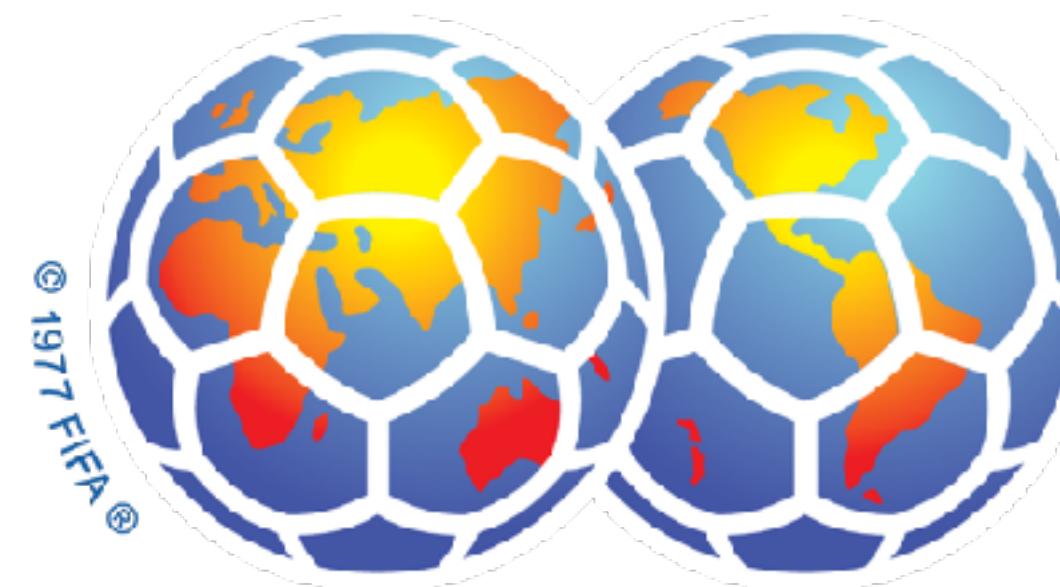




WORLD CUP IMPACT ANALYSIS



STRUCTURE

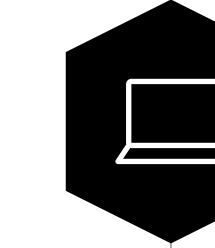


FIFA®

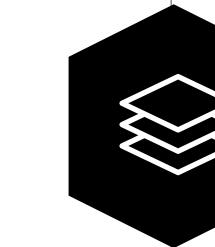
For the Good of the Game



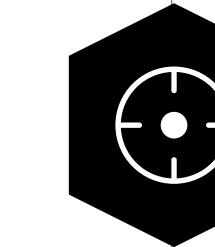
Introduction



Data Explanation



Interesting Findings



Summary

PROCESS



WHY

- AREA of interests
- Importance of World Cup

Source

- Kaggle
- World Bank
- Elo Rating

Preparation

- Data Cleaning
- Google
- Wikipedia

TOOL

- Tableau

FINDING



ONE

Home country advantage
can move an additional two
rounds on average



TWO

World Cup may NOT
increase the GDP of
host countries



THREE

World Cup may NOT
bring tourism gains to
host countries



1

Home Advantage

Home country advantage is equivalent to progressing an additional two rounds on average

DATASET

World Soccer Elo Rating

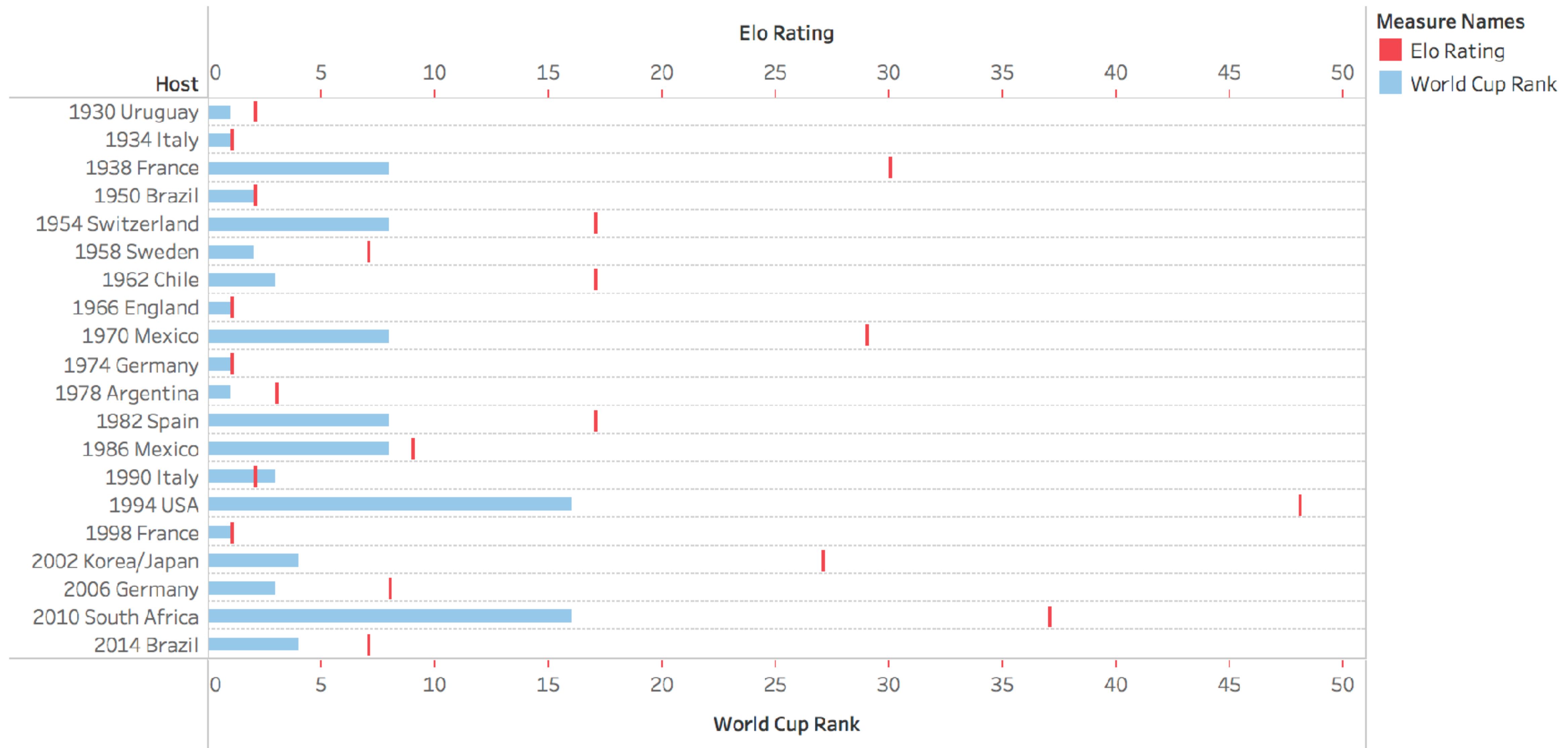
- Based on the Elo rating system, developed by Dr. Arpad Elo.
- Ratings tend to converge on a team's true strength relative to its competitors after about 30 matches.

FIFA World Cup Ranking

- FIFA Official Site
- Wikipedia



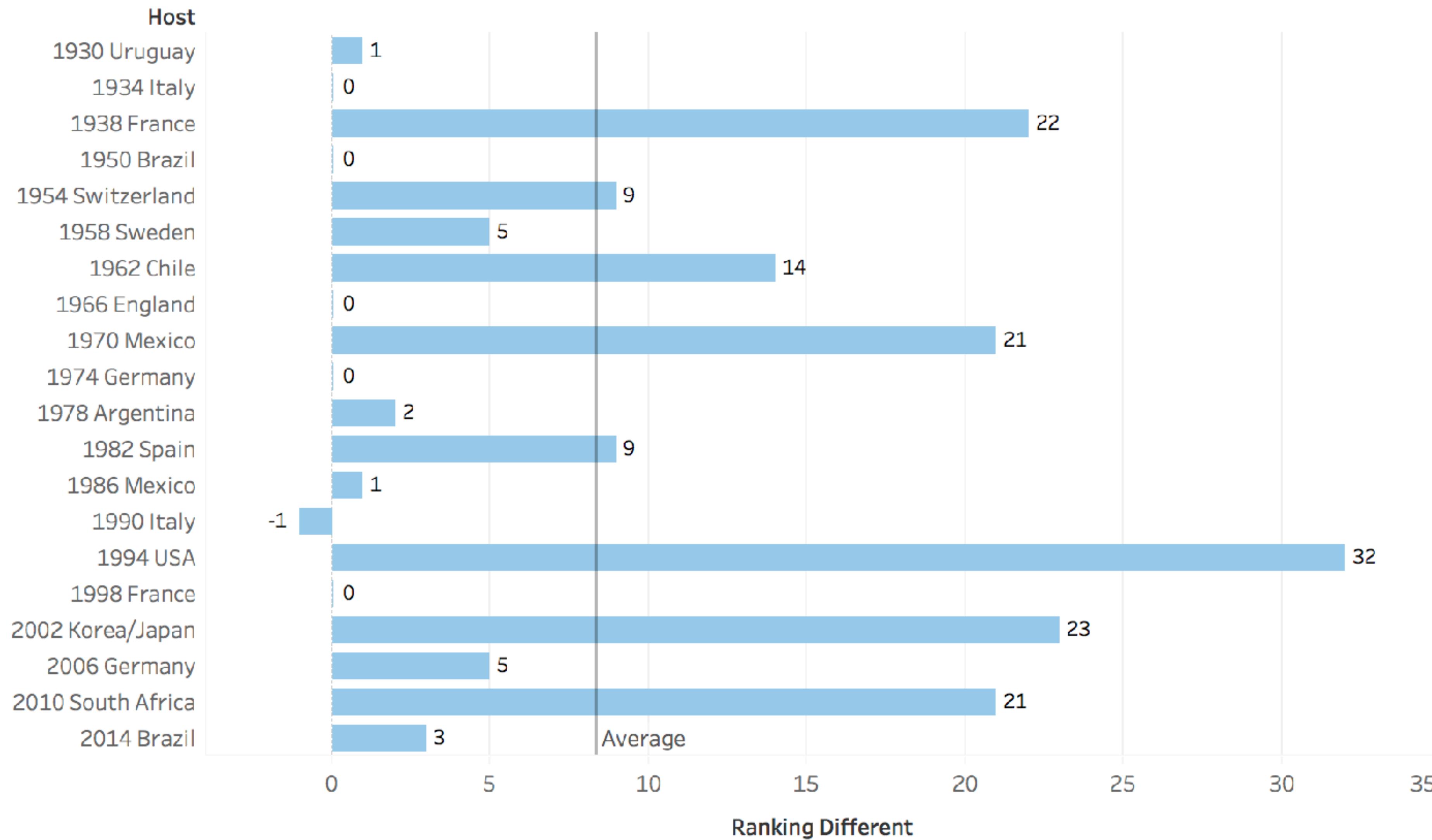
World Cup Rank Vs. Elo Soccer Rating for World Cup Host Countries from 1930 to 2014



World Cup Rank and Elo Soccer Rating for each Host. Color shows details about World Cup Rank and Elo Soccer Rating.

SOURCE: Elo World Soccer Rating; Wikipedia, FIFA world Cup Rank from 1930 - 2014.

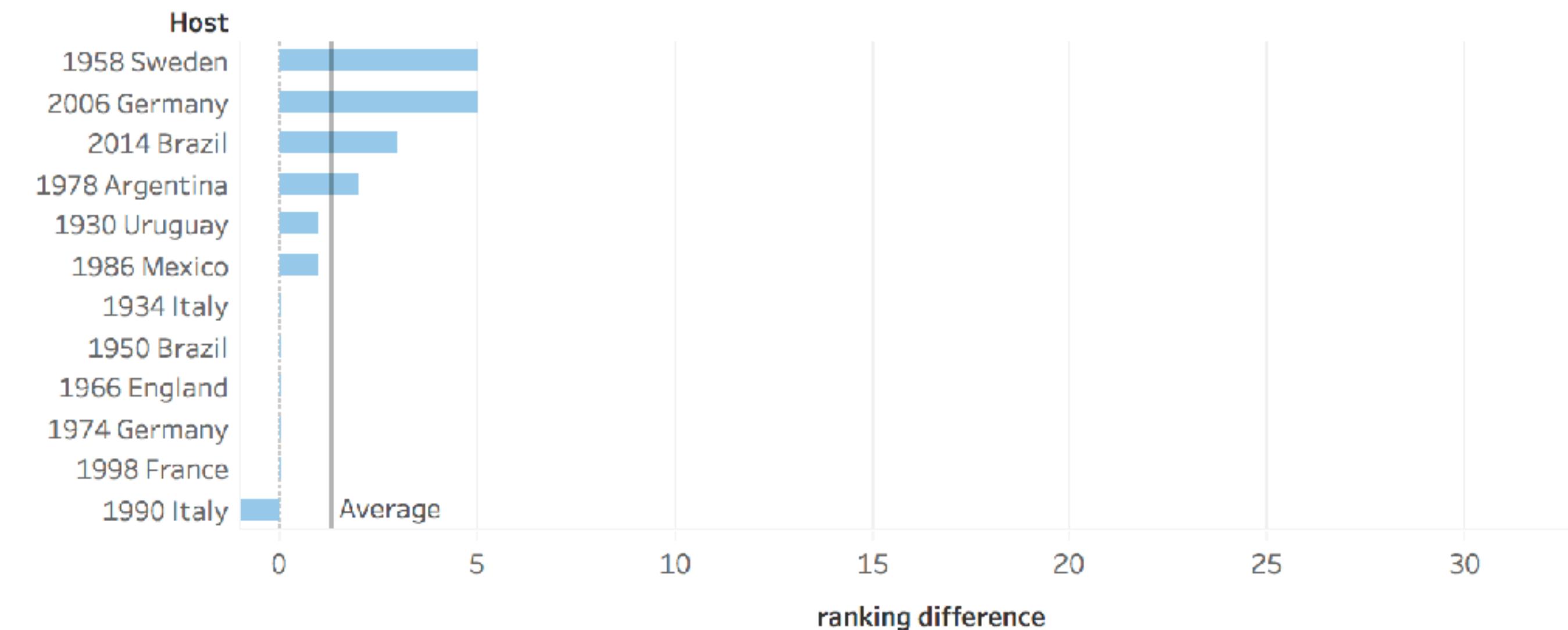
Ranking Differences Between World Cup Rank and Elo Soccer Rating



Absolute ranking value differences for each Host. With an Average of 8.35.

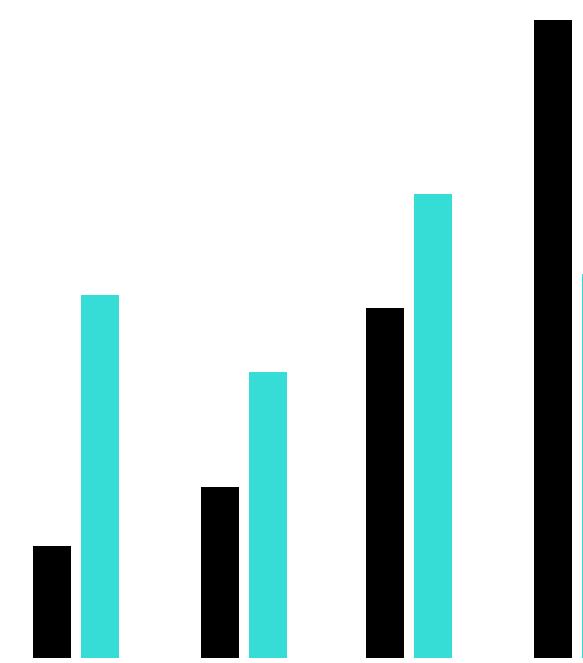
SOURCE: Elo World Soccer Rating; Wikipedia, FIFA world Cup Rank from 1930 - 2014.

When world ranking < 10, differences between Elo Soccer Rating and world cup ranking



World Ranking < 10

Sum of different for each Host. The view is filtered on Host, which keeps 12 of 20 members, with an average of 1.33.
SOURCE: Elo World Soccer Rating; Wikipedia, FIFA world Cup Rank from 1930 - 2014.



World Ranking > 10

Sum of different for each Host. The view is filtered on Host, which keeps 8 of 20 members, with an average of 18.875.
SOURCE: Elo World Soccer Rating; Wikipedia, FIFA world Cup Rank from 1930 - 2014.



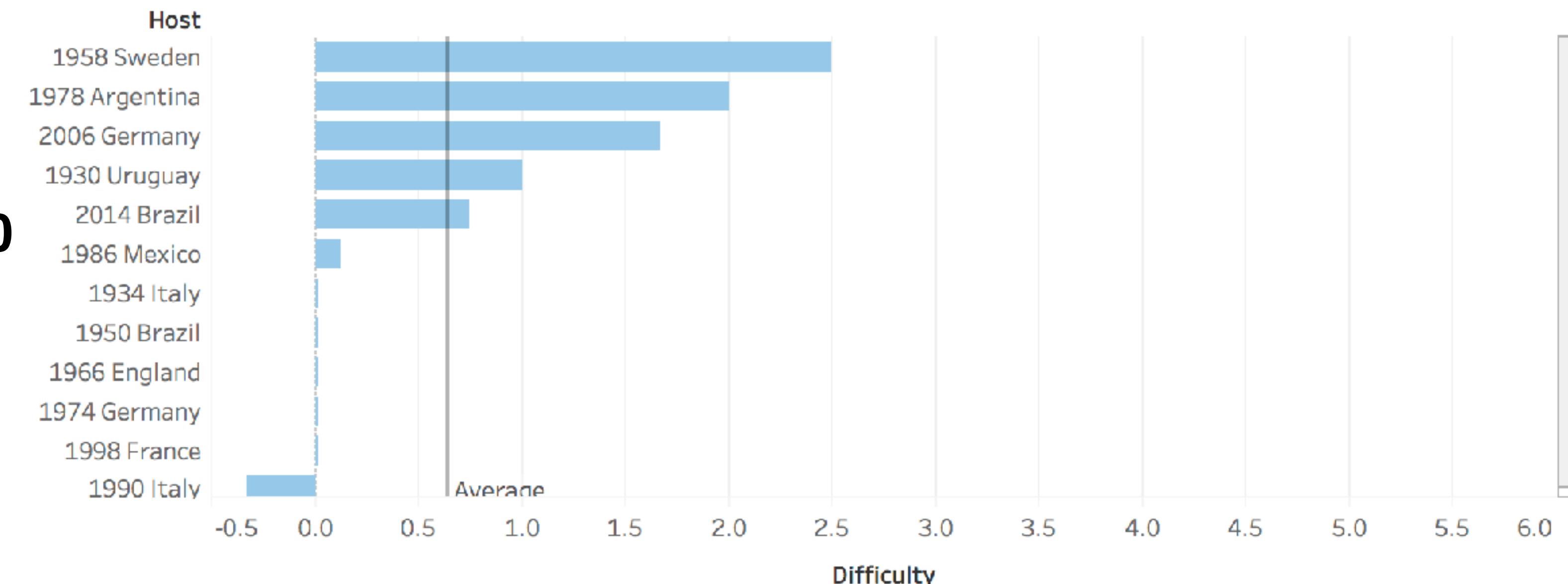
FUNCTION

Difficulty = (World Ranking – World Cup Ranking) / World Cup Ranking

World Ranking < 10, difficulty for Elo Soccer Rating increase to world cup ranking



World Ranking < 10

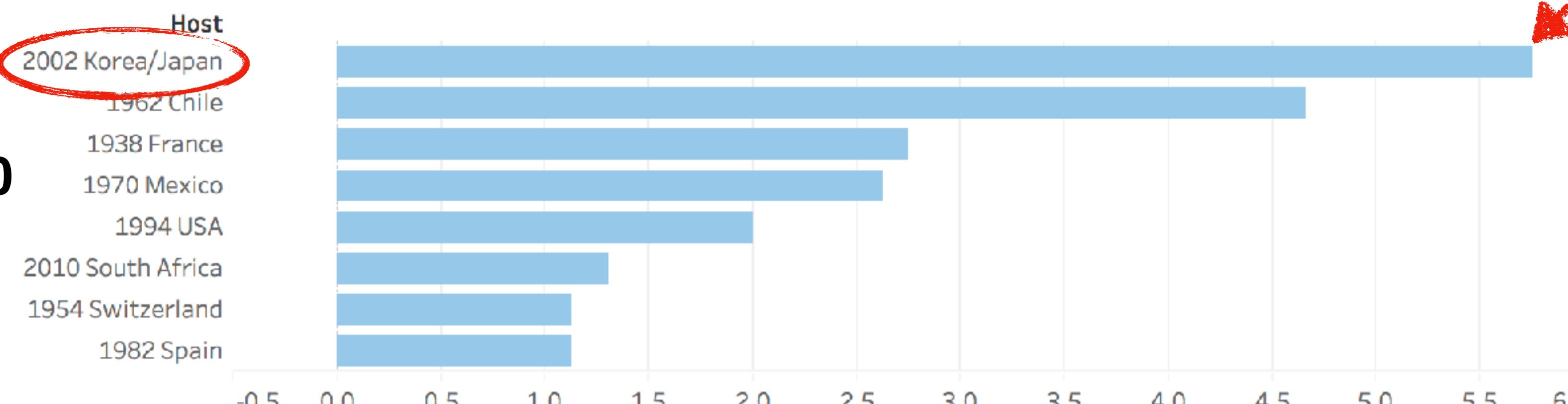


Sum of Difficulty for each Country. The view is filtered on Country, which keeps 12 of 20 members. Having an average of 1.08
 SOURCE: Elo World Soccer Rating; Wikipedia, FIFA world Cup Rank from 1930 - 2014.

5.7



World Ranking > 10



Sum of Difficulty for each Country. The view is filtered on Country, which keeps 8 of 20 members. Having an average of 2.669
 SOURCE: Elo World Soccer Rating; Wikipedia, FIFA world Cup Rank from 1930 - 2014.



Limitations & Outlook

- Is any other representation better than Bar Chart?
- Can we find any post-influences for these countries?
- 2002 Italy was kicked out, does this incident influence their morale?



2

Economic Impact

PROCESS

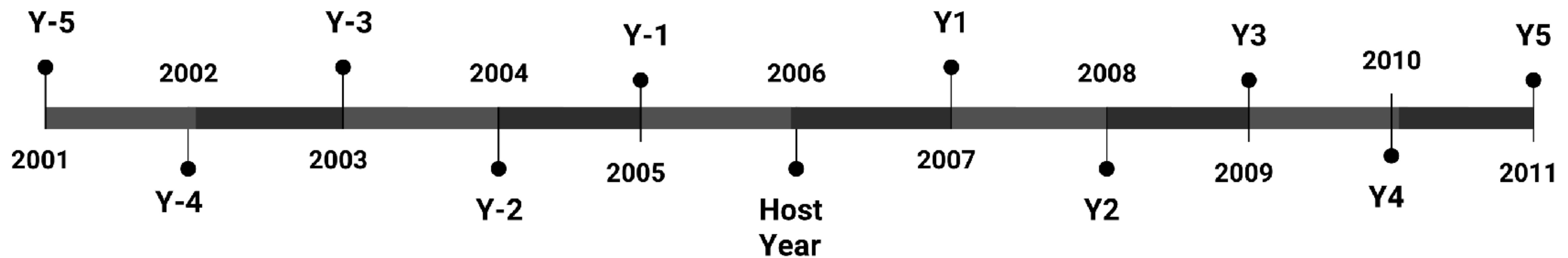
We selected **13** countries of **14** world cup games since 1960, including:

- United States(1994)
- France(1998)
- Korea(2002)
- Japan(2002)
- Germany(2006)
- South Africa(2010)
- Brazil(2014)
- Chile(1962)
- United Kingdom(1966)
- Mexico(1970)
- Germany(1974)
- Argentina(1978)
- Spain(1982)
- Mexico(1986)
- Italy(1990)

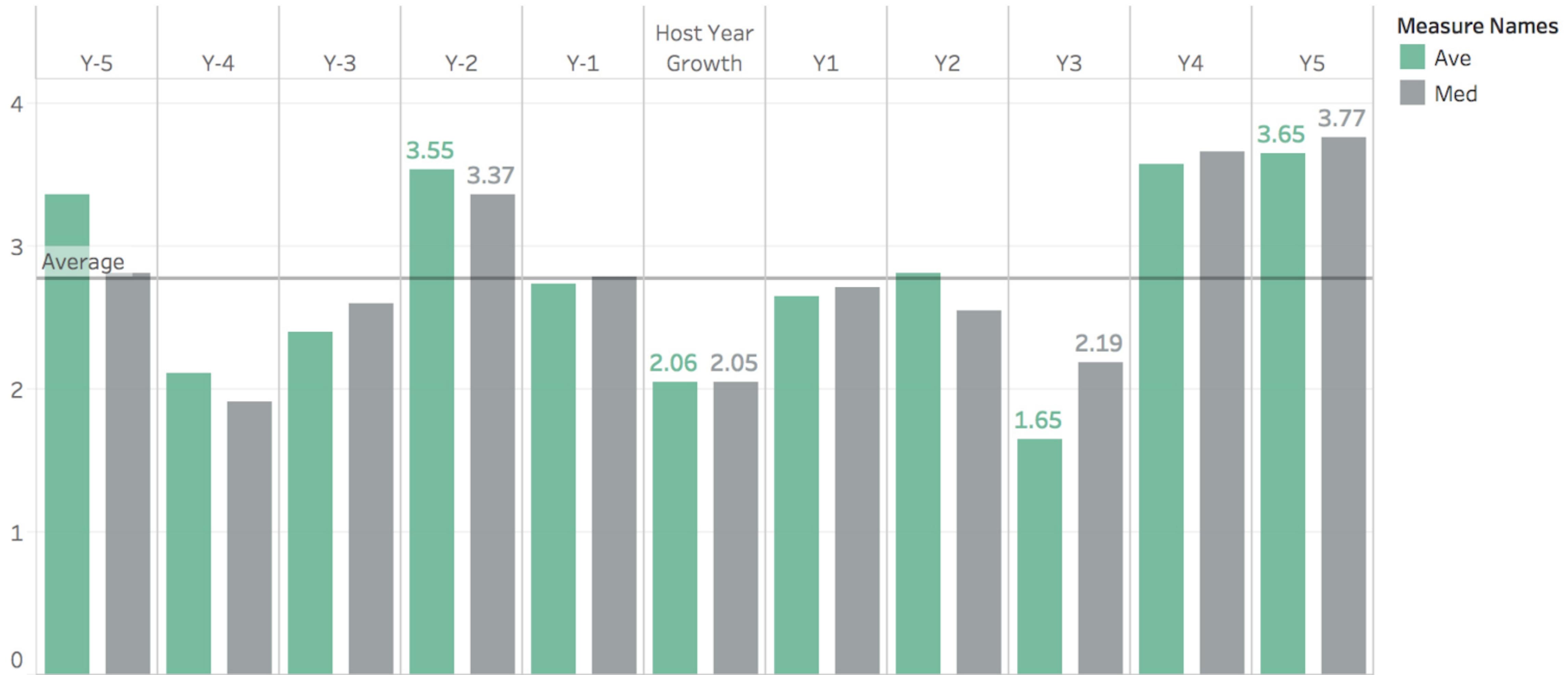
PROCESS

Comparing **the growth rate of GDP** and **the GDP change in current \$US** in the five years prior to the World Cup (Pre: Y-5 to Host Year) and in the World Cup host year, as well as the five-year periods following (Post: Host year to Y5).

Use [Germany - Host Year 2006] as an example:



Average and Median Growth in Real GDP Host Countries 1960-2016

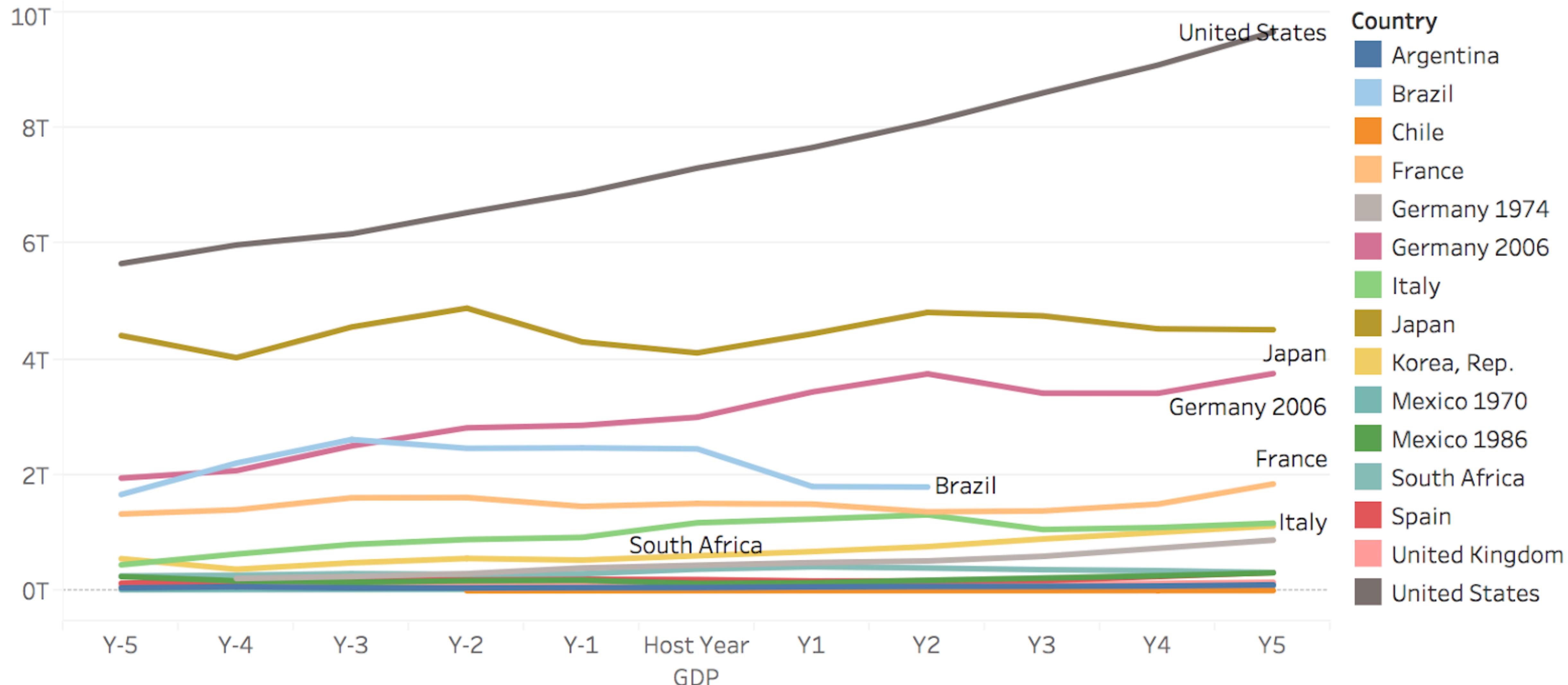


Source: The World Bank, GDP growth (annual %), 1960 - 2016

GDP Changes among Host Countries

17

Large Economies, 1960-2016

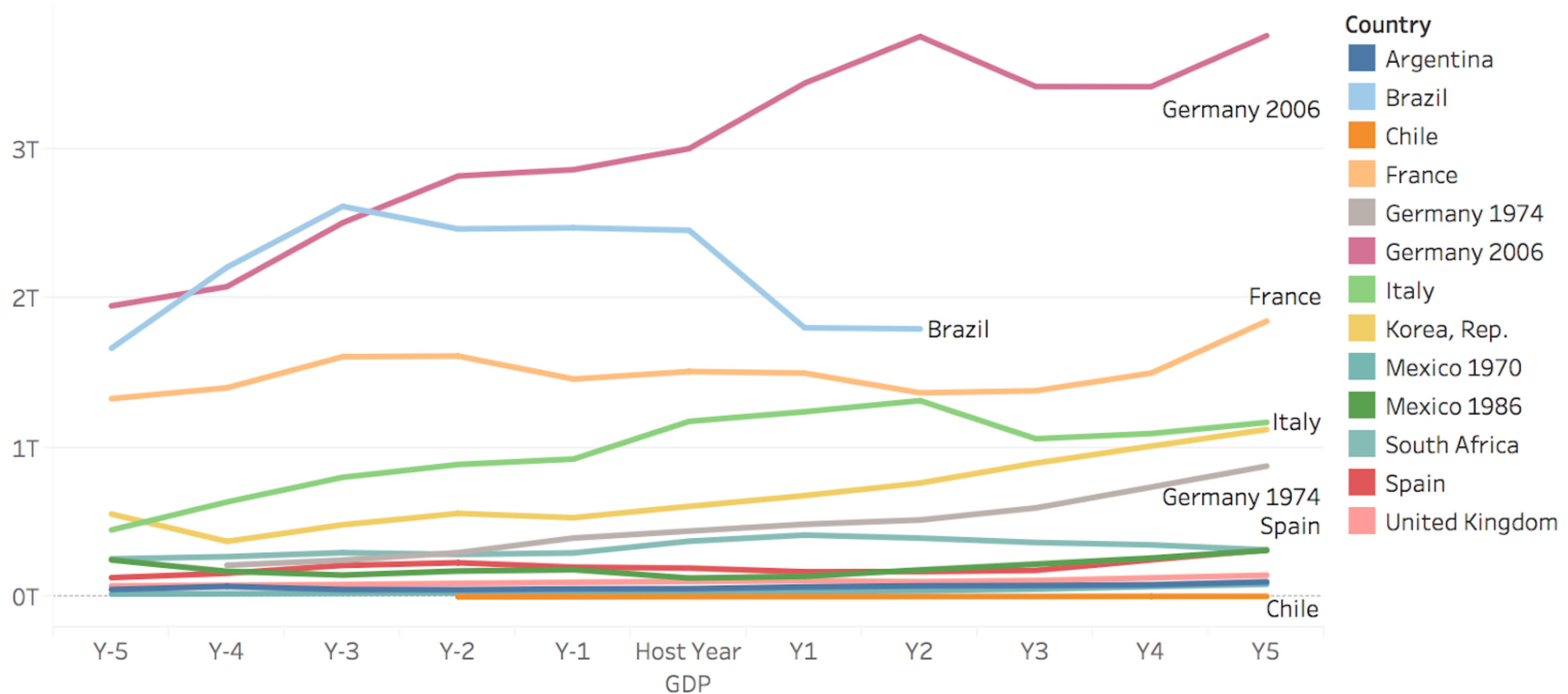


Source: The World Bank, GDP (current US\$), 1960 - 2016

GDP Changes among Host Countries

Medium Economies, 1960-2016

18

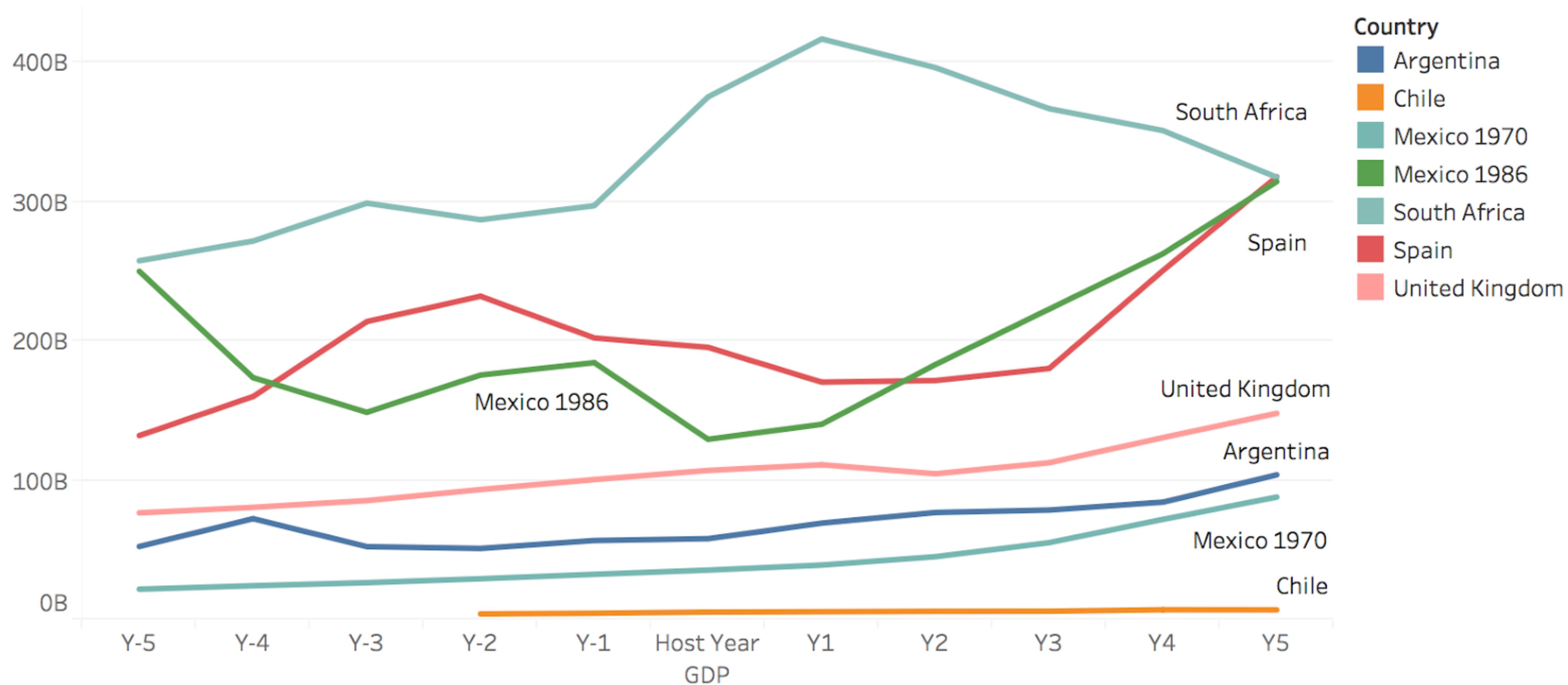


Source: The World Bank, GDP (current US\$), 1960 - 2016

GDP Changes among Host Countries

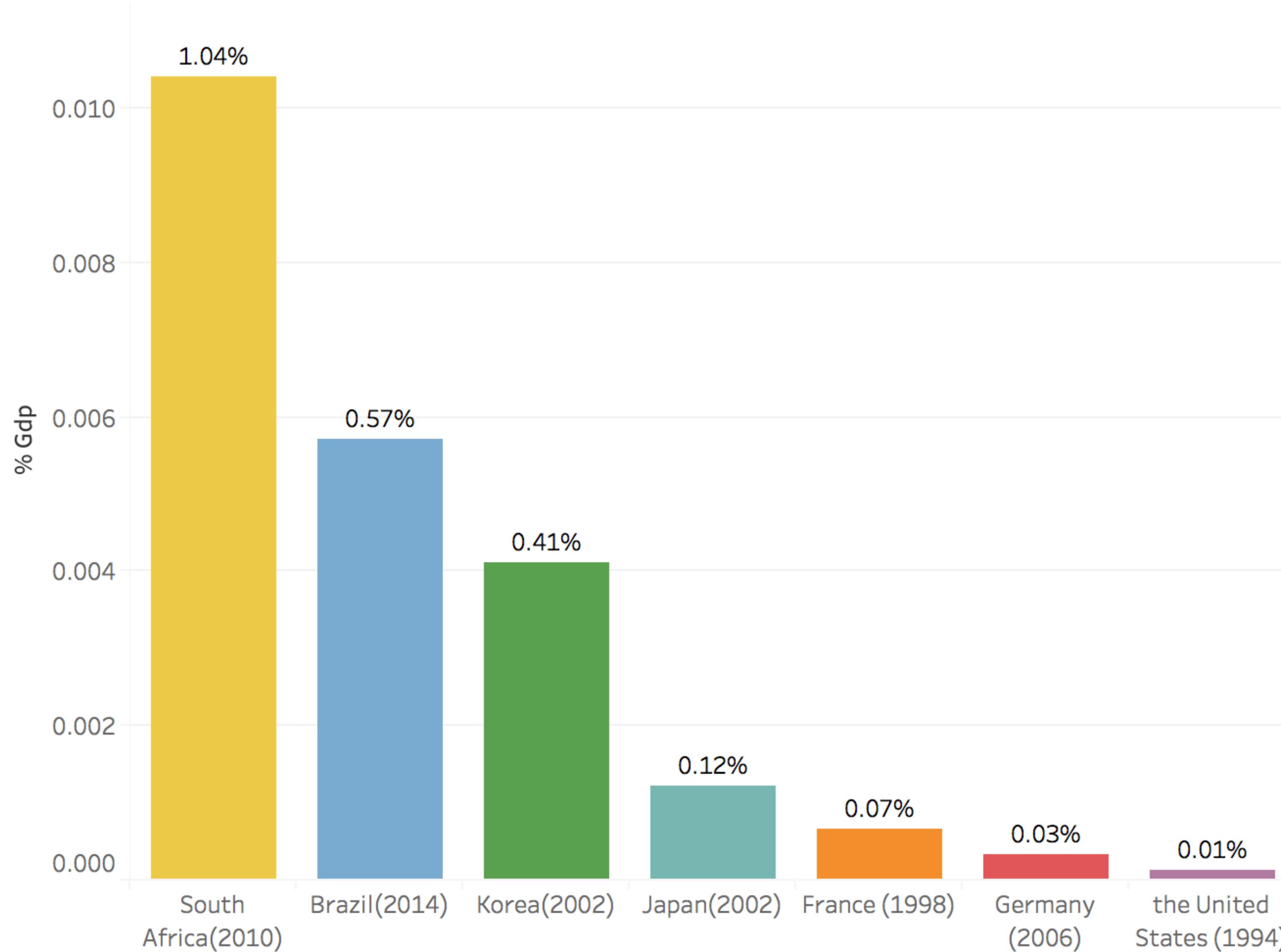
Small Economies, 1960-2016

19



Source: The World Bank, GDP (current US\$), 1960 - 2016

The World Cup Cost % of GDP



- Germany (2006), France (1998) and the United States (1994), with developed infrastructure and modern stadiums, spent less than a billion each.
- When South Korea and Japan co-hosted in 2002 and built new facilities, South Korea spent \$2.5 billion and Japan \$5 billion.
- 2010 World Cup in South Africa cost a total of \$3.9 billion.
- The most expensive one is Brazil, with estimates of total expenditures hovering around \$14 billion.



Limitations & Outlook

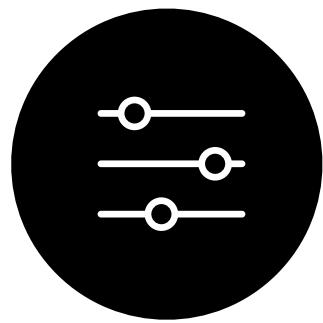
- Road map for future improvement
- Drawing general conclusion from GDP data is very difficult
- Popularity of World Cup is increasing, past data may not be a good guide



3

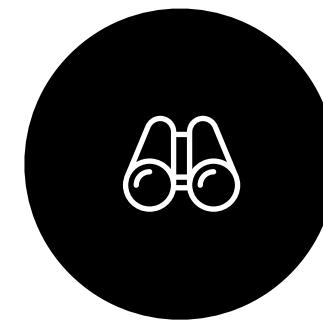
Social Impact

PROCESS



DATASET

World Bank Data
(1995-2016)



COUNTRY

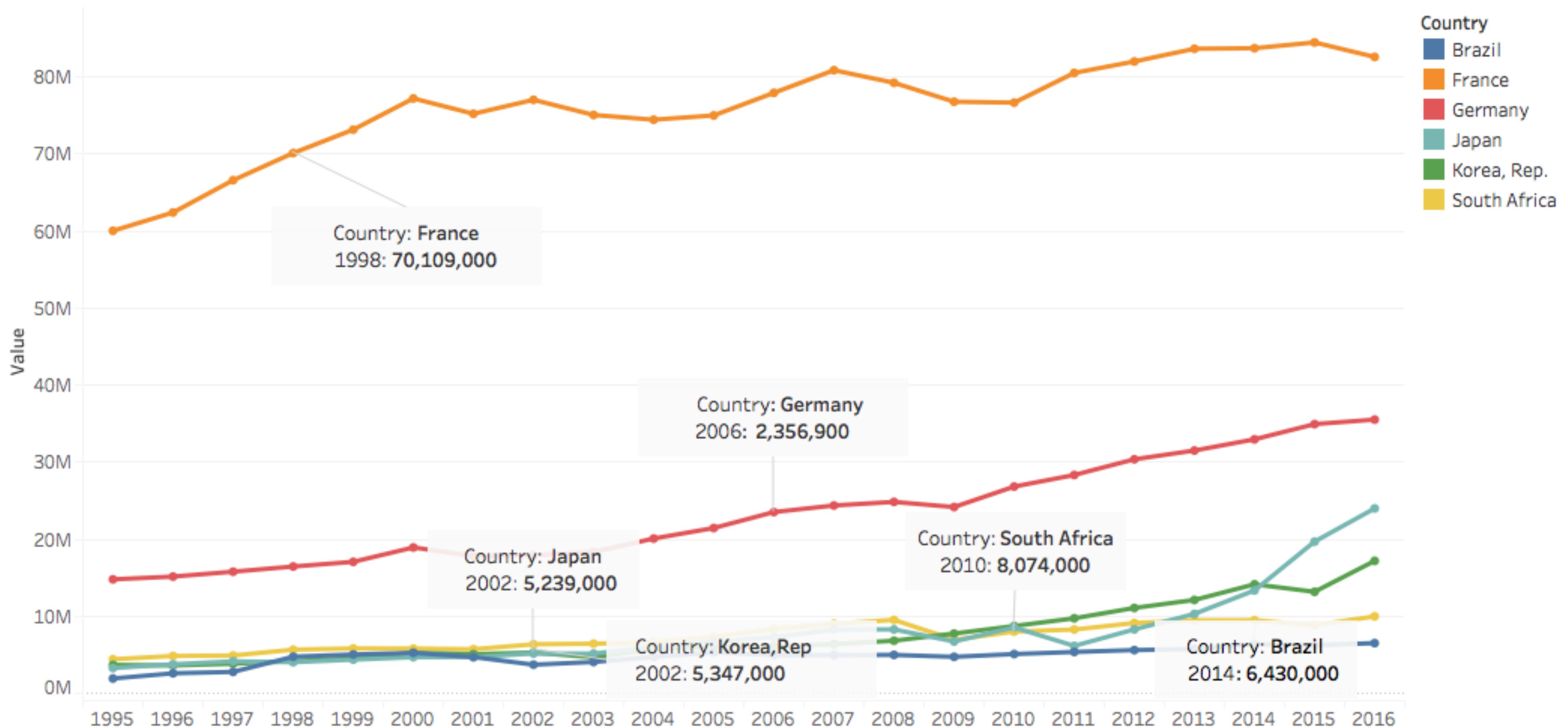
Country	Year
France	1998
Korea.Rep	2002
Japan	2002
Germany	2006
South Africa	2010
Brazil	2014



Perspective

- Number of International Arrivals
- International Tourism Expenditure
- Over Population Ratio

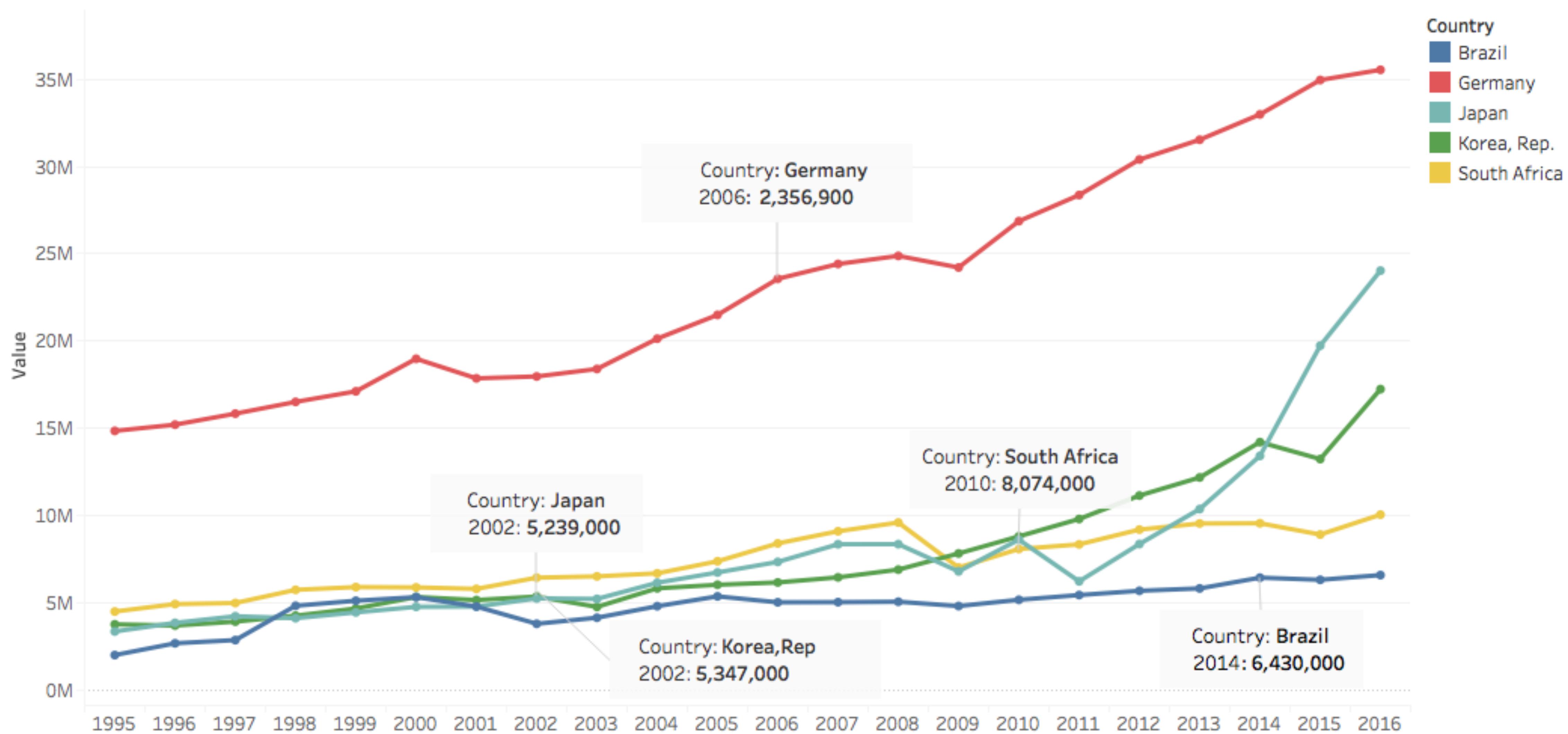
International Tourism (Num of Arrivals) 1995-2016



SOURCE: The World Bank Data (International Tourism number of arrivals)

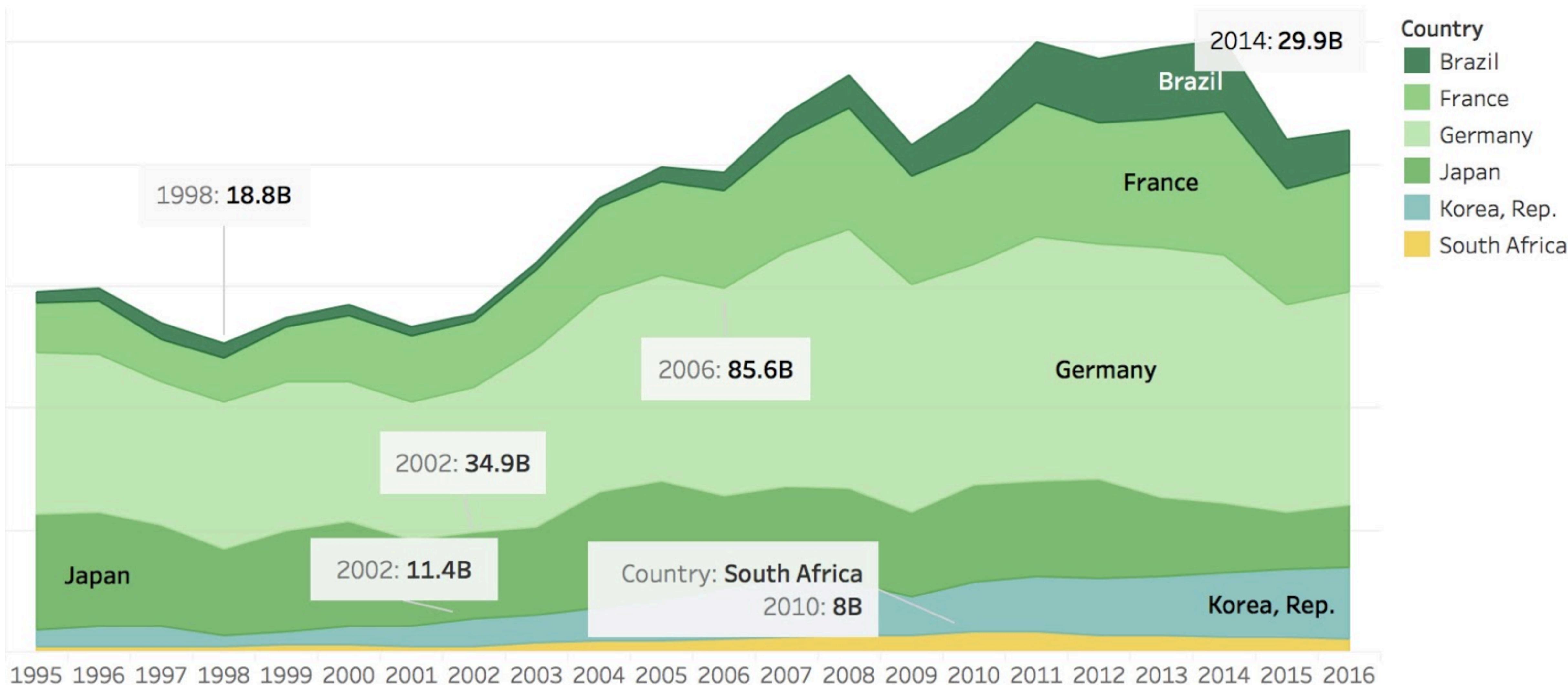
International Tourism (Num of Arrivals) 1995-2016

25



SOURCE: The World Bank Data (International Tourism number of arrivals)

International tourism, expenditures 1995 - 2016, current US\$





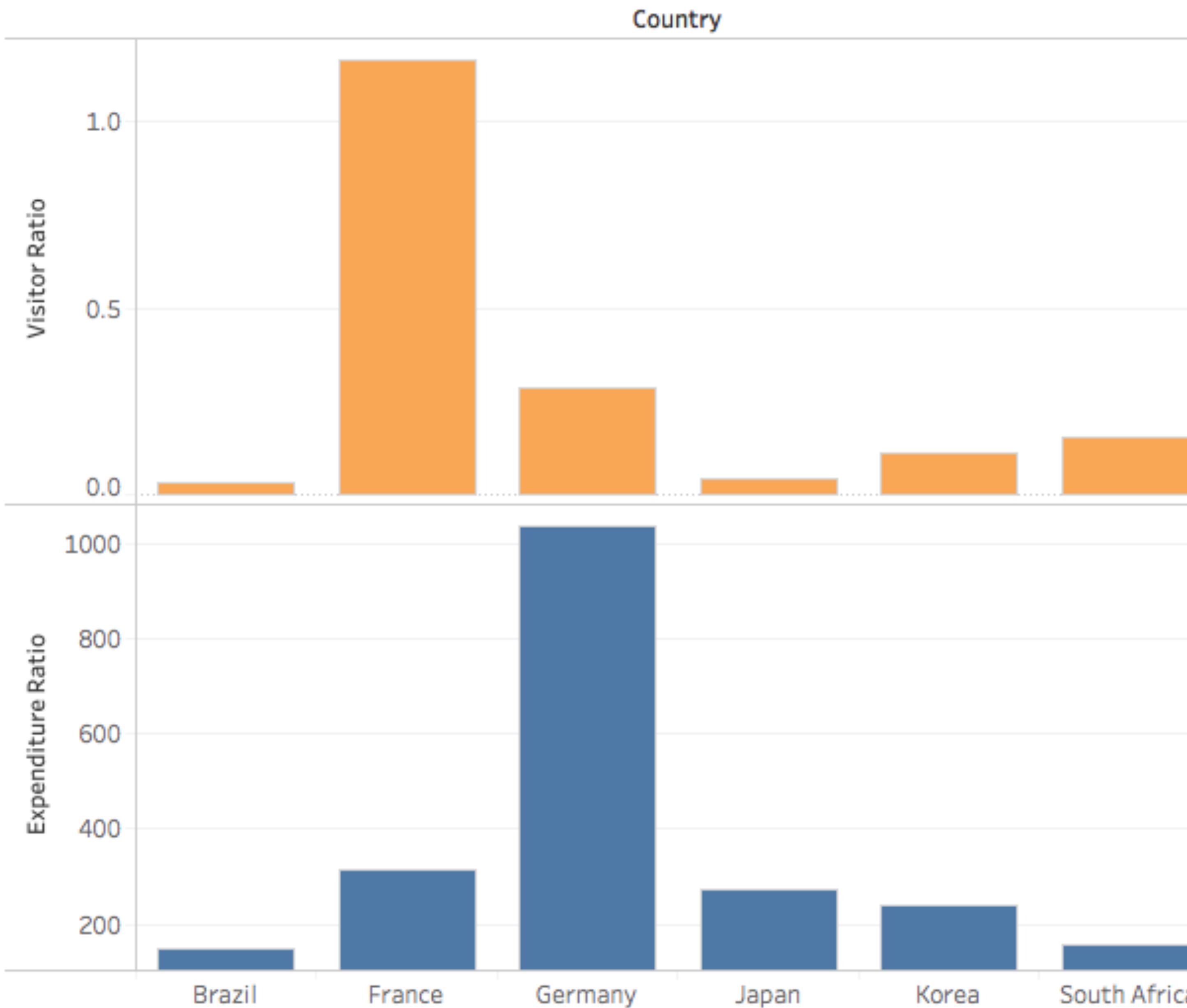
FUNCTION

$$\text{Tourists_Population Ratio} = \frac{\text{Total International Tourists}}{\text{Total Population}}$$

$$\text{Expenditure_Population Ratio} = \frac{\text{Total International Tourism Expenditure}}{\text{Total Population}}$$

Host Country Tourist & Expenditure Over Population Ratio

28



Tourists Ratio:

- Highest: France (1.16)
- Lowest: Brazil (0.03)

Expenditure Ratio:

- Highest: Germany (1040.08)
- Lowest: Brazil (146.90)



Limitations & Outlook

- Roadmap for future improvement
- Trending over different years without monthly comparison
- Focus on international tourism impact without domestic visitors



CONCLUSION

Truth Continuum

Analytical Design

Deceptive Detection

Understand Audience

Comparable Indicators