Evolution of the Net Migration in the last years in **“Venezuela”**

Richerd Marques

Dataset(s)

The dataset used was “World Development Indicators Dataset”

Data Source: https://www.kaggle.com/worldbank/world-development-indicators
Folder: 'world-development-indicators'

Motivation

In the last years many people in Venezuela have emigrated for some factors poltics-economics, especially is important to know the net migration of the years before 1.998 (Democratics goverment) and after 1.998 (Comunist goverment) and observe the difference of the net migration in the country.

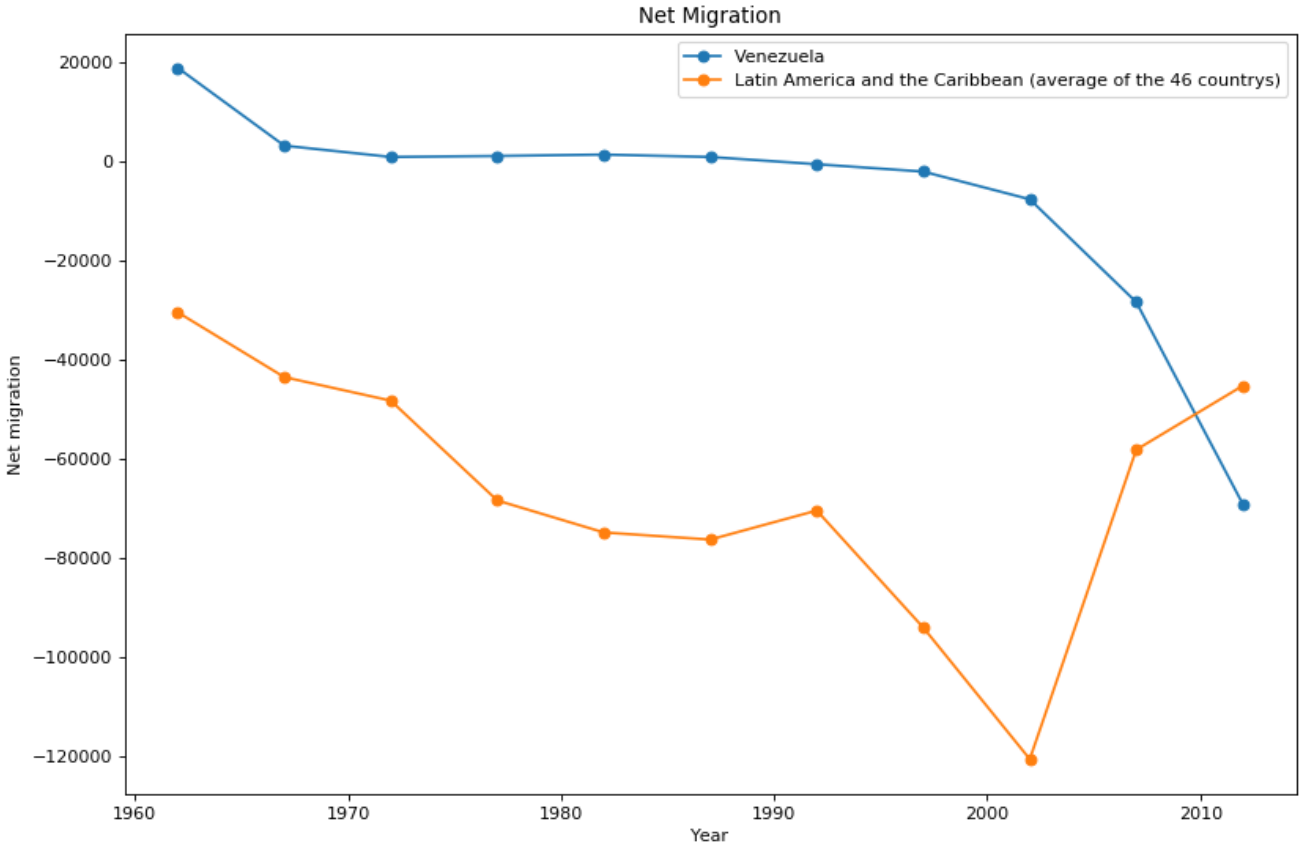
Also is interesting know the Net Migration difference between **“Venezuela”** and **“Latin America and the Caribbean”.**

Research Question(s)

Did **“Venezuela”** have more emigration before of the year 1.998 than after of the year 1.998 ?

Did **“Venezuela”** have more emigration than “**Latin America and the Caribbean**” in the last years ?

Findings


Net Migration
Venezuela
Latin America and the Caribbean (average of the 46 countrys)
Net migration
Year
20000
0
−20000
−40000
−60000
−80000
−100000
−120000
1960
1970
1980
1990
2000
2010

Findings

In the graph be can see that “**Venezuela”** since of year 1.960 to 1.992 was a inmigrated country because the net migrated ever was positive, then of the year 1.992 the net migrated began decrease moderatly and then of the year 1.998 the net migrated decrease significantly every year.

Did **“Venezuela”** have more emigration before of the year 1.998 than after of the year 1.998 ?
R: Yes, Venezuela have more emigration after of the year 1.998 may have been affected by the arrival of the comunist goverment, in where we can observe the significatly decrease of the net migrated.

Findings

Compare Net Migrated of **Venezuela** and **Latin America and Caribbean** we can say that Venezuela was a inmigrated country until 1.992 while that **Latin America and the Caribbean** in generally always had Net Migrated negative.

Did **“Venezuela”** have more emigration than “**Latin America and the Caribbean**” in the last years ?
R: Yes, “**Venezuela”** had more emigration than **“Latin America and the Caribbean”** in the last years. Is interesting observe that the since the year 2.002 the net migration in “**Venezuela”** begin to decrease while that in “**Latin America and the Caribbean”** begin to grow, this can me that the persons emigrated of the “**Venezuela”** to the other countrys in “**Latin America and the Caribbean”** may be due by the politic-economic situation presented since 1.998 with the arrive the comunist goverment.

Acknowledgements

I use the “World Development Indicators” Dataset for this analyze, however I Know the political-economical in Venezuela and I have knowledge of the differents elements that can affected the country situation.

For this analize, I didn’t have feedback of Friends.

References

I did all the work on my own.

Jupyter Notebook

Mini Project - Richerd Marques

Before this notebook, I explored the dataset.

In [15]:
```
import pandas as pd
import sqlite3
import matplotlib.pyplot as plt
```

In [5]:
```
country = pd.read_csv('/Users/riche/Desktop/Data Science/Data Science - Week5-Visualization/Week5-Visualization/world-development-indicators/Country.csv', sep=',')
print(type(country))
country.head(3)
```

```
<class 'pandas.core.frame.DataFrame'>
```

Out[5]:

	CountryCode	ShortName	TableName	LongName	Alpha2Code	CurrencyUnit	SpecialNotes	Region	IncomeGroup	Wb2Code	...	Governmer
0	AFG	Afghanistan	Afghanistan	Islamic State of Afghanistan	AF	Afghan afghani	Fiscal year end: March 20; reporting period fo...	South Asia	Low income	AF	...	Consolidate
1	ALB	Albania	Albania	Republic of Albania	AL	Albanian lek	NaN	Europe & Central Asia	Upper middle income	AL	...	Budgetary c
2	DZA	Algeria	Algeria	People's Democratic Republic of Algeria	DZ	Algerian dinar	NaN	Middle East & North Africa	Upper middle income	DZ	...	Budgetary c

3 rows × 31 columns

In [6]:
```
is_Venezuela = country['ShortName'].str.contains('Venezuela')
```

In [7]:
```
country[is_Venezuela]
```

Out[7]:

	CountryCode	ShortName	TableName	LongName	Alpha2Code	CurrencyUnit	SpecialNotes	Region	IncomeGroup	Wb2Code	...	Governr
239	VEN	Venezuela	Venezuela, RB	República Bolivariana de Venezuela	VE	Venezuelan bolivar fuerte	NaN	Latin America & Caribbean	High income: nonOECD	VE	...	Consoli

1 rows × 31 columns

Jupyter Notebook

In [8]:
```
indicators = pd.read_csv('/Users/riche/Desktop/Data Science/Data Science - Week5-Visualization/Week5-Visualization/world-development-indicators/Indicators.csv', sep=',')
print(type(indicators))
indicators.head(3)
```

```
<class 'pandas.core.frame.DataFrame'>
```

Out[8]:

	CountryName	CountryCode	IndicatorName	IndicatorCode	Year	Value
0	Arab World	ARB	Adolescent fertility rate (births per 1,000 wo...	SP.ADO.TFRT	1960	133.560907
1	Arab World	ARB	Age dependency ratio (% of working-age populat...	SP.POP.DPND	1960	87.797601
2	Arab World	ARB	Age dependency ratio, old (% of working-age po...	SP.POP.DPND.OL	1960	6.634579

In [9]:
```
series = pd.read_csv('/Users/riche/Desktop/Data Science/Data Science - Week5-Visualization/Week5-Visualization/world-development-indicators/Series.csv', sep=',')
print(type(series))
series.head()
```

```
<class 'pandas.core.frame.DataFrame'>
```

Out[9]:

	SeriesCode	Topic	IndicatorName	ShortDefinition	LongDefinition	UnitOfMeasure	Periodicity	BasePeriod	OtherNotes	Aggre
0	BN.KLT.DINV.CD	Economic Policy & Debt: Balance of payments: C...	Foreign direct investment, net (BoP, current US$)	NaN	Foreign direct investment are the net inflows ...	NaN	Annual	NaN	NaN	NaN
1	BX.KLT.DINV.WD.GD.ZS	Economic Policy & Debt: Balance of payments: C...	Foreign direct investment, net inflows (% of GDP)	NaN	Foreign direct investment are the net inflows ...	NaN	Annual	NaN	NaN	Weigh
2	BX.KLT.DINV.CD.WD	Economic Policy & Debt: Balance of payments: C...	Foreign direct investment, net inflows (BoP, c...	NaN	Foreign direct investment refers to direct inv...	NaN	Annual	NaN	NaN	Sum
3	BM.KLT.DINV.GD.ZS	Economic Policy & Debt: Balance of payments: C...	Foreign direct investment, net outflows (% of ...	NaN	Foreign direct investment are the net inflows ...	NaN	Annual	NaN	NaN	Weigh
4	BN.TRF.KOGT.CD	Economic Policy & Debt: Balance	Net capital account (BoP,	NaN	Net capital account records	NaN	Annual	NaN	NaN	NaN

Jupyter Notebook

In [10]:
```
hist_series='SM.POP.NETM'
mask_series = series['SeriesCode'].str.contains(hist_series)
series[mask_series]
```

Out[10]:

	SeriesCode	Topic	IndicatorName	ShortDefinition	LongDefinition	UnitOfMeasure	Periodicity	BasePeriod	OtherNotes	Aggregatio
1303	SM.POP.NETM	Social Protection & Labor: Migration	Net migration	Net migration is the number of immigrants minu...	Net migration is the net total of migrants dur...	NaN	Annual	NaN	NaN	Sum

In [11]:
```
print(series[mask_series].LongDefinition.all())
```

```
Net migration is the net total of migrants during the period, that is, the total number of immigrants less the annual number of
emigrants, including both citizens and noncitizens. Data are five-year estimates.
```

In [12]:
```
hist_indicator='Net migration'
hist_country='VEN'

mask1 = indicators['IndicatorName'].str.contains(hist_indicator)
mask2 = indicators['CountryCode'].str.contains(hist_country)

stage = indicators[mask1 & mask2]
stage.head(100)
```

Out[12]:

	CountryName	CountryCode	IndicatorName	IndicatorCode	Year	Value
77714	Venezuela, RB	VEN	Net migration	SM.POP.NETM	1962	18874.0
231432	Venezuela, RB	VEN	Net migration	SM.POP.NETM	1967	3172.0
496730	Venezuela, RB	VEN	Net migration	SM.POP.NETM	1972	892.0
857822	Venezuela, RB	VEN	Net migration	SM.POP.NETM	1977	1094.0
1260082	Venezuela, RB	VEN	Net migration	SM.POP.NETM	1982	1373.0
1696112	Venezuela, RB	VEN	Net migration	SM.POP.NETM	1987	891.0
2232483	Venezuela, RB	VEN	Net migration	SM.POP.NETM	1992	-572.0
2887703	Venezuela, RB	VEN	Net migration	SM.POP.NETM	1997	-2061.0
3627338	Venezuela, RB	VEN	Net migration	SM.POP.NETM	2002	-7648.0
4476421	Venezuela, RB	VEN	Net migration	SM.POP.NETM	2007	-28395.0
5373192	Venezuela, RB	VEN	Net migration	SM.POP.NETM	2012	-69121.0

In [13]:
```
hist_indicator='Net migration'
hist_country_LA='LCN'
hist_country_name_LA='Latin'

mask1_LA = indicators['IndicatorName'].str.contains(hist_indicator)
mask2_LA = indicators['CountryCode'].str.contains(hist_country_LA)

stage_LA = indicators[mask1_LA & mask2_LA]
stage_LA.head(100)
```

Jupyter Notebook

Out[13]:

	CountryName	CountryCode	IndicatorName	IndicatorCode	Year	Value
51648	Latin America & Caribbean (all income levels)	LCN	Net migration	SM.POP.NETM	1962	-1400307.0
201350	Latin America & Caribbean (all income levels)	LCN	Net migration	SM.POP.NETM	1967	-2001834.0
432263	Latin America & Caribbean (all income levels)	LCN	Net migration	SM.POP.NETM	1972	-2220184.0
787948	Latin America & Caribbean (all income levels)	LCN	Net migration	SM.POP.NETM	1977	-3146290.0
1181298	Latin America & Caribbean (all income levels)	LCN	Net migration	SM.POP.NETM	1982	-3443208.0
1613382	Latin America & Caribbean (all income levels)	LCN	Net migration	SM.POP.NETM	1987	-3509490.0
2120411	Latin America & Caribbean (all income levels)	LCN	Net migration	SM.POP.NETM	1992	-3239912.0
2762289	Latin America & Caribbean (all income levels)	LCN	Net migration	SM.POP.NETM	1997	-4325806.0
3484062	Latin America & Caribbean (all income levels)	LCN	Net migration	SM.POP.NETM	2002	-5546821.0
4309501	Latin America & Caribbean (all income levels)	LCN	Net migration	SM.POP.NETM	2007	-2675725.0
5211246	Latin America & Caribbean (all income levels)	LCN	Net migration	SM.POP.NETM	2012	-2081948.0

In [16]:

```
plt.figure(figsize=(12, 8), dpi=80)

plt.ylabel('Net migration')
plt.xlabel('Year')

X = stage['Year']
Y = stage['Value']

X1 = stage_LA['Year']
Y1 = stage_LA['Value']/46

plt.plot(X,Y,'o-',label='Venezuela')

plt.plot(X1,Y1,'o-',label='Latin America and the Caribbean (average of the 46 countrys)')

plt.title('Net Migration')

plt.legend()

plt.show()
```

Jupyter Notebook