

The Effect of Winning a World Cup

LMU Master Thesis - Project Overview

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This thesis investigates the macroeconomic effects of winning the FIFA World Cup on national economies. Building upon and replicating the methodology of Mello (2024) "A Kick for GDP", the analysis examines whether World Cup victories generate measurable impacts on GDP growth, consumption, investment, and trade for winning nations.

1. Research Overview

This project replicates and extends the empirical analysis from Mello's "A Kick for GDP" paper published in Oxford Bulletin of Economics and Statistics (2024). The study uses quarterly macroeconomic data from OECD countries spanning 1961–2021 to assess whether winning the FIFA World Cup produces identifiable economic effects.

Key Research Questions:

- Does winning the World Cup affect GDP growth in the winning country?
- Are there effects on consumption, investment, exports, and imports?
- How do effects differ between World Cup hosts and winners?
- Are the effects temporary or persistent?

2. Data

The analysis uses quarterly national accounts data from the OECD QNA database, specifically chain-linked volume estimates in PPP-adjusted 2015 US dollars (VPVOBARSA specification). The dataset includes over 8,700 country-quarter observations.

Specification	Value
Time Period	1961-Q1 to 2021-Q4
Total Observations	8,737
Number of Countries	48
Winner Countries	6 (BRA, DEU, ESP, FRA, GBR, ITA)
Control Countries	42
Frequency	Quarterly, Seasonally Adjusted
Unit	2015 PPP USD (Chain-linked)

Variables Analyzed (Year-over-Year Growth):

- GDP (Gross Domestic Product)
- Final Consumption Expenditure
- Gross Fixed Capital Formation (Investment)
- Exports of Goods and Services
- Imports of Goods and Services
- Population

3. Summary Statistics

The table below compares key macroeconomic indicators between World Cup winner countries and non-winner countries. Statistical significance is denoted by * ($p < 0.10$), ** ($p < 0.05$), *** ($p < 0.01$).

Variable	Winner	Non-winner	t-test
GDP (thousands of 2015 USD millions)	2,277.67 (1,040.89)	1,057.08 (2,493.32)	17.48***
Population (millions)	68.23 (37.34)	49.65 (149.16)	4.49***
GDP per capita	35,020.24 (12,743.09)	33,077.68 (19,305.46)	3.52***
Year-on-Year GDP growth (%)	2.52 (3.29)	3.39 (3.96)	-7.49***
Number of countries	6	42	
Number of observations	1,315	7,422	

Growth Rate Summary (Full Sample):

Variable	N	Mean	Std. Dev.	Min	Max
GDP Growth (%)	8,737	3.26	3.88	-21.98	28.15
Consumption Growth (%)	8,693	3.14	3.68	-41.40	41.68
Investment Growth (%)	8,693	4.34	12.32	-74.77	296.81
Exports Growth (%)	8,693	6.05	9.13	-43.74	77.06
Imports Growth (%)	8,693	6.15	11.07	-63.73	89.95

4. Methodology

The analysis employs two complementary econometric approaches to identify the causal effect of World Cup victories on macroeconomic outcomes:

4.1 Event Study Design

The event study approach examines GDP growth dynamics around World Cup events, comparing treated units (winners/hosts) to control units across a symmetric event window. This method captures both pre-trends and post-treatment dynamics.

4.2 Synthetic Difference-in-Differences (SDID)

SDID combines elements of synthetic control and difference-in-differences methods. It constructs optimal weights for both control units and pre-treatment periods, providing more robust treatment effect estimates than either method alone.

5. World Cup Events Analyzed

World Cup Winners in Sample:

Year	Winner	Host
1966	England (GBR)	England
1974	West Germany (DEU)	West Germany
1982	Italy (ITA)	Spain
1990	West Germany (DEU)	Italy
1998	France (FRA)	France
2002	Brazil (BRA)	Japan/South Korea
2006	Italy (ITA)	Germany
2010	Spain (ESP)	South Africa
2014	Germany (DEU)	Brazil
2018	France (FRA)	Russia

6. Analysis Outputs Generated

The project has produced extensive analytical outputs including visualizations and statistical analyses:

6.1 Event Study Plots (73 plots generated):

- Individual winner country plots (GDP trends around World Cup victory)
- Summary overlay plots for all winners
- Host country event plots
- Feature-specific plots (consumption, investment, exports, imports)
- Average winner vs. host comparison plots

6.2 SDID Analysis Results (5 outcome variables):

- SDID_GDP.png - GDP treatment effects
- SDID_Final_Consumption.png - Consumption treatment effects
- SDID_Gross_fixed_capital.png - Investment treatment effects
- SDID_Export.png - Export treatment effects
- SDID_Import.png - Import treatment effects

6.3 Argentina 2022 Extension:

An extension analysis examines Argentina's 2022 World Cup victory, comparing actual vs. counterfactual economic trajectories:

Feature	Pre-WC Mean (%)	Post-WC Mean (%)	Change (pp)
GDP	0.43	-1.58	-2.02
Consumption	-0.42	-0.92	-0.50
Investment	3.40	-9.32	-12.71
Exports	1.33	5.19	+3.86
Imports	-0.21	-3.95	-3.74

7. Project File Structure

Key files and directories in the project:

File/Directory	Description
oecd_manual_analysis.ipynb	Main data processing and analysis notebook
wc_event_plots.ipynb	Event study visualization generation
sdid_replication.ipynb	SDID analysis implementation
summary_statistics.ipynb	Summary statistics and Table 1 replication
argentina_wc2022_prediction.ipynb	Argentina 2022 extension analysis
paper_replicate_sdid.R	R script for SDID replication
paper_replicate_event_study.R	R script for event study replication
Data/	Raw data files and processing scripts
event descriptive plots/	Generated event study visualizations
sdid results/	SDID analysis output plots
argentina_2022_analysis/	Argentina extension outputs

8. Key Reference

Mello, L. (2024). "A Kick for GDP? The Economic Effects of World Cup Success." *Oxford Bulletin of Economics and Statistics*.