Noam Ben Moshe: 318962693

Avraham Elbaz: 209885359

Roy Kremer: 207577099

Romi Richter: 212876551

Maxim Lisiansky: 206529018

Assignment 2

1. Contributions of the Work

This project tries to better understand how economic factors influence success in the Olympic Games. A lot of research has already looked at the connection between money and medals, but this work adds a few things. First, it compares multiple studies and tries to see if the economic hypothesis (that richer countries win more medals) still holds true when looking at more recent data. Second, it looks at how important other things like population size or hosting the Olympics are compared to GDP or GNP. Lastly, the project tries to show how much these effects might change across countries or over time. The goal is not to create a perfect prediction model, but to better understand which factors matter most and whether the usual economic explanation still makes sense today.

2. Novelty of the Work

What makes this project different is that it tries to bring together ideas from several studies and compare how they explain Olympic success. While many papers focus on one specific method or time period, this project looks at the bigger picture by combining different models and trying to understand what factors really matter — like GDP, population, or hosting the games. It doesn't try to invent a totally new method, but it aims to take what's already been done and see how the results match up or differ when using the same ideas in a combined or clearer way. The novelty comes from organizing and comparing things more directly, not from doing something completely new.

3. Research Question

The main research question for this project is:
The effect of economic and demographic factors, such as GDP per capita and population size, on the number of Olympic medals countries achieve, and how differences in economic strength may influence overall Olympic success.

4. Related Work

Rewilak (2021) studies Olympic results from 1996 to 2016 and finds that GDP per capita is not a strong predictor of success once country-specific traits are considered. Instead, population and hosting the games were more consistent factors.
Our project is related because it also looks at whether economic strength really explains Olympic results.

The difference is that Rewilak uses advanced models to remove hidden country effects, while I’m trying to compare multiple ideas more simply to understand the general picture.

Bernard & Busse (2004) use a production function model and Tobit regression to study Olympic medal shares between 1960 and 1996. They find that total GDP and population are the biggest predictors, and that host countries get a clear medal bonus.
This connects closely to our project because it also looks at GDP and population size as key factors.
However, our work is less focused on prediction and more about comparing how different studies explain success, rather than building one strong model.

Hoffmann et al. (2004) focus on ASEAN countries in the 2000 Olympics and explain their low medal counts by pointing to lower GNP and smaller populations. They also mention that richer countries still need to invest in sports, not just rely on being rich.
This is relevant because it adds a regional example and shows limits of the economic explanation.
Our approach is broader, using multiple papers to see if the same patterns apply generally, not just to one region or one Olympics.

Arcidiacono,Kimbrough (2017) from The North American Sports Study investigates the connection between team payrolls and performance in major sports leagues (MLB, NBA, NHL, and NFL). It shows that in leagues without strict salary caps, higher payrolls strongly improve winning chances. Our project relates because both studies explore how financial resources impact performance, though we focus on Olympic medals rather than team sports. The difference is that the sports study looks at club-level data and competitive balance rules, while we study country-level factors and the Olympics.

Xun Bian's (2005) study analyzes Olympic medal counts using population size, economic resources (GDP per capita), political structure, and hosting status. It finds that all four factors significantly impact success, though diminishing returns exist. Our project is related because we also focus on GDP, population, and hosting effects on Olympic medals. The difference is that Xun Bian uses a Cobb-Douglas production function and linear models, while we aim more to compare different studies' findings rather than building a single predictive model