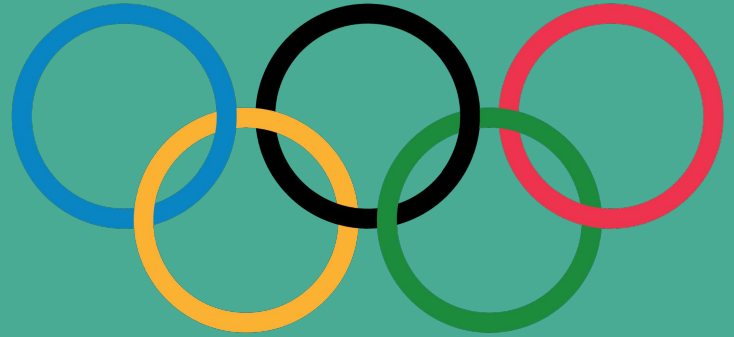


Olympics and Economics

Beijing, Austin, Melissa
MIDS W200 Summer 2021

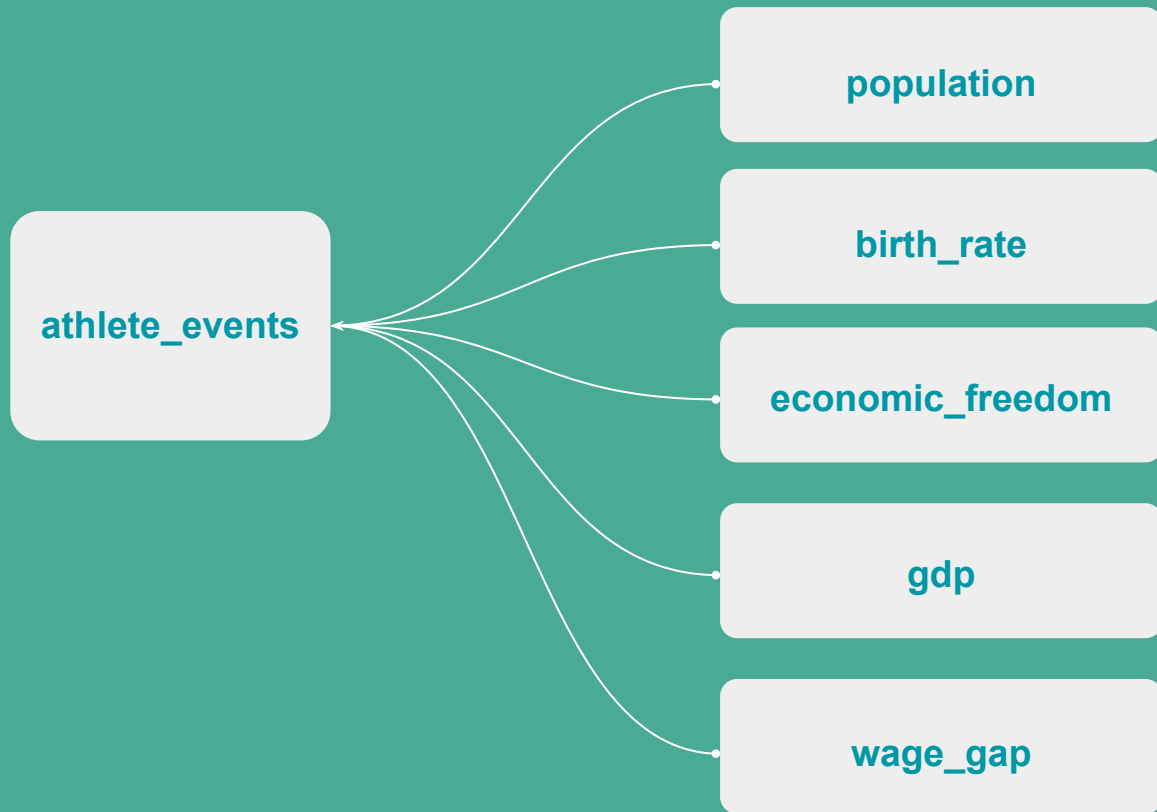


How do **economic characteristics** (population, birth rate, GDP, gender equality) of various countries correlate with high performance (high medal count)?

- ❖ How might we use economic factors to explain **gold medal trends** over time?
- ❖ How does this **change** over time?
- ❖ What does it look like for countries to **dominate** individual sports?

Dataset overview

We used 6 datasets: 1 primary and 5 supplemental



Primary dataset overview



51



213

There are 213 different countries represented in this dataset

Primary dataset “quirks”

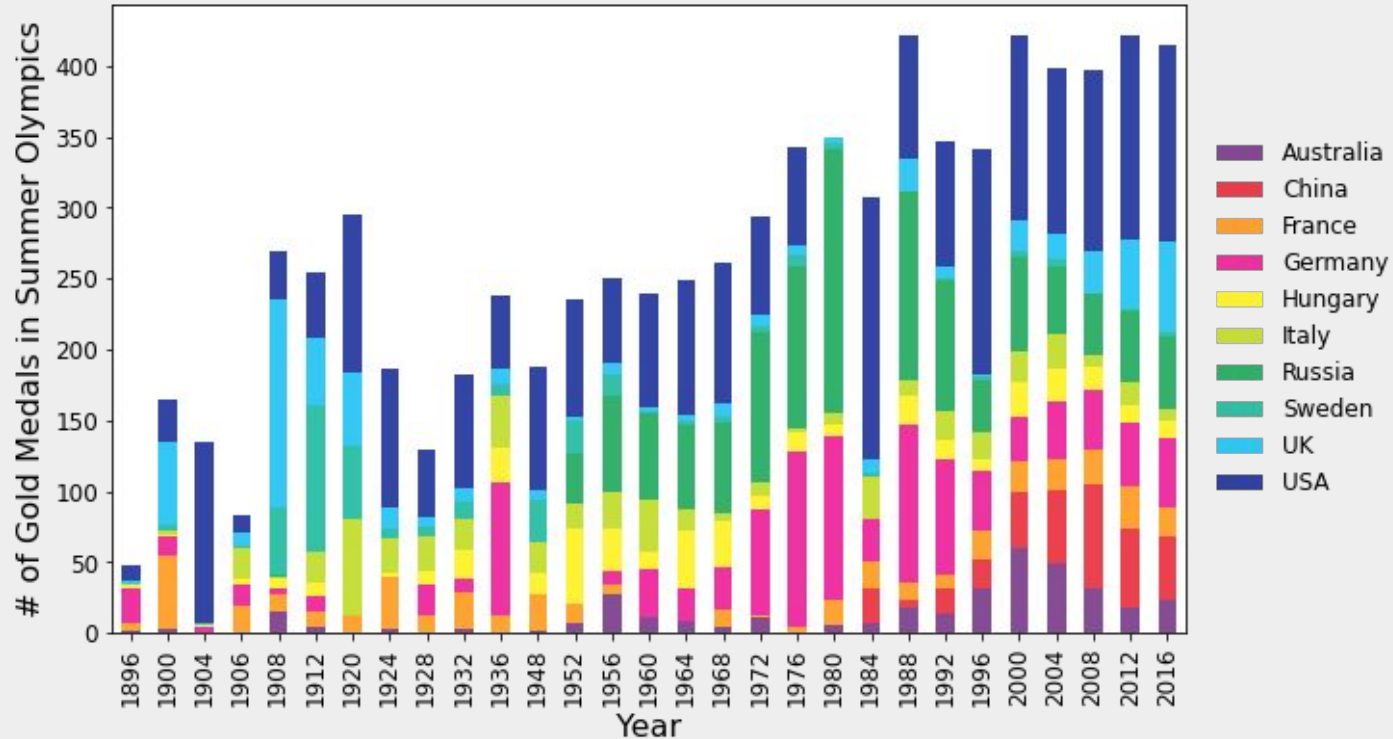
Multiple medals for team events

	Name	Age	Team	Games	Event	Medal
	Julius Shareef Abdur-Rahim	23.0	United States	2000 Summer	Basketball Men's Basketball	Gold
	Walter Ray Allen	25.0	United States	2000 Summer	Basketball Men's Basketball	Gold
	Vincent Lamont "Vin" Baker	28.0	United States	2000 Summer	Basketball Men's Basketball	Gold
	Vincent Lamar "Vince" Carter	23.0	United States	2000 Summer	Basketball Men's Basketball	Gold
	Kevin Maurice Garnett	24.0	United States	2000 Summer	Basketball Men's Basketball	Gold
	Timothy Duane "Tim" Hardaway	34.0	United States	2000 Summer	Basketball Men's Basketball	Gold
	Allan Wade Houston	29.0	United States	2000 Summer	Basketball Men's Basketball	Gold
	Jason Frederick Kidd	27.0	United States	2000 Summer	Basketball Men's Basketball	Gold
	Antonio Keithflen McDyess	26.0	United States	2000 Summer	Basketball Men's Basketball	Gold
	Alonzo Harding Mourning	30.0	United States	2000 Summer	Basketball Men's Basketball	Gold
	Gary Dwayne Payton	32.0	United States	2000 Summer	Basketball Men's Basketball	Gold
	Steven Delano "Steve" Smith	31.0	United States	2000 Summer	Basketball Men's Basketball	Gold

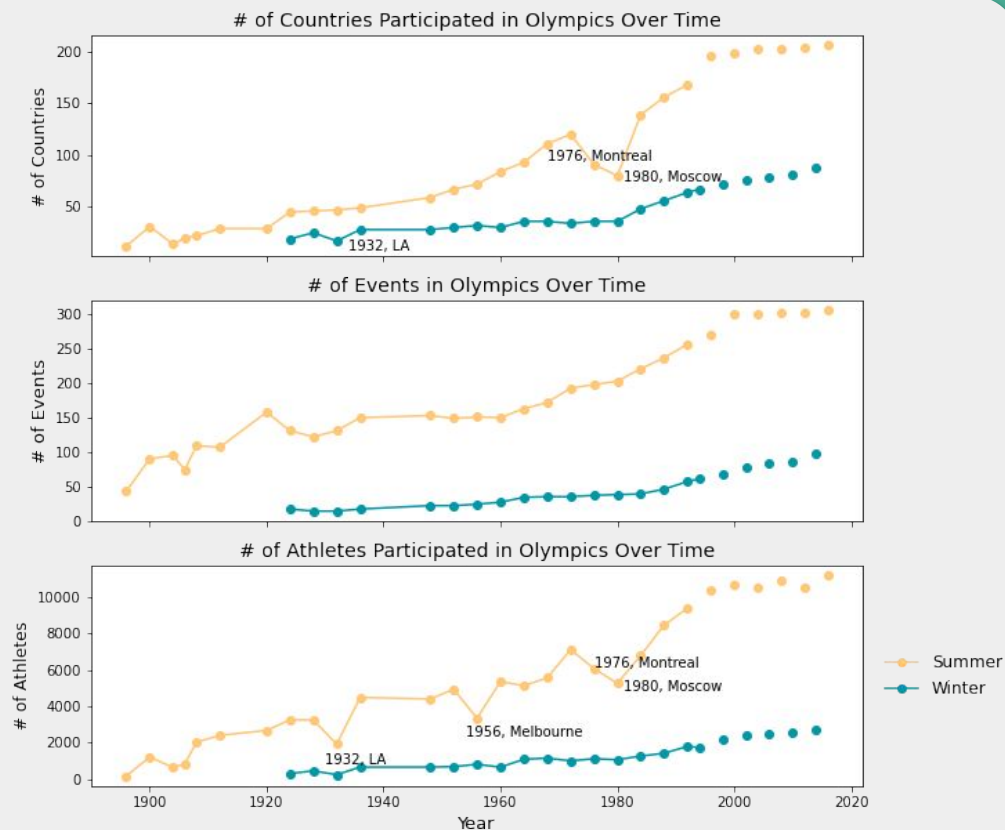
Nulls

id	0
name	0
sex	0
age	9474
height	60171
weight	62875
team	0
noc	0
games	0
year	0
season	0
city	0
sport	0
event	0
medal	231333

The number of medals won has been increasing every year

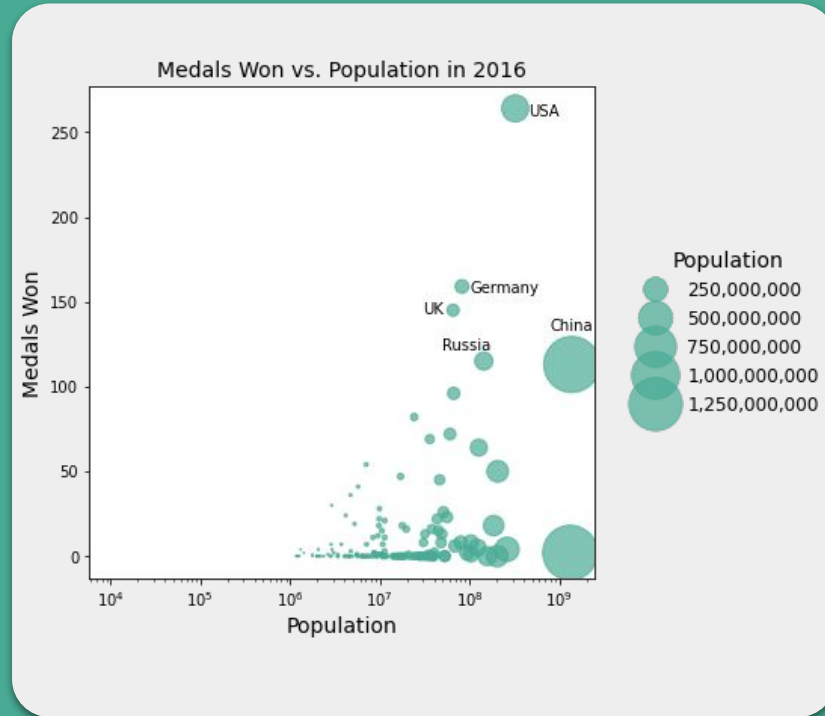


More countries participate, more events occur, more athletes go



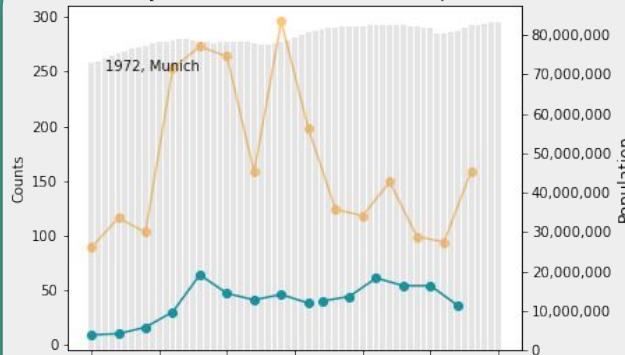
Economic factors

Population - in 2016 for all countries



Population - over time for select countries

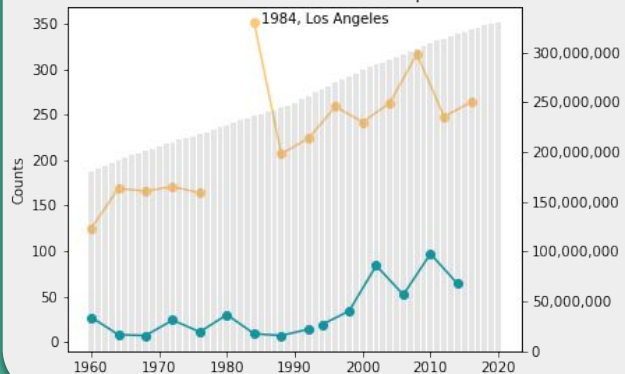
Germany: Total # of Medals Won & Population



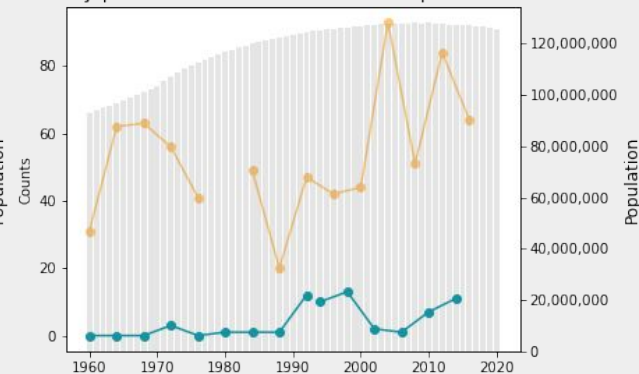
Russia: Total # of Medals Won & Population



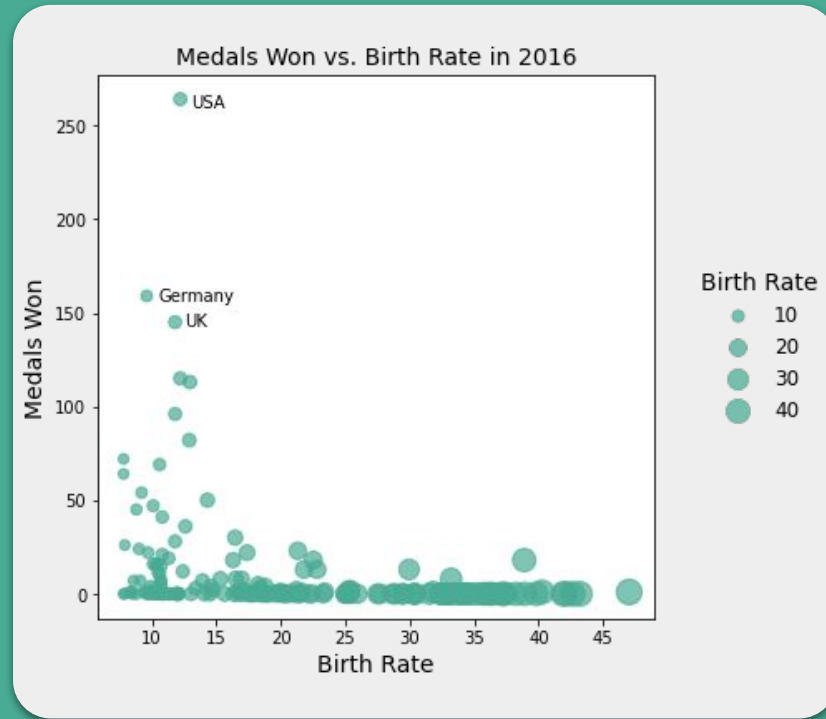
USA: Total # of Medals Won & Population



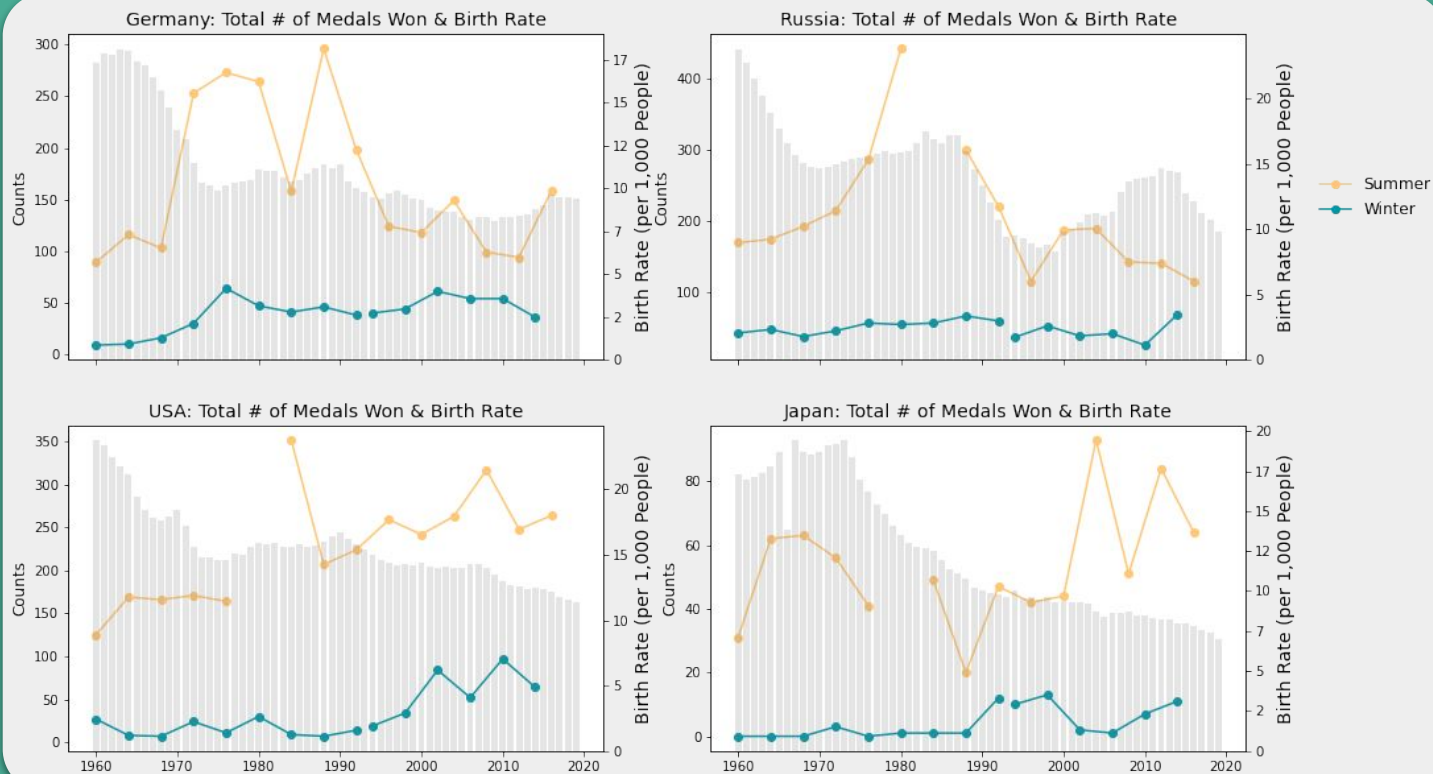
Japan: Total # of Medals Won & Population



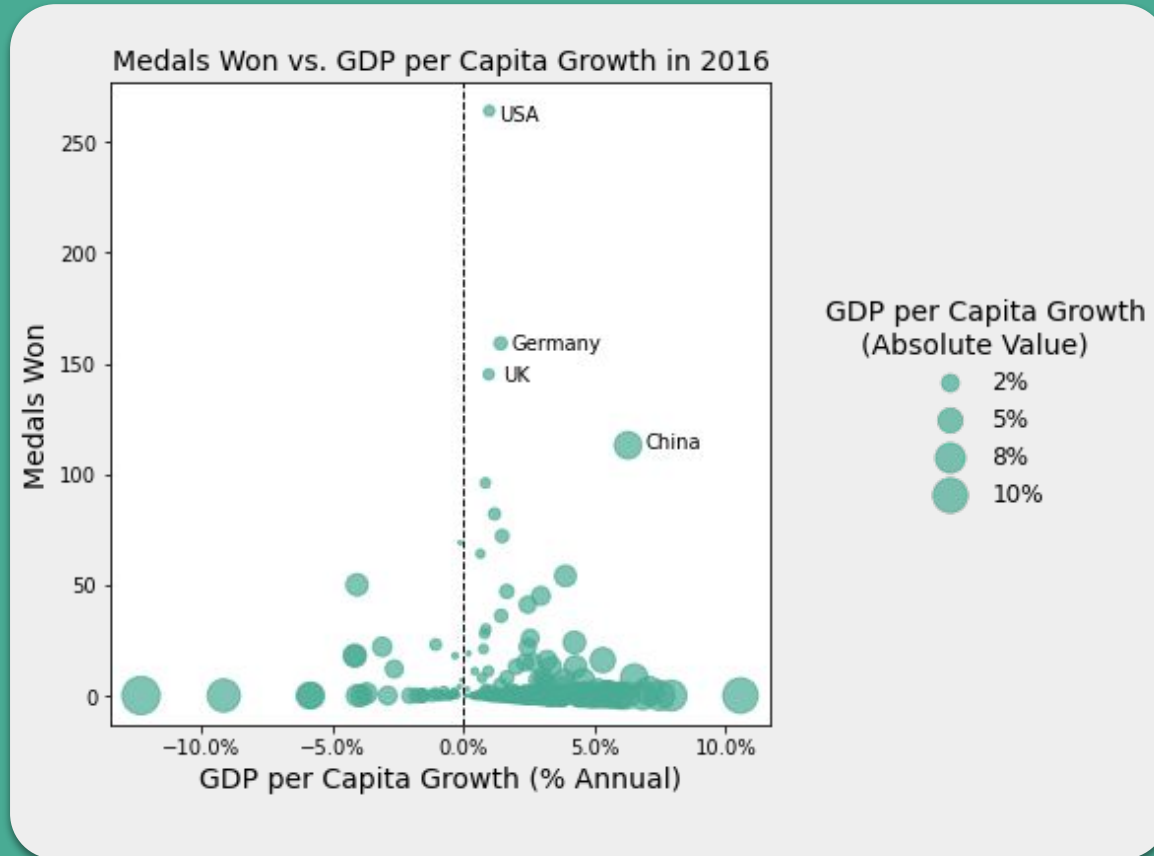
Birth Rate - in 2016 for all countries



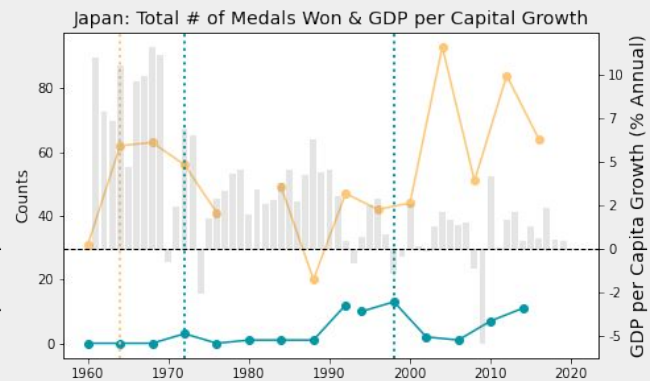
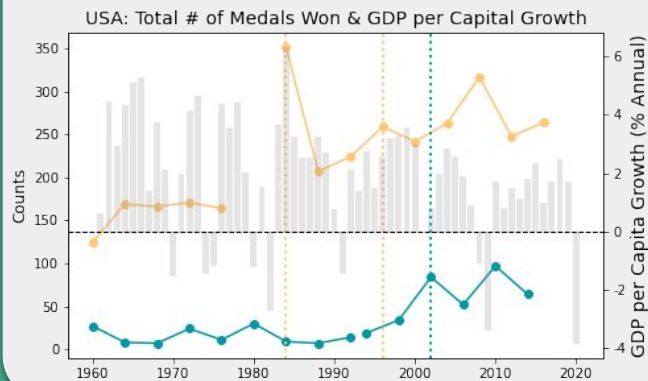
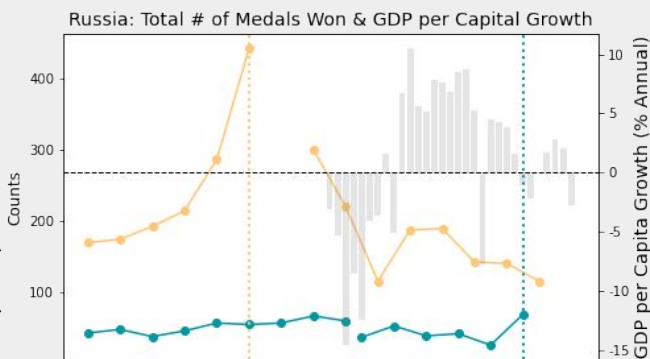
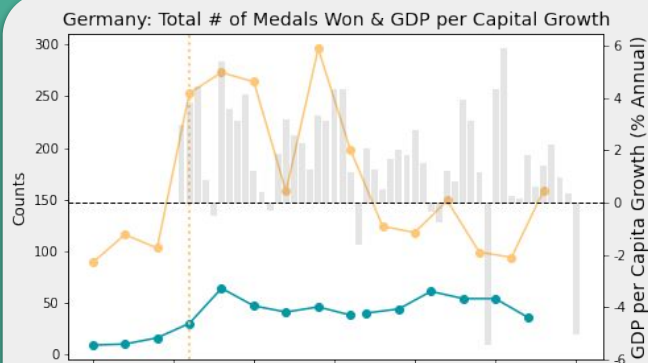
Birth Rate - over time for select countries



GDP per capita - in 2016 for all countries

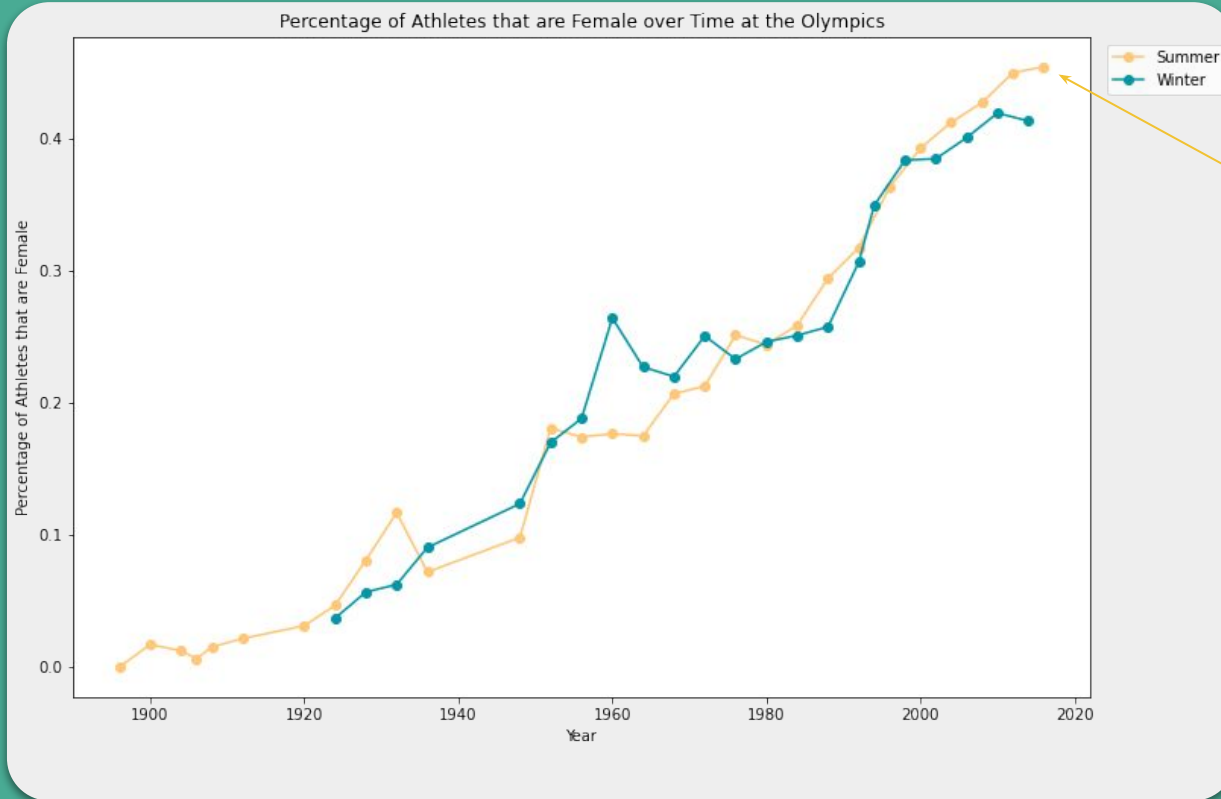


GDP per capita - over time for select countries



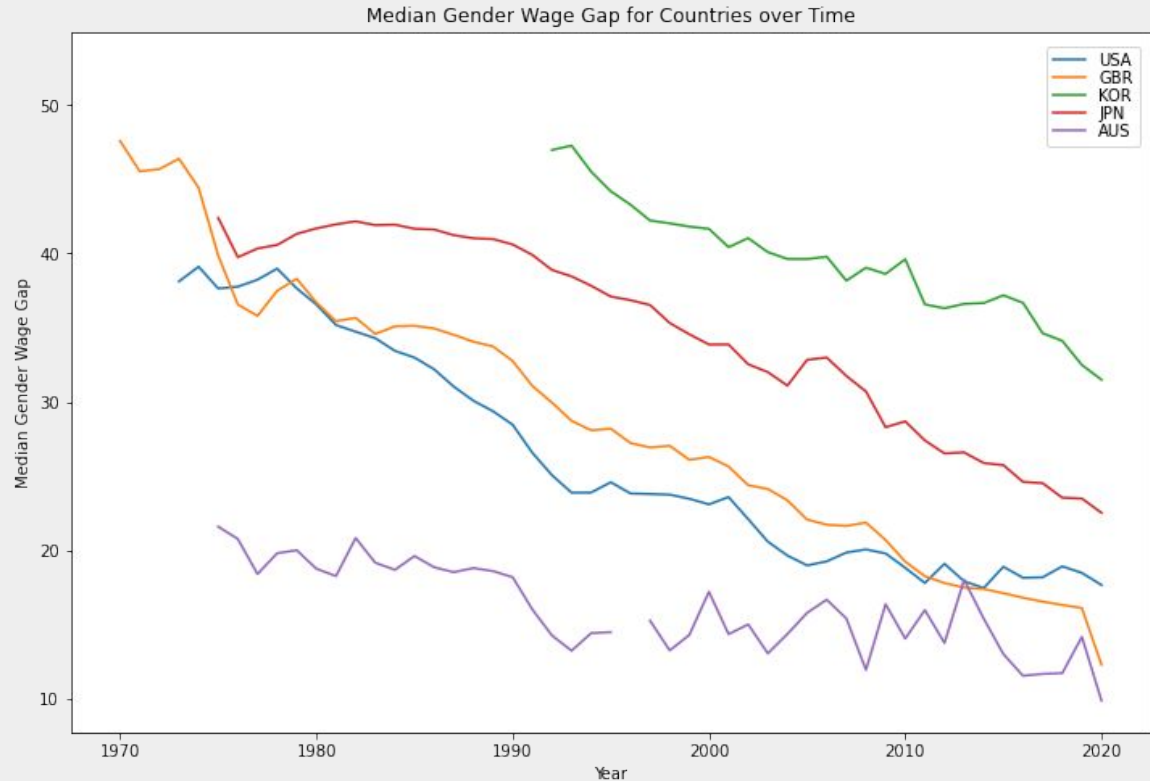
Olympics & Gender equality

The percentage of total athletes that are females at the Olympics has been increasing over time



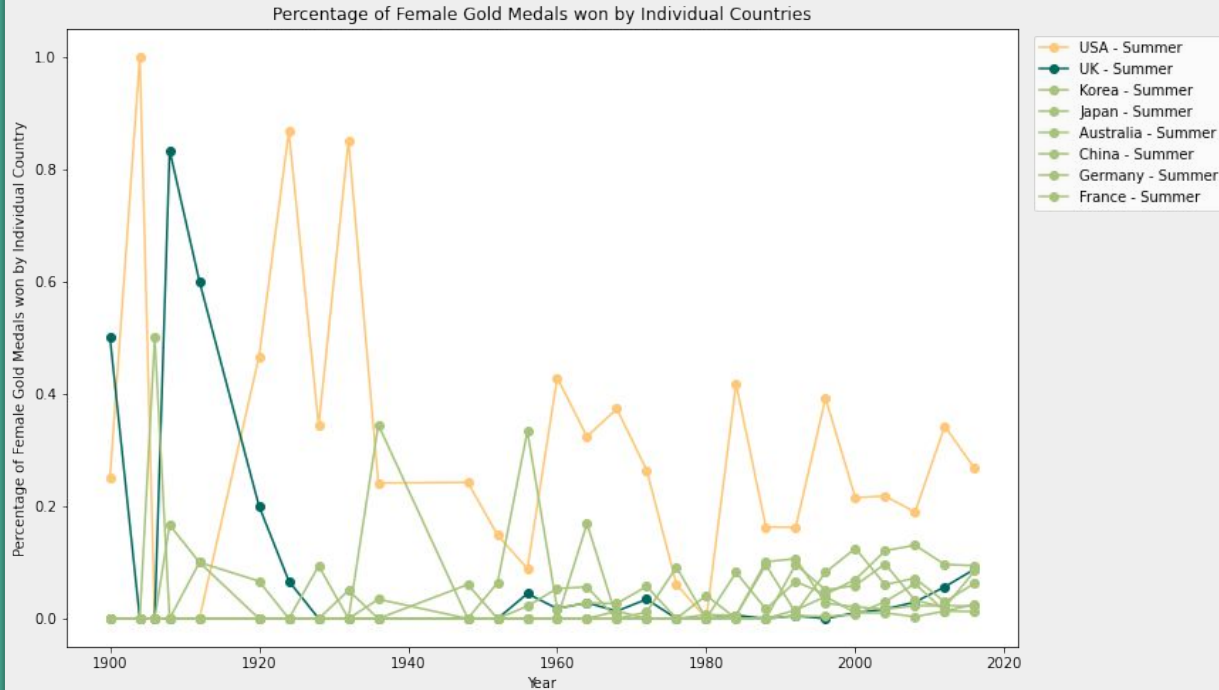
45.5% of the athletes at the 2016 Summer games in Rio de Janeiro were women.

The wage gap has been decreasing over time



Here, wage gap is defined as:
the difference between
median earnings of men and
women relative to median
earnings of men

There is increasing diversity over time in the countries with women who win gold medals



Individual Event Domination

USA dominates swimming while China dominates table tennis

Swim Gold Medals (1896 - 2016)

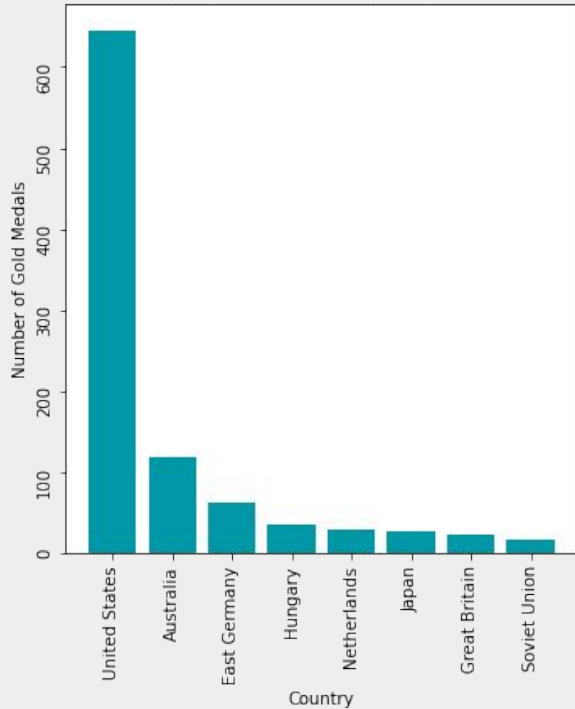
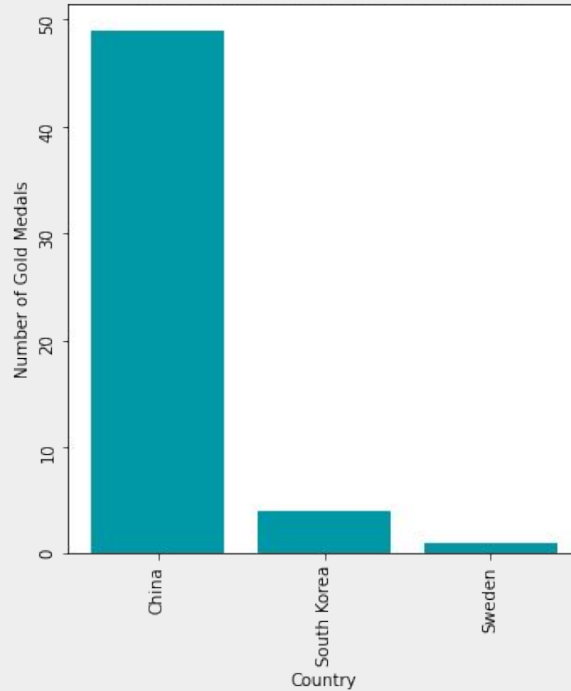
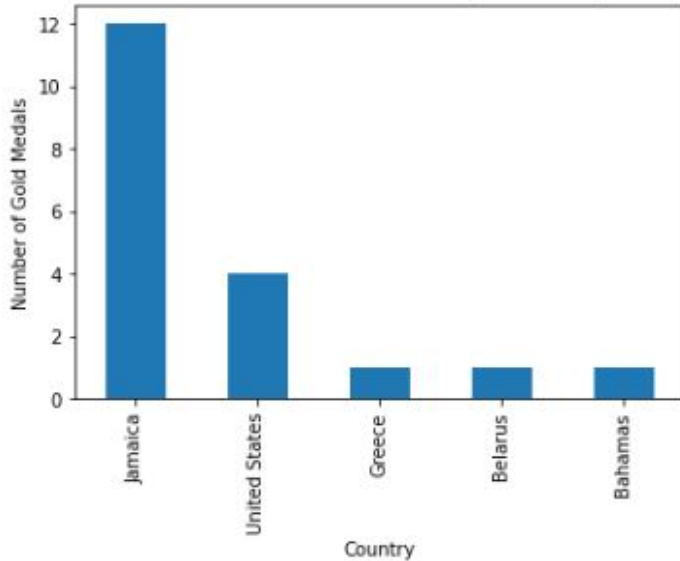


Table Tennis Gold Medals (1896 - 2016)

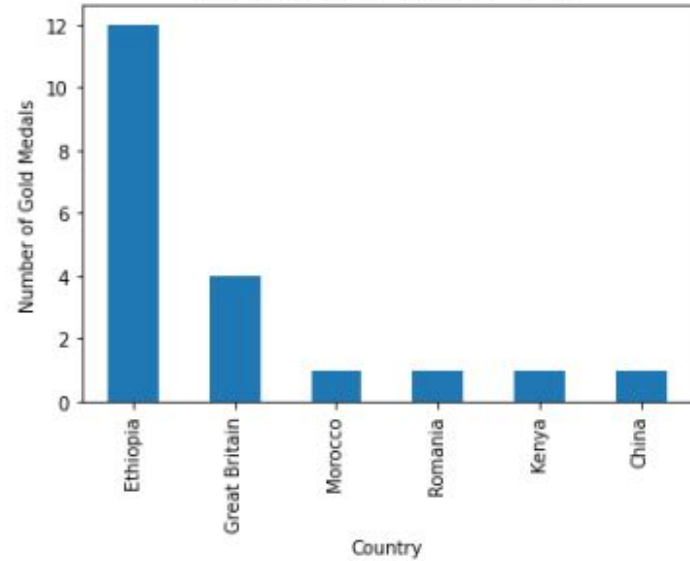


Jamaica, Kenya, and Ethiopia overtake USA on track in 21st Century

100m & 200m Gold Medals (2000-2016)



5K & 10K Gold Medals (2000-2016)



**Concluding thoughts & further
analysis ideas**

Economic Impact on Host Cities



Individual Athlete Superstars



