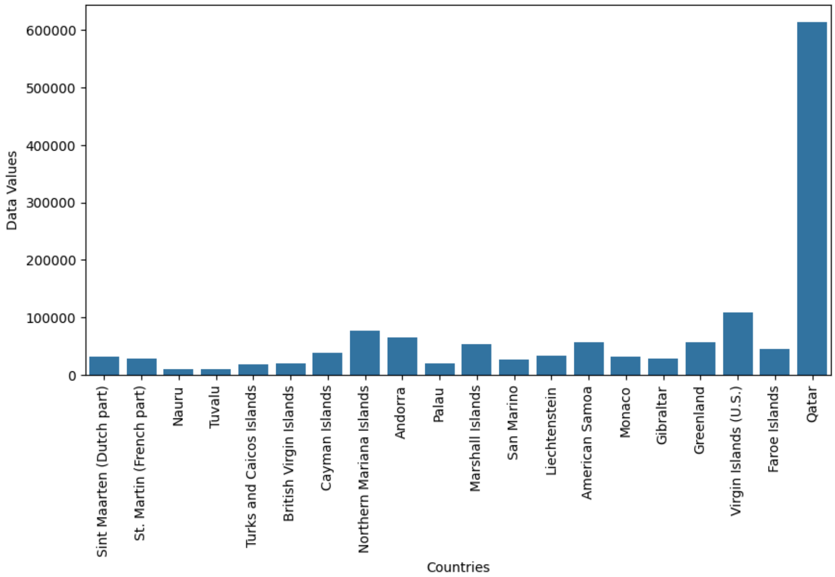


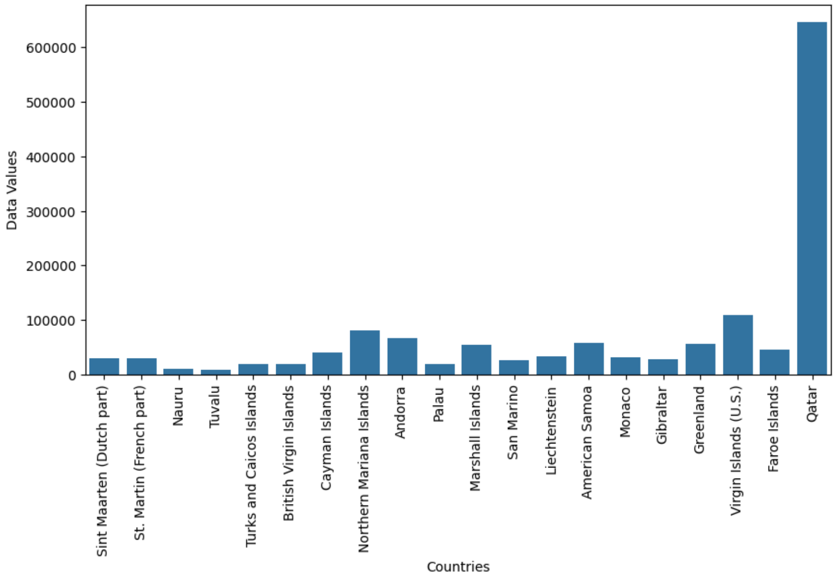
1998 - Data Values from 1960 to 2022



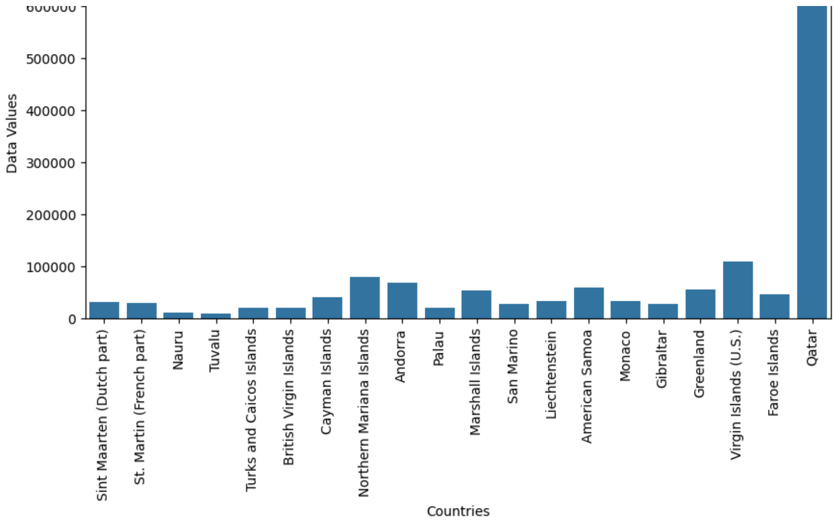
1999 - Data Values from 1960 to 2022



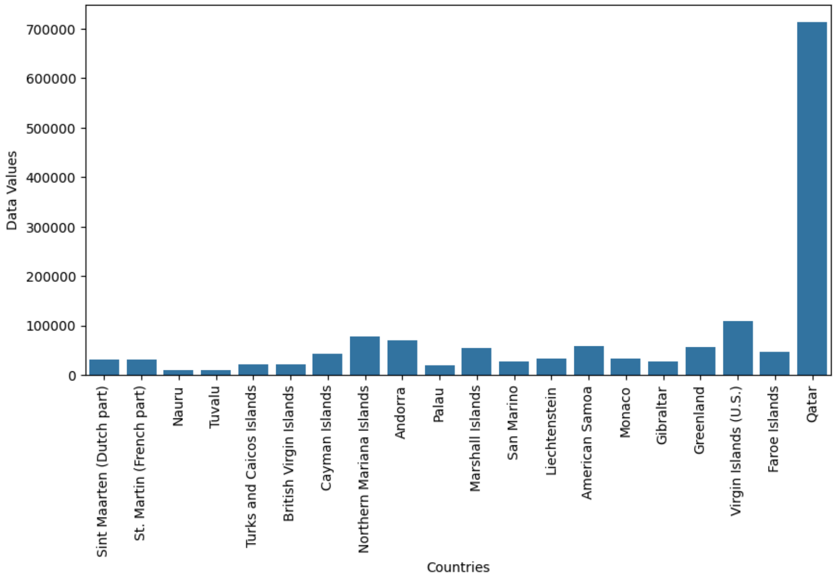
2000 - Data Values from 1960 to 2022



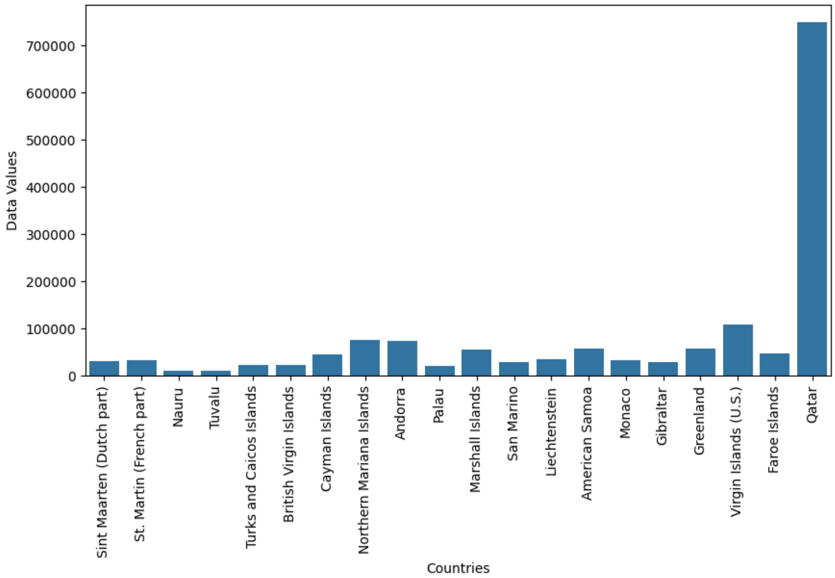
2001 - Data Values from 1960 to 2022



2002 - Data Values from 1960 to 2022

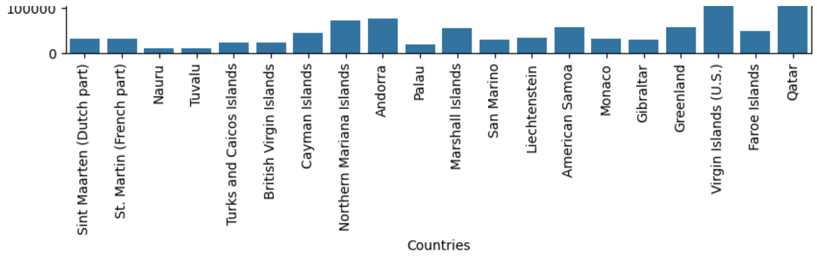


2003 - Data Values from 1960 to 2022

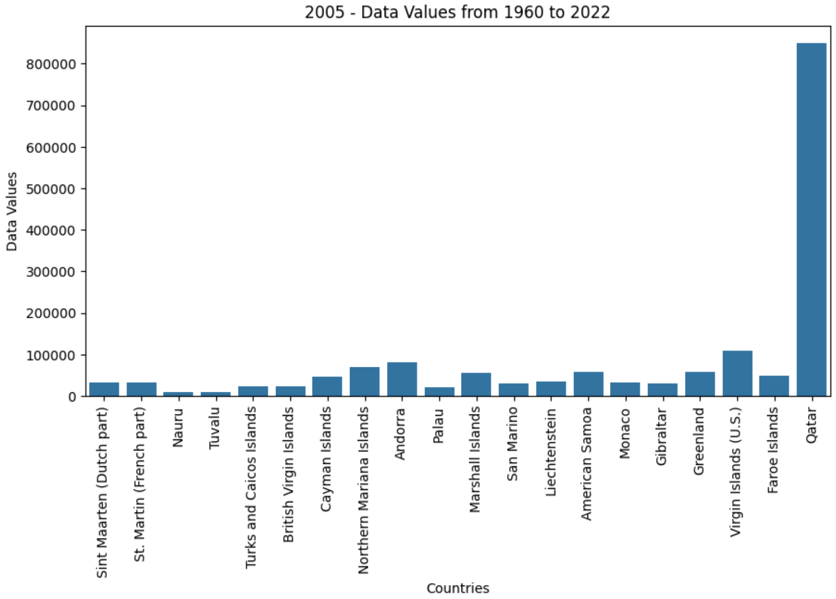


2004 - Data Values from 1960 to 2022

800000
700000
600000
500000
400000
300000
200000
Data Values



100000
0
Sint Maarten (Dutch part)
St. Martin (French part)
Nauru
Tuvalu
Turks and Caicos Islands
British Virgin Islands
Cayman Islands
Northern Mariana Islands
Andorra
Palau
Marshall Islands
San Marino
Liechtenstein
American Samoa
Monaco
Gibraltar
Greenland
Virgin Islands (U.S.)
Faroe Islands
Qatar
Countries



2005 - Data Values from 1960 to 2022
Data Values
800000
700000
600000
500000
400000
300000
200000
100000
0
Sint Maarten (Dutch part)
St. Martin (French part)
Nauru
Tuvalu
Turks and Caicos Islands
British Virgin Islands
Cayman Islands
Northern Mariana Islands
Andorra
Palau
Marshall Islands
San Marino
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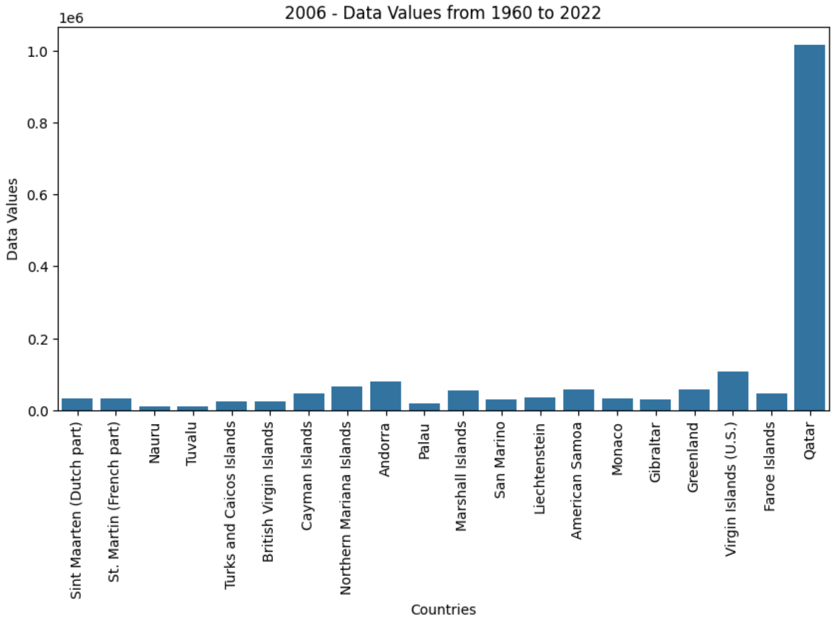
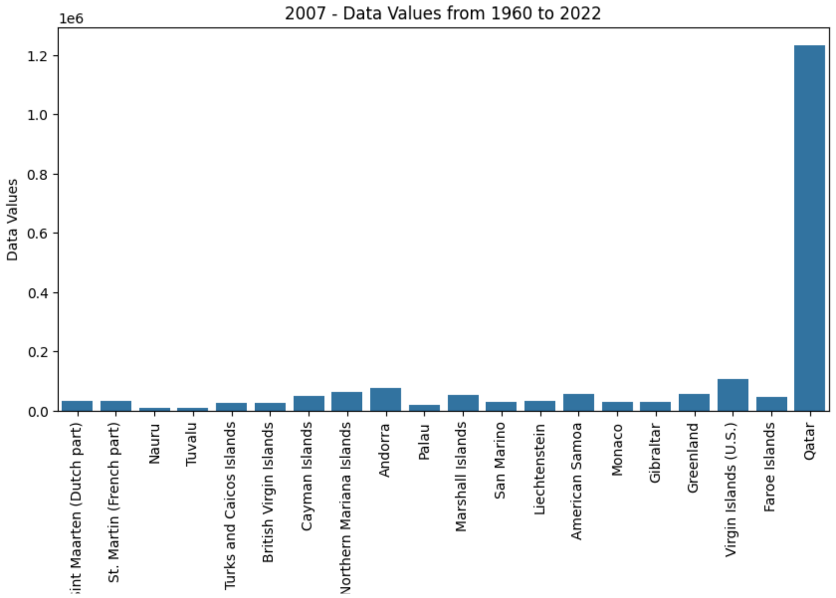
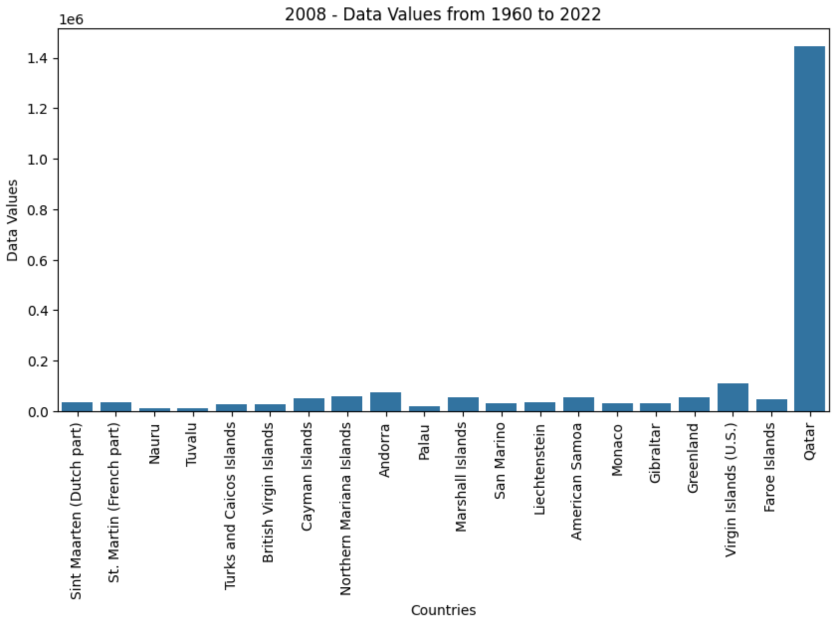
Gibraltar
Greenland
Virgin Islands (U.S.)
Faroe Islands
Qatar
Countries

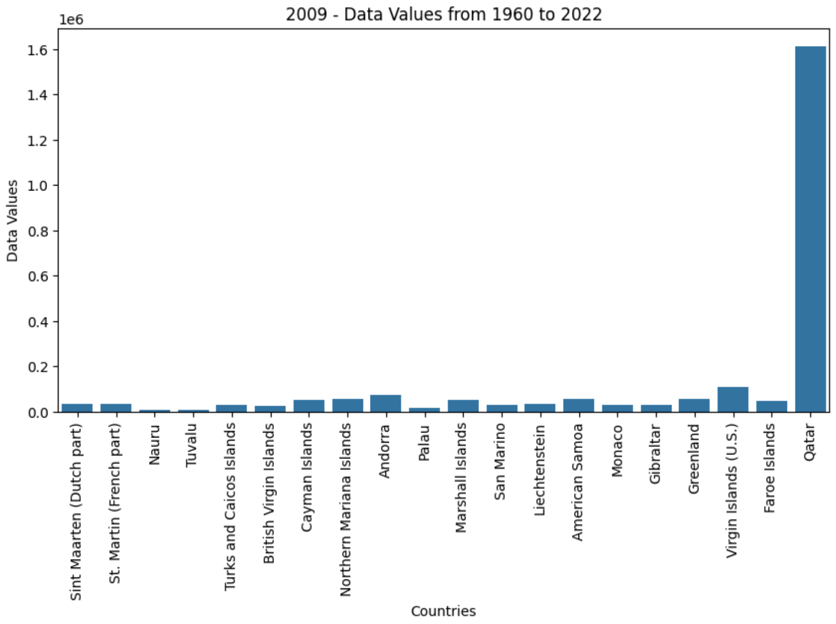


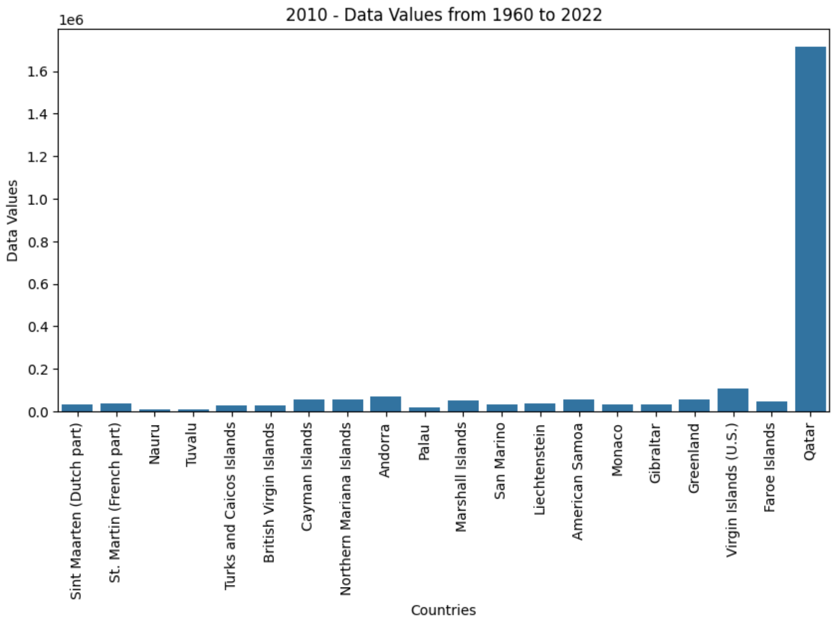
2006 - Data Values from 1960 to 2022
1e6
Data Values
1.0
0.8
0.6
0.4
0.2
0.0
Sint Maarten (Dutch part)
St. Martin (French part)
Nauru
Tuvalu
Turks and Caicos Islands
British Virgin Islands
Cayman Islands
Northern Mariana Islands
Andorra
Palau
Marshall Islands
San Marino
Liechtenstein
American Samoa
Monaco
Gibraltar
Greenland
Virgin Islands (U.S.)
Faroe Islands
Qatar
Countries

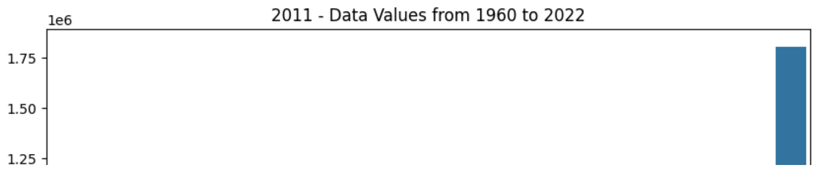


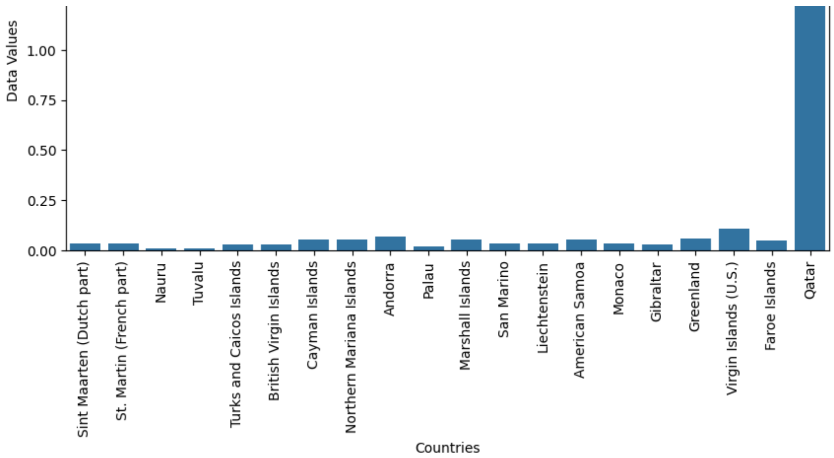
2007 - Data Values from 1960 to 2022
1e6
Data Values
1.2
1.0
0.8
0.6
0.4
0.2
0.0
int Maarten (Dutch part)
St. Martin (French part)
Nauru
Tuvalu
Turks and Caicos Islands
British Virgin Islands
Cayman Islands
Northern Mariana Islands
Andorra
Palau
Marshall Islands
San Marino
Liechtenstein
American Samoa
Monaco
Gibraltar
Greenland
Virgin Islands (U.S.)
Faroe Islands
Qatar

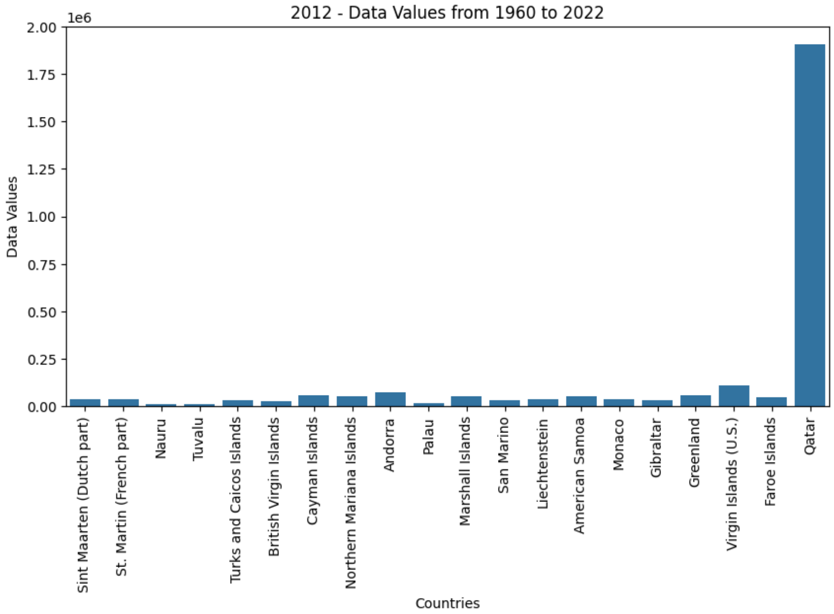

2008 - Data Values from 1960 to 2022

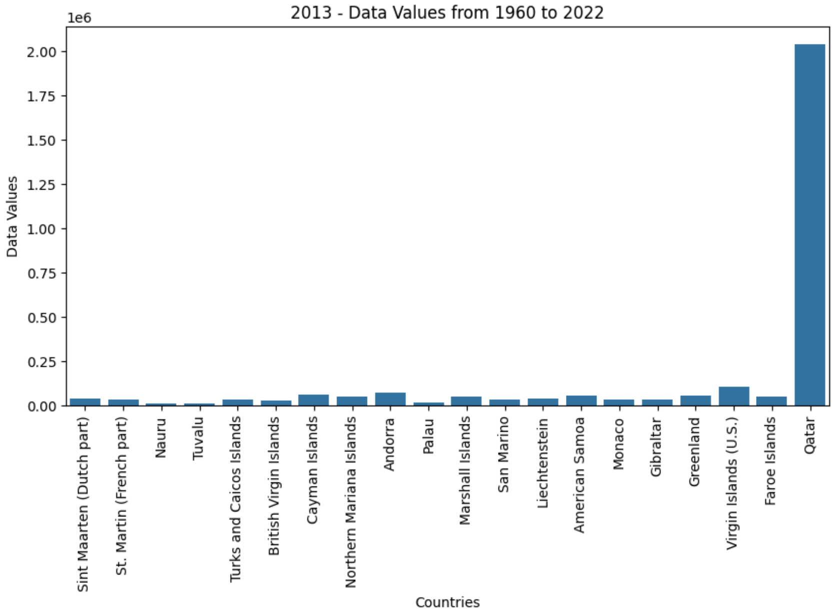

2009 - Data Values from 1960 to 2022

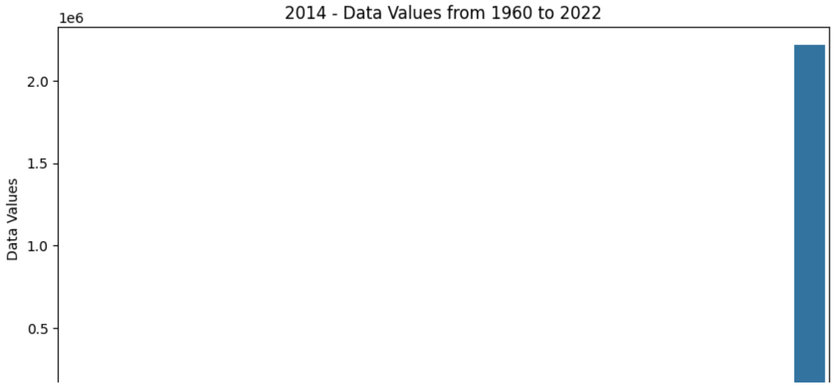

2010 - Data Values from 1960 to 2022

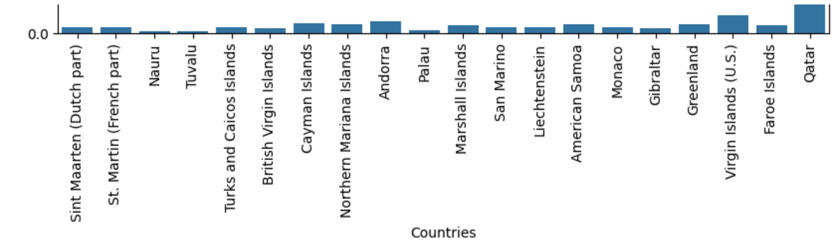

2011 - Data Values from 1960 to 2022

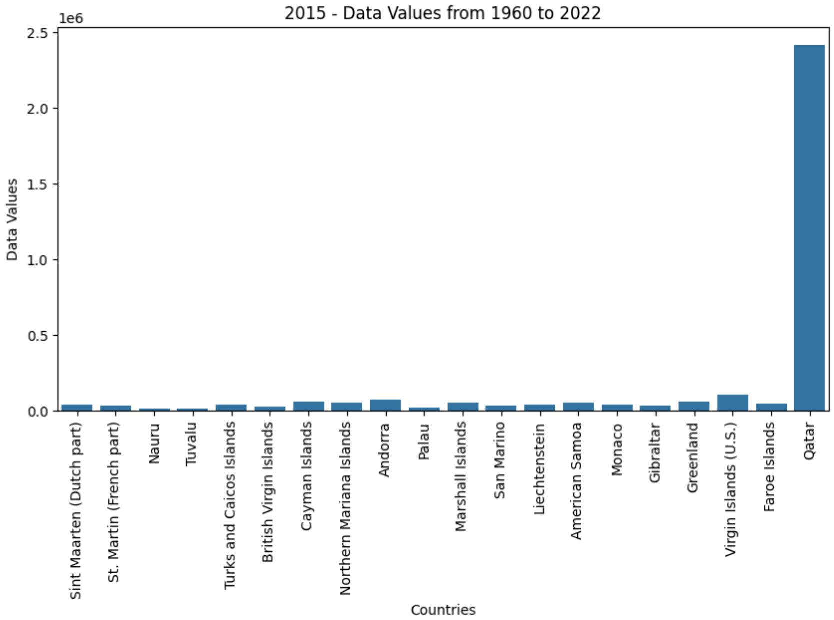

Data Values
1.00
0.75
0.50
0.25
0.00
Sint Maarten (Dutch part)
St. Martin (French part)
Nauru
Tuvalu
Turks and Caicos Islands
British Virgin Islands
Cayman Islands
Northern Mariana Islands
Andorra
Palau
Marshall Islands
San Marino
Liechtenstein
American Samoa
Monaco
Gibraltar
Greenland
Virgin Islands (U.S.)
Faroe Islands
Qatar
Countries

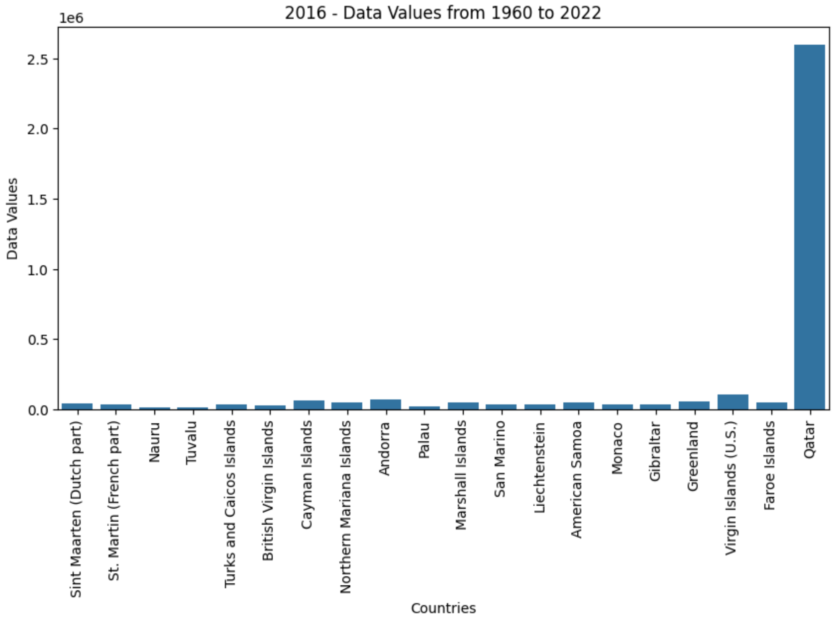

2012 - Data Values from 1960 to 2022
1e6
Data Values
2.00
1.75
1.50
1.25
1.00
0.75
0.50
0.25
0.00
Sint Maarten (Dutch part)
St. Martin (French part)
Nauru
Tuvalu
Turks and Caicos Islands
British Virgin Islands
Cayman Islands
Northern Mariana Islands
Andorra
Palau
Marshall Islands
San Marino
Liechtenstein
American Samoa
Monaco
Gibraltar
Greenland
Virgin Islands (U.S.)
Faroe Islands
Qatar
Countries

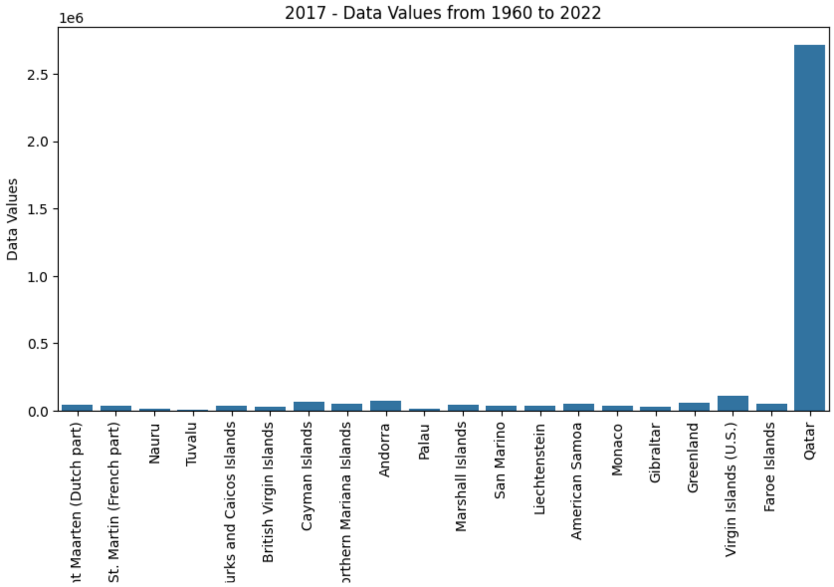

2013 - Data Values from 1960 to 2022
1e6
Data Values
2.00
1.75
1.50
1.25
1.00
0.75
0.50
0.25
0.00
Sint Maarten (Dutch part)
St. Martin (French part)
Nauru
Tuvalu
Turks and Caicos Islands
British Virgin Islands
Cayman Islands
Northern Mariana Islands
Andorra
Palau
Marshall Islands
San Marino
Liechtenstein
American Samoa
Monaco
Gibraltar
Greenland
Virgin Islands (U.S.)
Faroe Islands
Qatar
Countries

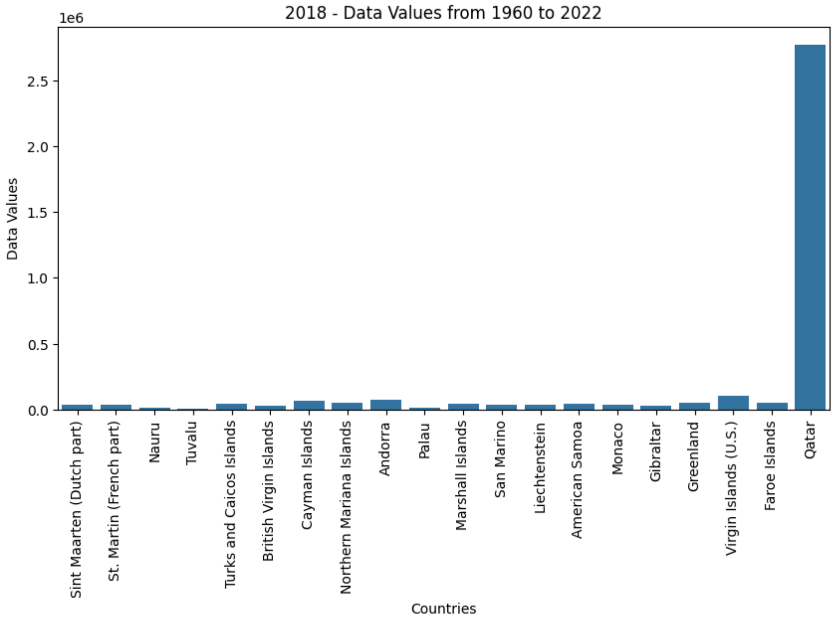

2014 - Data Values from 1960 to 2022
1e6
Data Values
2.0
1.5
1.0
0.5

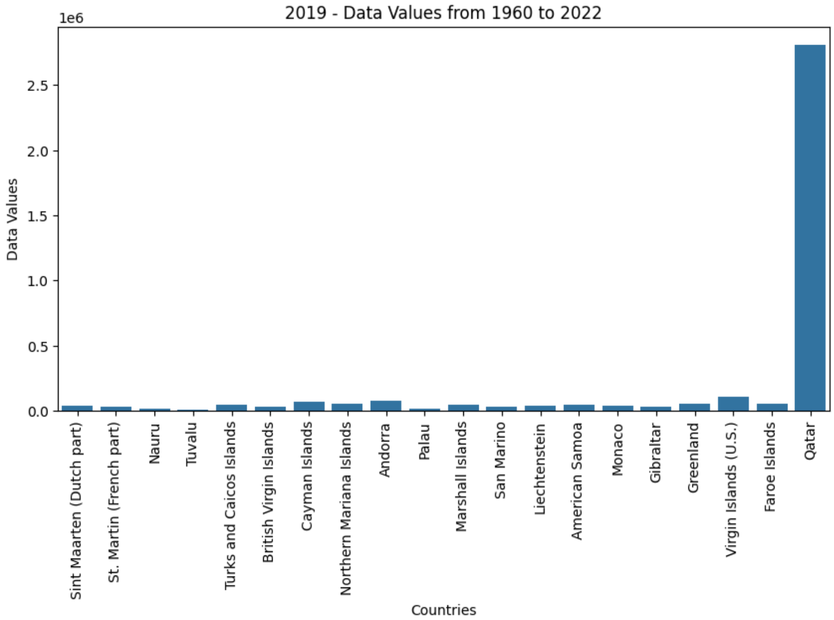

0.0
Sint Maarten (Dutch part)
St. Martin (French part)
Nauru
Tuvalu
Turks and Caicos Islands
British Virgin Islands
Cayman Islands
Northern Mariana Islands
Andorra
Palau
Marshall Islands
San Marino
Liechtenstein
American Samoa
Monaco
Gibraltar
Greenland
Virgin Islands (U.S.)
Faroe Islands
Qatar
Countries

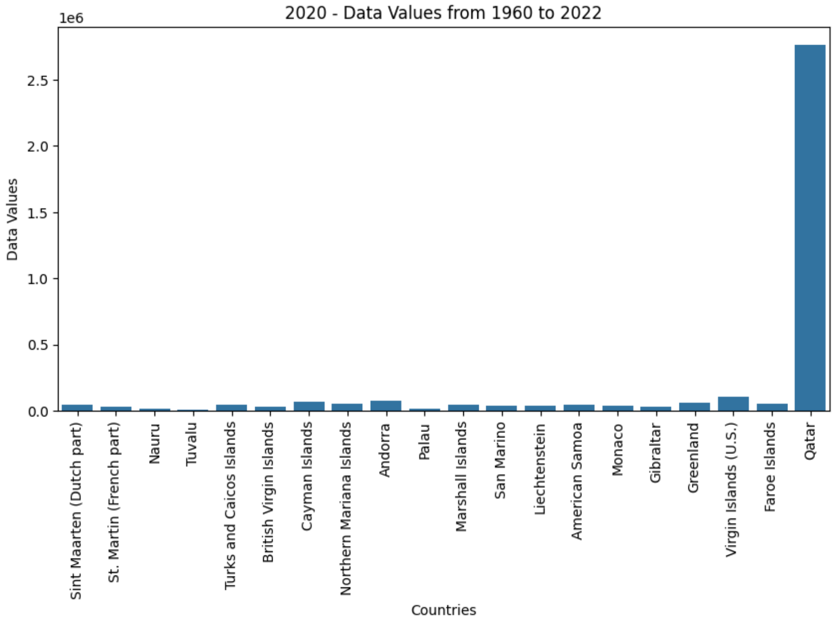

2015 - Data Values from 1960 to 2022
1e6
2.5
2.0
1.5
1.0
0.5
0.0
Data Values
Sint Maarten (Dutch part)
St. Martin (French part)
Nauru
Tuvalu
Turks and Caicos Islands
British Virgin Islands
Cayman Islands
Northern Mariana Islands
Andorra
Palau
Marshall Islands
San Marino
Liechtenstein
American Samoa
Monaco
Gibraltar
Greenland
Virgin Islands (U.S.)
Faroe Islands
Qatar
Countries

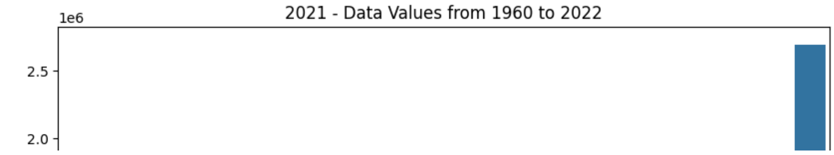

2016 - Data Values from 1960 to 2022
1e6
2.5
2.0
1.5
1.0
0.5
0.0
Data Values
Sint Maarten (Dutch part)
St. Martin (French part)
Nauru
Tuvalu
Turks and Caicos Islands
British Virgin Islands
Cayman Islands
Northern Mariana Islands
Andorra
Palau
Marshall Islands
San Marino
Liechtenstein
American Samoa
Monaco
Gibraltar
Greenland
Virgin Islands (U.S.)
Faroe Islands
Qatar
Countries


2017 - Data Values from 1960 to 2022
1e6
2.5
2.0
1.5
1.0
0.5
0.0
Data Values
nt Maarten (Dutch part)
St. Martin (French part)
Nauru
Tuvalu
urks and Caicos Islands
British Virgin Islands
Cayman Islands
orthern Mariana Islands
Andorra
Palau
Marshall Islands
San Marino
Liechtenstein
American Samoa
Monaco
Gibraltar
Greenland
Virgin Islands (U.S.)
Faroe Islands
Qatar


2018 - Data Values from 1960 to 2022


2019 - Data Values from 1960 to 2022


2020 - Data Values from 1960 to 2022


2021 - Data Values from 1960 to 2022

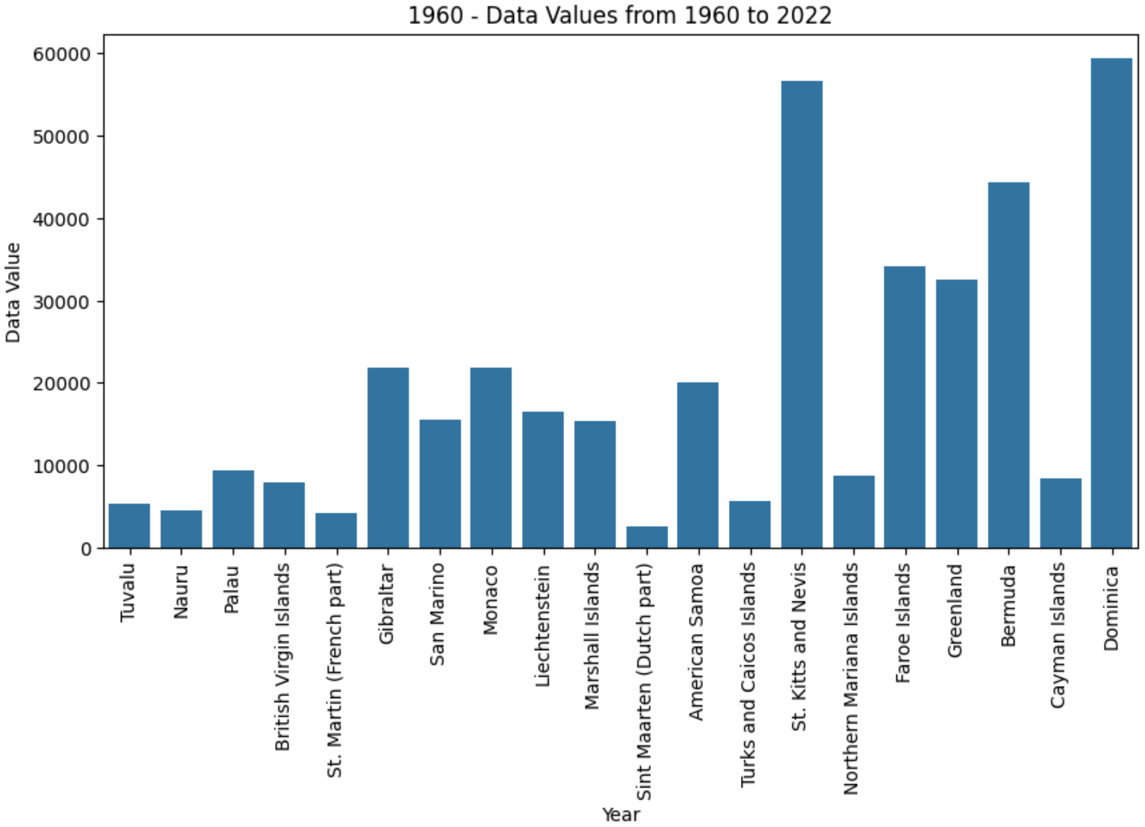
ta Values
1.5

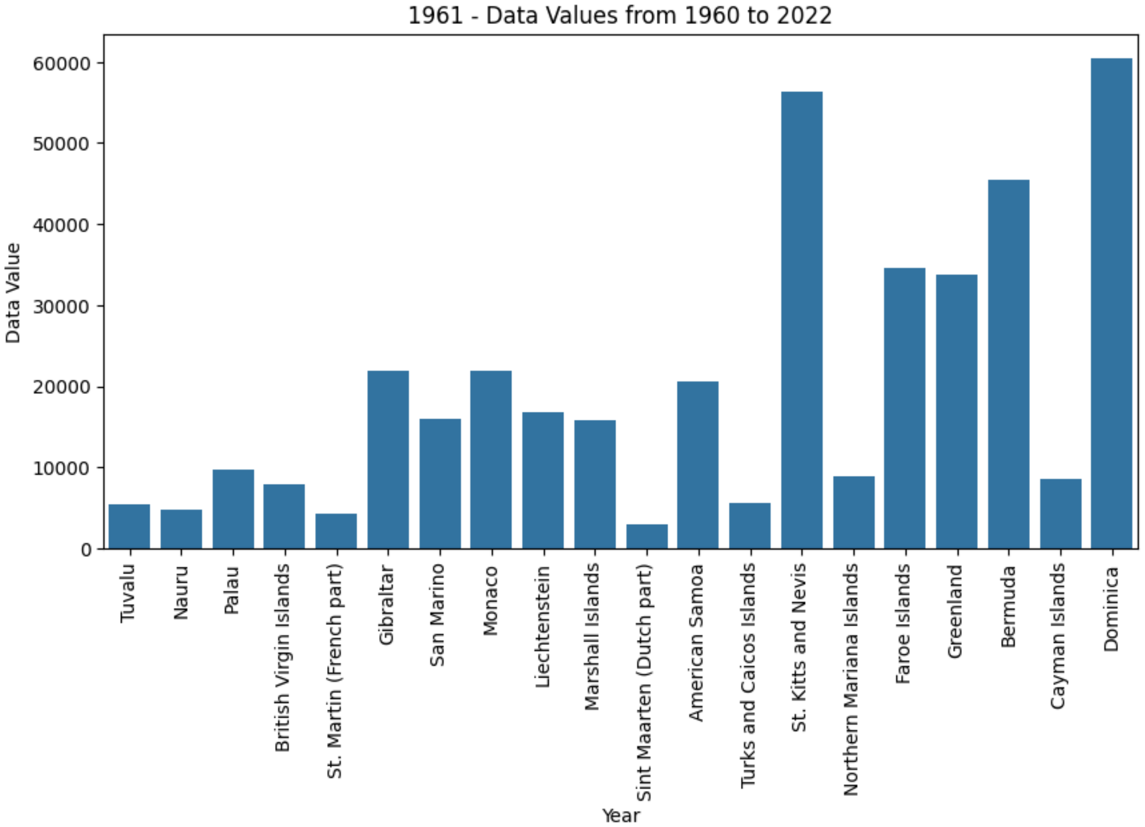
```
country_by_2022 = df.sort_values(by='2022').head(20)
country_by_2022
```

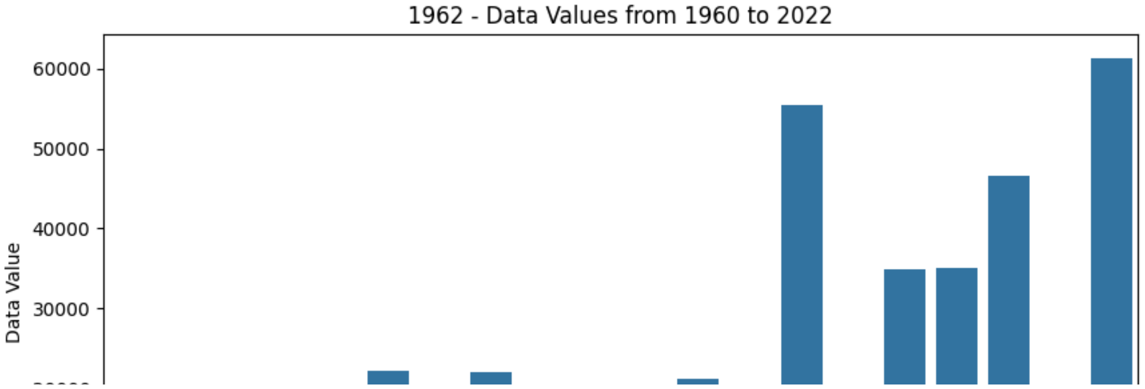
	Country Name	1960	1961	1962	1963	1964	1965	1966	1967
245	Tuvalu	5404.0	5436.0	5471.0	5503.0	5525.0	5548.0	5591.0	5657.0
179	Nauru	4582.0	4753.0	4950.0	5198.0	5484.0	5804.0	6021.0	6114.0
188	Palau	9446.0	9639.0	9851.0	10076.0	10318.0	10563.0	10813.0	10992.0
255	British Virgin Islands	7850.0	7885.0	7902.0	7919.0	7949.0	8018.0	8139.0	8337.0
147	St. Martin (French part)	4135.0	4258.0	4388.0	4524.0	4666.0	4832.0	5044.0	5294.0
84	Gibraltar	21822.0	21907.0	22249.0	22796.0	23347.0	23910.0	24477.0	25047.0
212	San Marino	15556.0	15895.0	16242.0	16583.0	16926.0	17273.0	17588.0	17907.0
149	Monaco	21797.0	21907.0	22106.0	22442.0	22766.0	23022.0	23198.0	23281.0
137	Liechtenstein	16472.0	16834.0	17221.0	17625.0	18058.0	18500.0	18957.0	19467.0
155	Marshall Islands	15374.0	15867.0	16387.0	16947.0	17537.0	18154.0	18794.0	19665.0
225	Sint Maarten (Dutch part)	2646.0	2888.0	3171.0	3481.0	3811.0	4161.0	4531.0	4930.0
11	American Samoa	20085.0	20626.0	21272.0	21949.0	22656.0	23391.0	24122.0	24848.0
228	Turks and Caicos Islands	5604.0	5625.0	5633.0	5634.0	5642.0	5650.0	5652.0	5662.0
125	St. Kitts and Nevis	56660.0	56247.0	55404.0	54391.0	53255.0	52016.0	50683.0	49269.0
164	Northern Mariana Islands	8702.0	8965.0	9252.0	9561.0	9890.0	10229.0	10577.0	10720.0
78	Faroe Islands	34154.0	34572.0	34963.0	35385.0	35841.0	36346.0	36825.0	37234.0
91	Greenland	32500.0	33700.0	35000.0	36400.0	37600.0	39200.0	40500.0	41900.0
27	Bermuda	44400.0	45500.0	46600.0	47700.0	48900.0	50100.0	51000.0	52000.0
52	Cayman Islands	8473.0	8626.0	8799.0	8985.0	9172.0	9366.0	9566.0	9771.0
57	Dominica	59379.0	60395.0	61224.0	62031.0	62843.0	63744.0	64728.0	65760.0

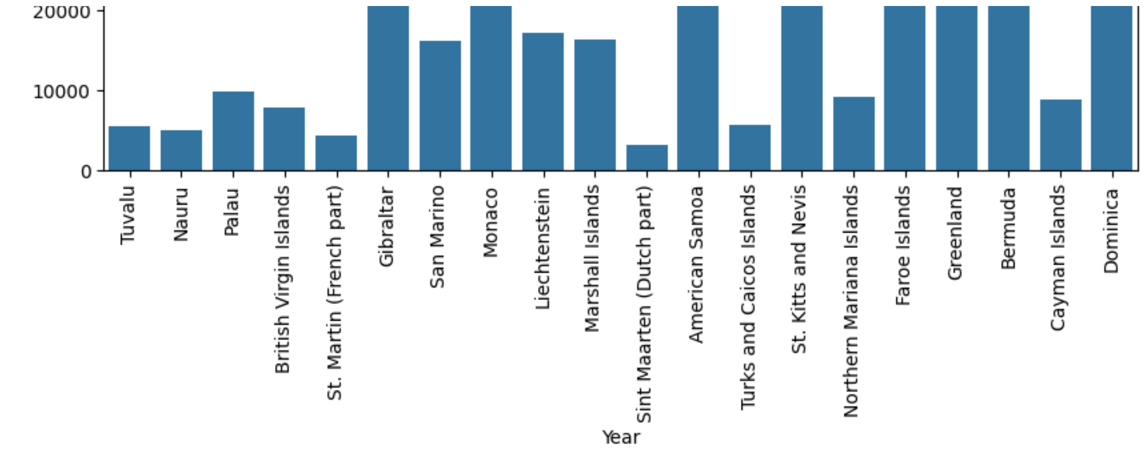
20 rows × 65 columns

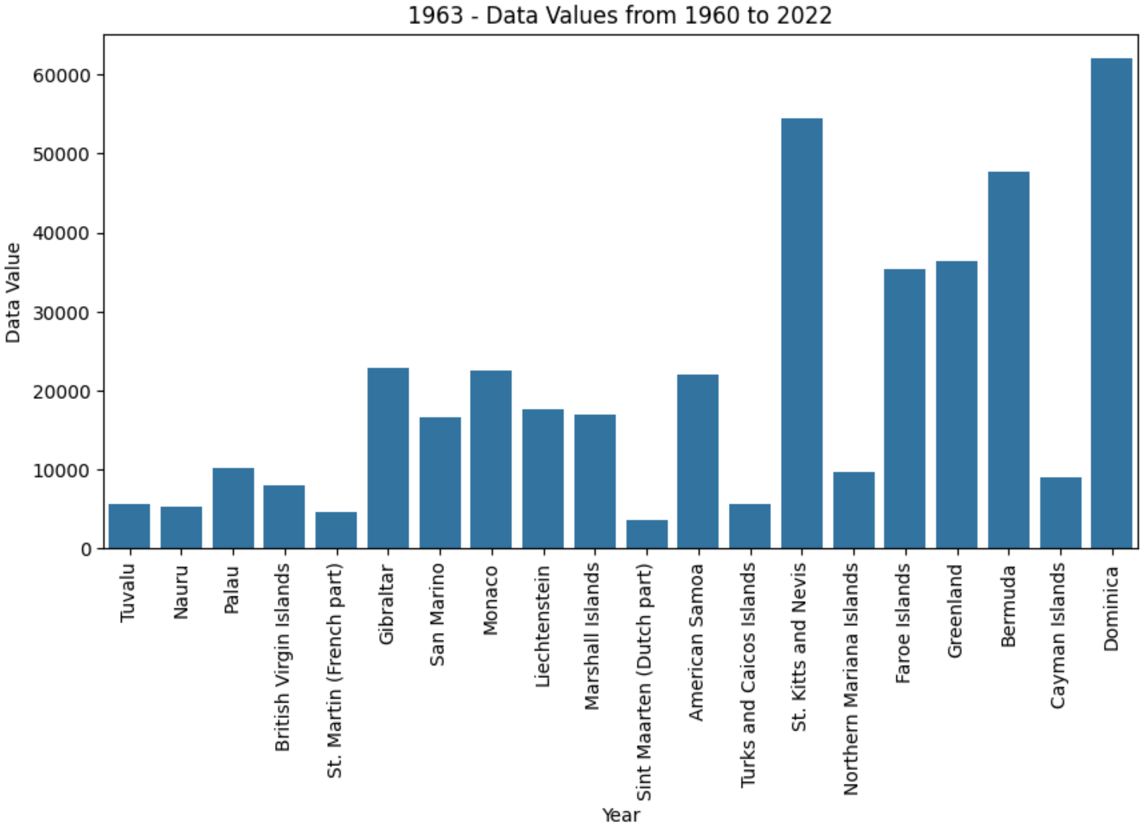
```
country_by_2022_t = country_by_2022.set_index('Country Name').T
for country_name, data_values in country_by_2022_t.iterrows():
    fig = plt.figure(figsize=(10, 5))
    sns.barplot(x=data_values.index, y=data_values.values)
    plt.xlabel('Year')
    plt.ylabel('Data Value')
    plt.title(f"{country_name} - Data Values from 1960 to 2022")
    plt.xticks(rotation=90)
    plt.show()
```

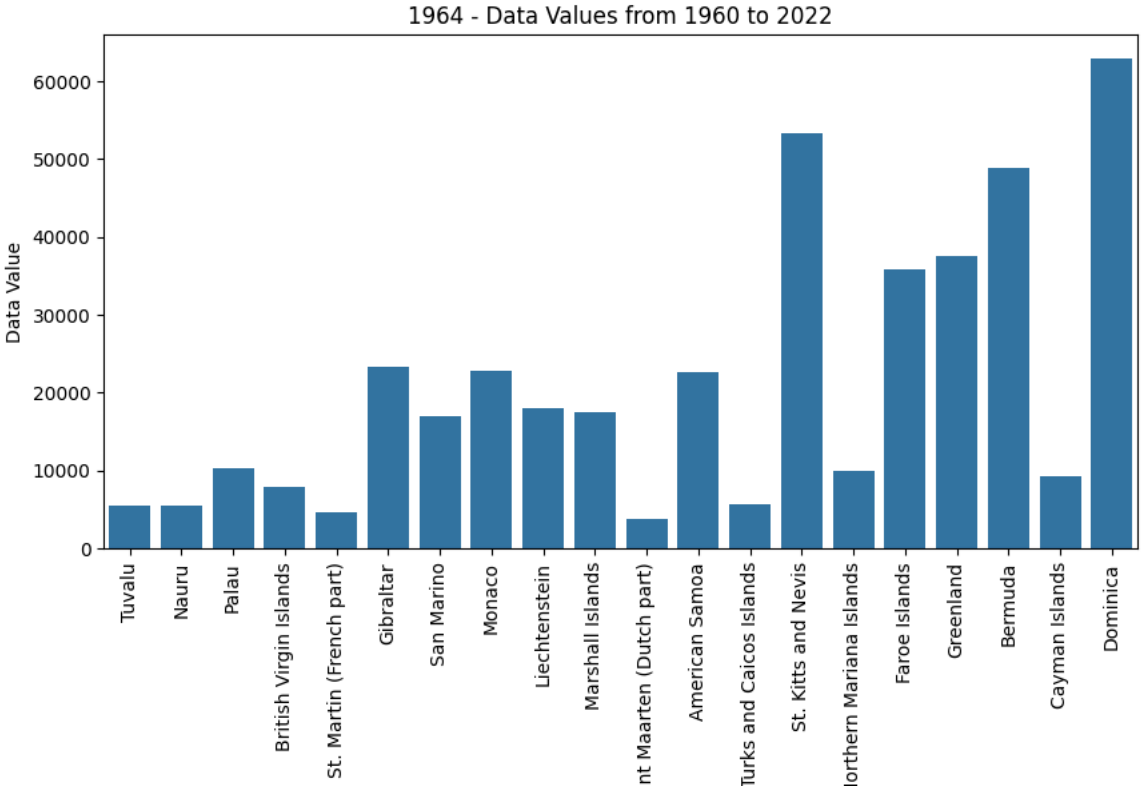

1960 - Data Values from 1960 to 2022
Data Value
60000
50000
40000
30000
20000
10000
0
Tuvalu
Nauru
Palau
British Virgin Islands
St. Martin (French part)
Gibraltar
San Marino
Monaco
Liechtenstein
Marshall Islands
Sint Maarten (Dutch part)
American Samoa
Turks and Caicos Islands
St. Kitts and Nevis
Northern Mariana Islands
Faroe Islands
Greenland
Bermuda
Cayman Islands
Dominica
Year

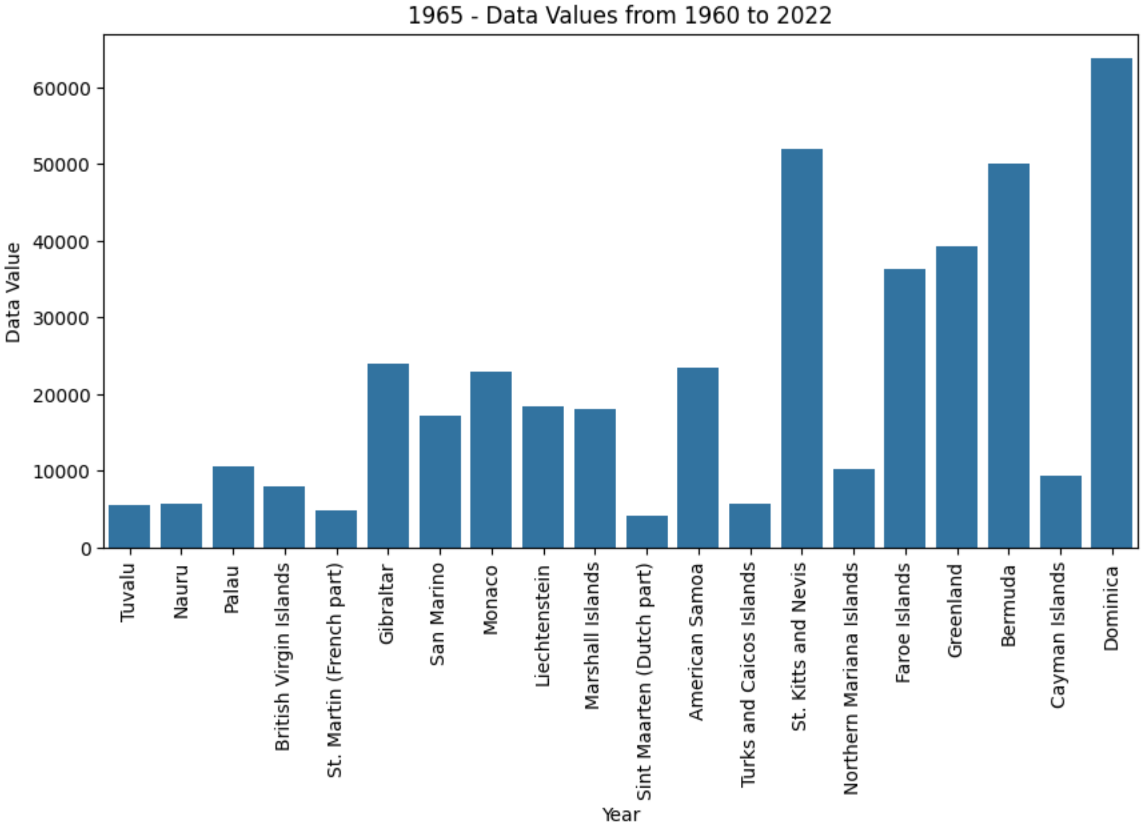

1961 - Data Values from 1960 to 2022
Data Value
60000
50000
40000
30000
20000
10000
0
Tuvalu
Nauru
Palau
British Virgin Islands
St. Martin (French part)
Gibraltar
San Marino
Monaco
Liechtenstein
Marshall Islands
Sint Maarten (Dutch part)
American Samoa
Turks and Caicos Islands
St. Kitts and Nevis
Northern Mariana Islands
Faroe Islands
Greenland
Bermuda
Cayman Islands
Dominica
Year


1962 - Data Values from 1960 to 2022
Data Value
60000
50000
40000
30000

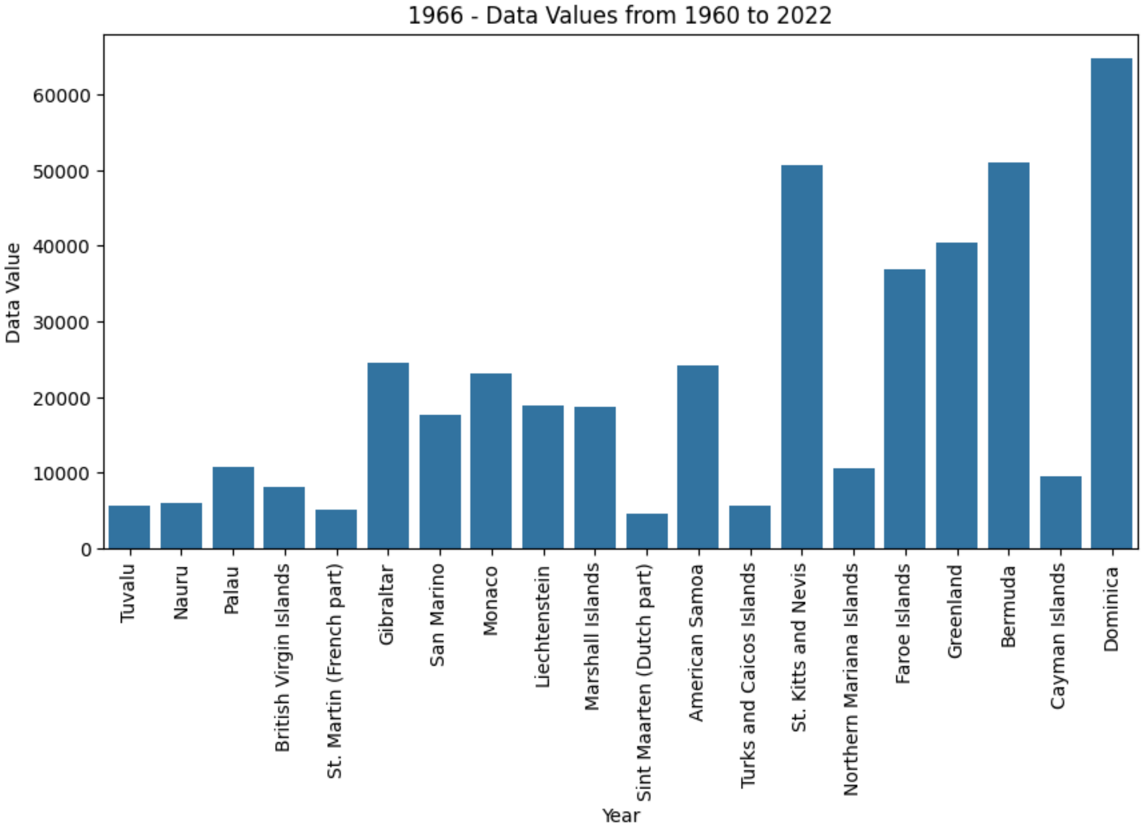



1963 - Data Values from 1960 to 2022

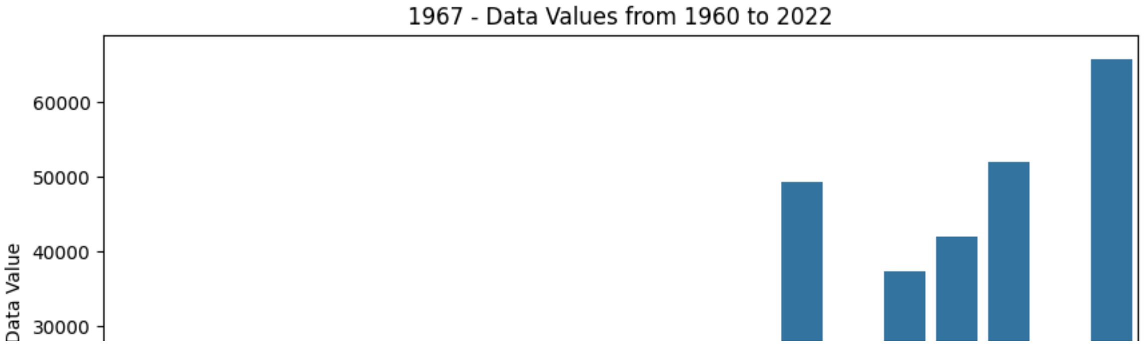

1964 - Data Values from 1960 to 2022



1965 - Data Values from 1960 to 2022



1966 - Data Values from 1960 to 2022



1967 - Data Values from 1960 to 2022