Replication Study: Strategic Thinking Skills: Team C

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July 21, 2025

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Replication Study: Strategic Thinking Skills: Team C

Abstract

This presentation reproduces Figure A11 (GDP per capita trends) from Choi, Kim, & Lim (2024), demonstrating R-based reproducibility following Huber (2025) guidelines.

Paper Details

Title: Strategic Thinking Skills: A Key to Collective Economic Success

Authors: Syngjoo Choi, Seonghoon Kim, & Wooyoung Lim

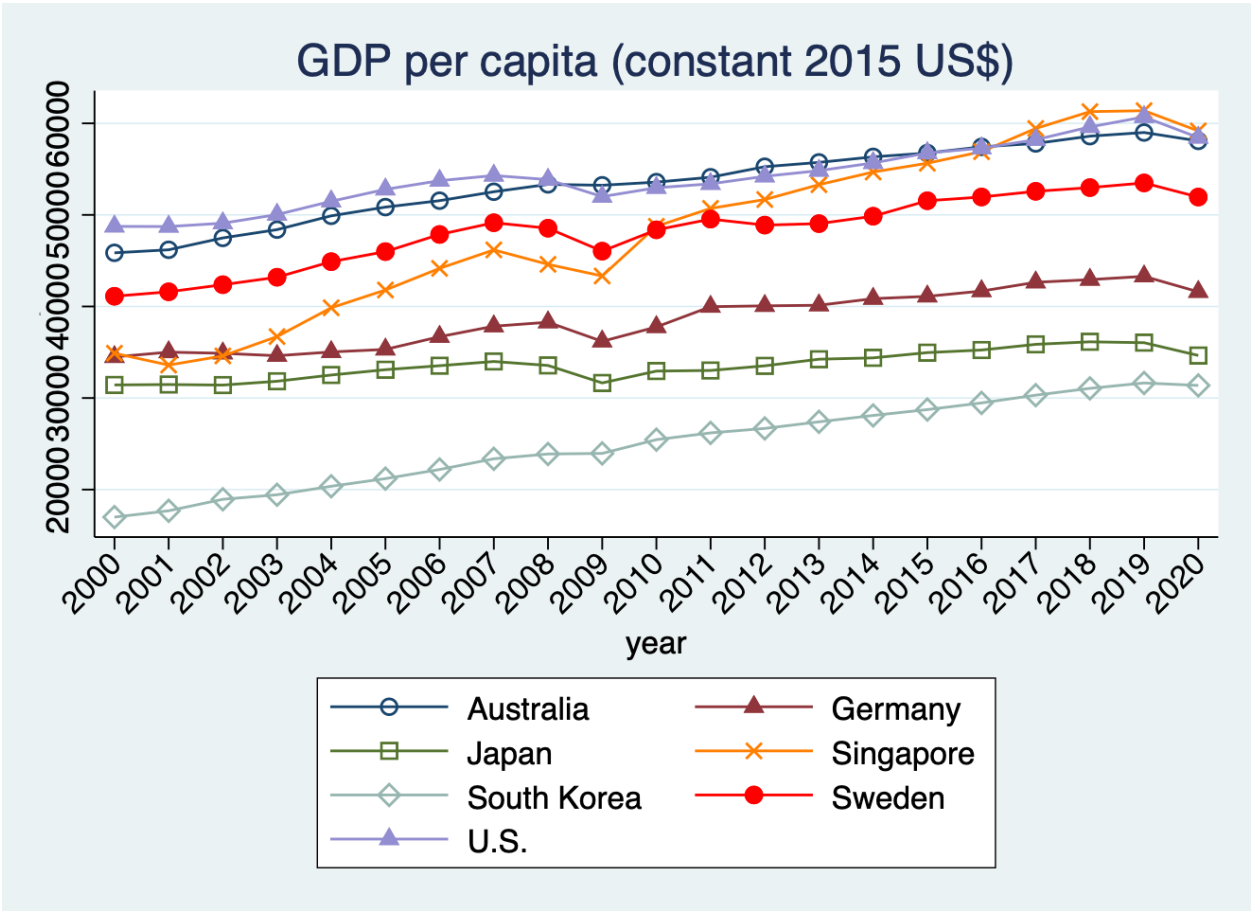**Journal:** Journal of Economic Perspectives, 2024

Original Graph

Figure: GDP per capita (constant 2015 US$) from the source paper.

Data and Methods

We obtained annual GDP per capita (constant 2015 US$) data for seven countries from the World Bank's World Development Indicators (WDI) database. Specifically:

- **Indicator:** `NY.GDP.PCAP.KD` (GDP per capita, constant 2015 US$)
- **Time period:** 2000 through 2020
- **Countries (ISO3 codes):** AUS (Australia), DEU (Germany), JPN (Japan), SGP (Singapore), KOR (South Korea), SWE (Sweden), USA (United States)

Data were fetched directly in R via the `WDI` package.

Reproduction Code

```r
# Load necessary packages (ensure installed beforehand)
library(pacman)
pacman::p_load(tidyverse, janitor, WDI)


# Clear workspace
rm(list = ls())


# Fetch World Bank data
countries <- c("AUS", "DEU", "JPN", "SGP", "KOR", "SWE", "USA")
indicators <- c("NY.GDP.PCAP.KD")


gdp_data <- WDI(country = countries, indicator = indicators,
                start = 2000, end = 2020, extra = TRUE)


# Clean and prepare data
library(dplyr); library(tidyr); library(ggplot2)
```
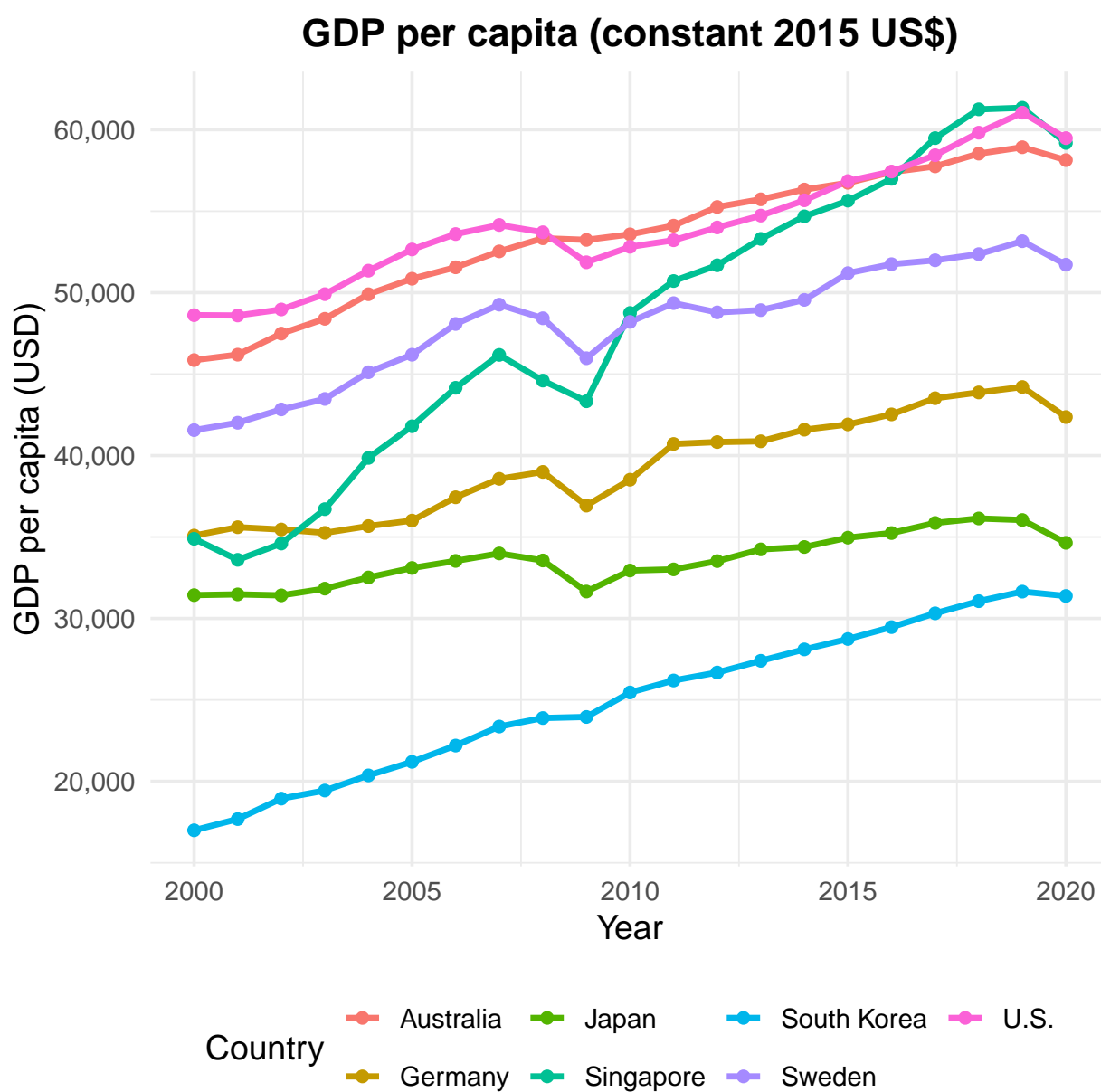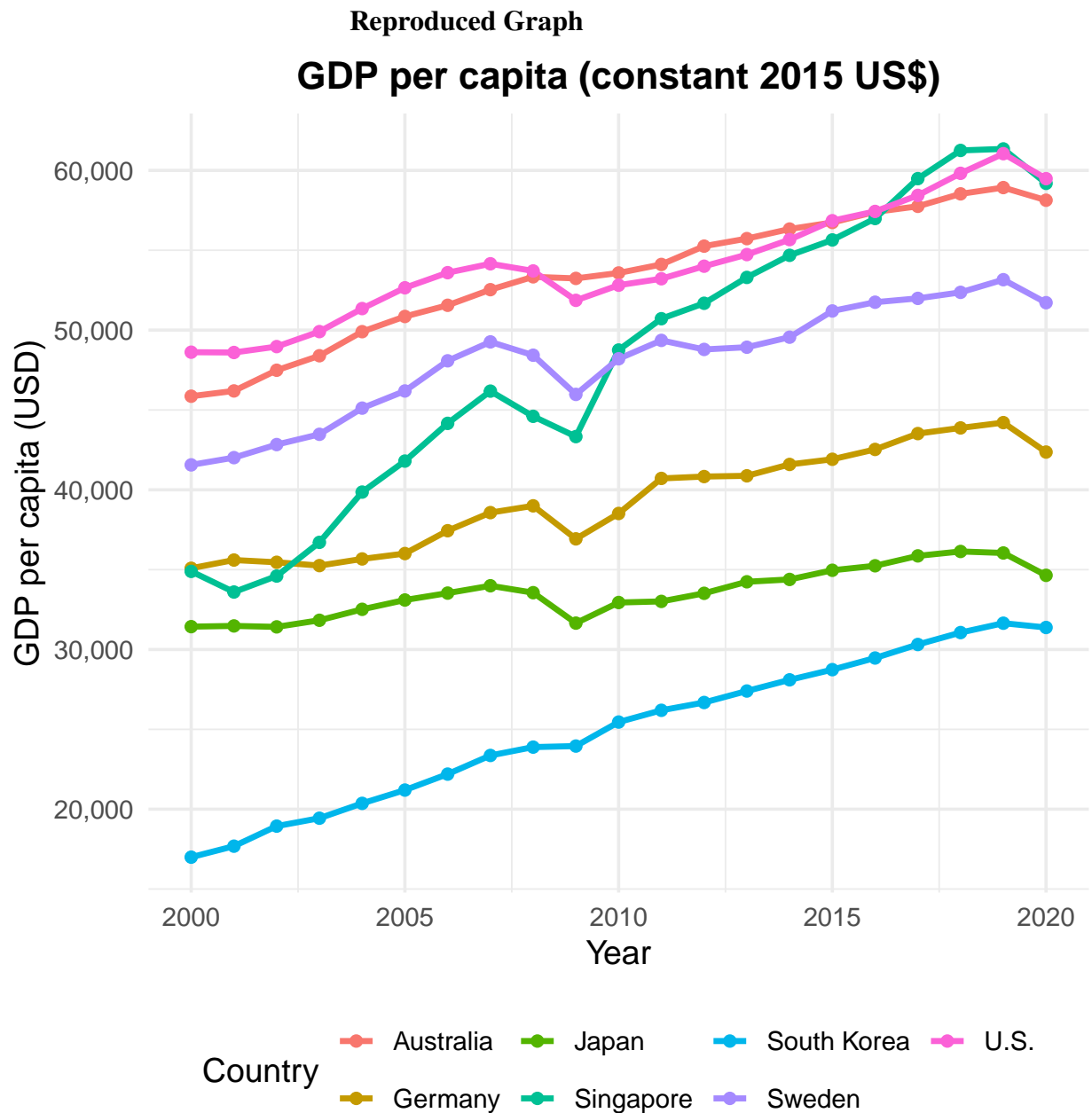
```r
gdp_clean <- gdp_data %>%

  rename(gdp_per_capita = NY.GDP.PCAP.KD) %>%

  clean_names() %>%

  select(country = iso2c, year, gdp_per_capita) %>%

  filter(!is.na(gdp_per_capita)) %>%

  mutate(country = case_when(

    country == "AU" ~ "Australia",

    country == "DE" ~ "Germany",

    country == "JP" ~ "Japan",

    country == "SG" ~ "Singapore",

    country == "KR" ~ "South Korea",

    country == "SE" ~ "Sweden",

    country == "US" ~ "U.S.",

    TRUE ~ country

  ))


# Plot the data

ggplot(gdp_clean, aes(x = year, y = gdp_per_capita, color = country)) +

  geom_line(size = 1.2) +

  geom_point(size = 2) +

  scale_y_continuous(labels = scales::comma) +

  labs(title = "GDP per capita (constant 2015 US$)",

       x = "Year", y = "GDP per capita (USD)", color = "Country") +

  theme_minimal(base_size = 14) +

  theme(

    legend.position = "bottom",
```

```
    plot.title = element_text(face = "bold", size = 16, hjust = 0.5)
)
```

GDP per capita (constant 2015 US$)

Reproduced Graph

GDP per capita (constant 2015 US$)

Discussion and Challenges

- The reproduced graph closely matches the original in trend and scale.

- Minor legend order differences due to factor level defaults.

- Data fetching via WDI may yield slightly different rounding than original.

- Choi, S., Kim, S., & Lim, W. (2024). Strategic Thinking Skills: A Key to Collective

  Economic Success. *[Journal Name]*.

- World Bank. (2024). *World Development Indicators* cite turn0file0

- Huber, S. (2025). *How to use R for data science: Lecture notes.*

Affidavit

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I hereby affirm that this submitted presentation was authored unaided and solely by me.