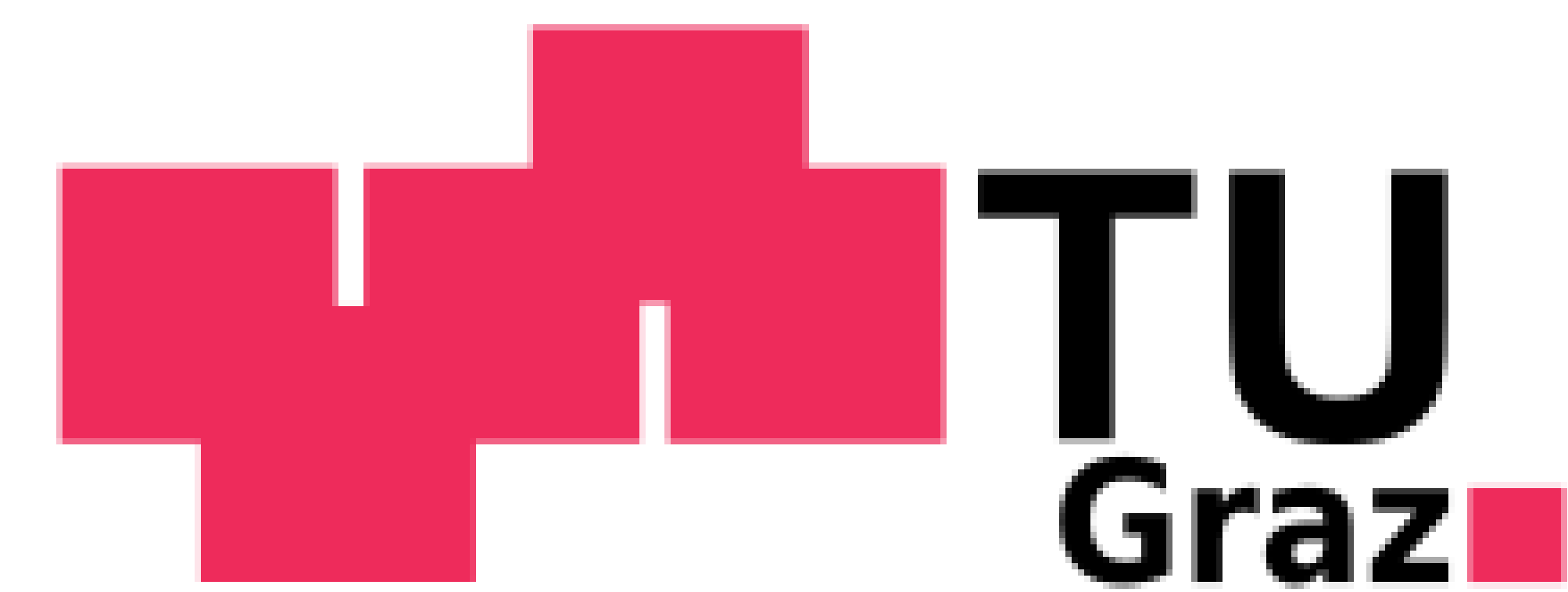


Future Orientation and Economic Development: Evidence from Digital Search Behavior

An analysis of the Future Orientation Index (FOI) and Gross Domestic Product (GDP) per capita.

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Introduction

Does a country’s forward-looking behavior correlate with its economic success? Economic growth is often attributed to physical and human capital. However, society’s focus on the future may be a crucial driver of development.

Future Orientation Index (FOI) is the ratio of searches for the next year in comparison to the previous year, to quantify a country’s focus on the future.

$$FOI = \frac{\text{Total Searches for 2025}}{\text{Total Searches for 2023}}$$

Research Question:
Is future oriented search behavior (FOI) associated with GDP per capita across countries, even after accounting for investment, internet access and education?

Data and Methods

Data:
Search interests for the years 2023 and 2025 via Google Trends for 30 countries.

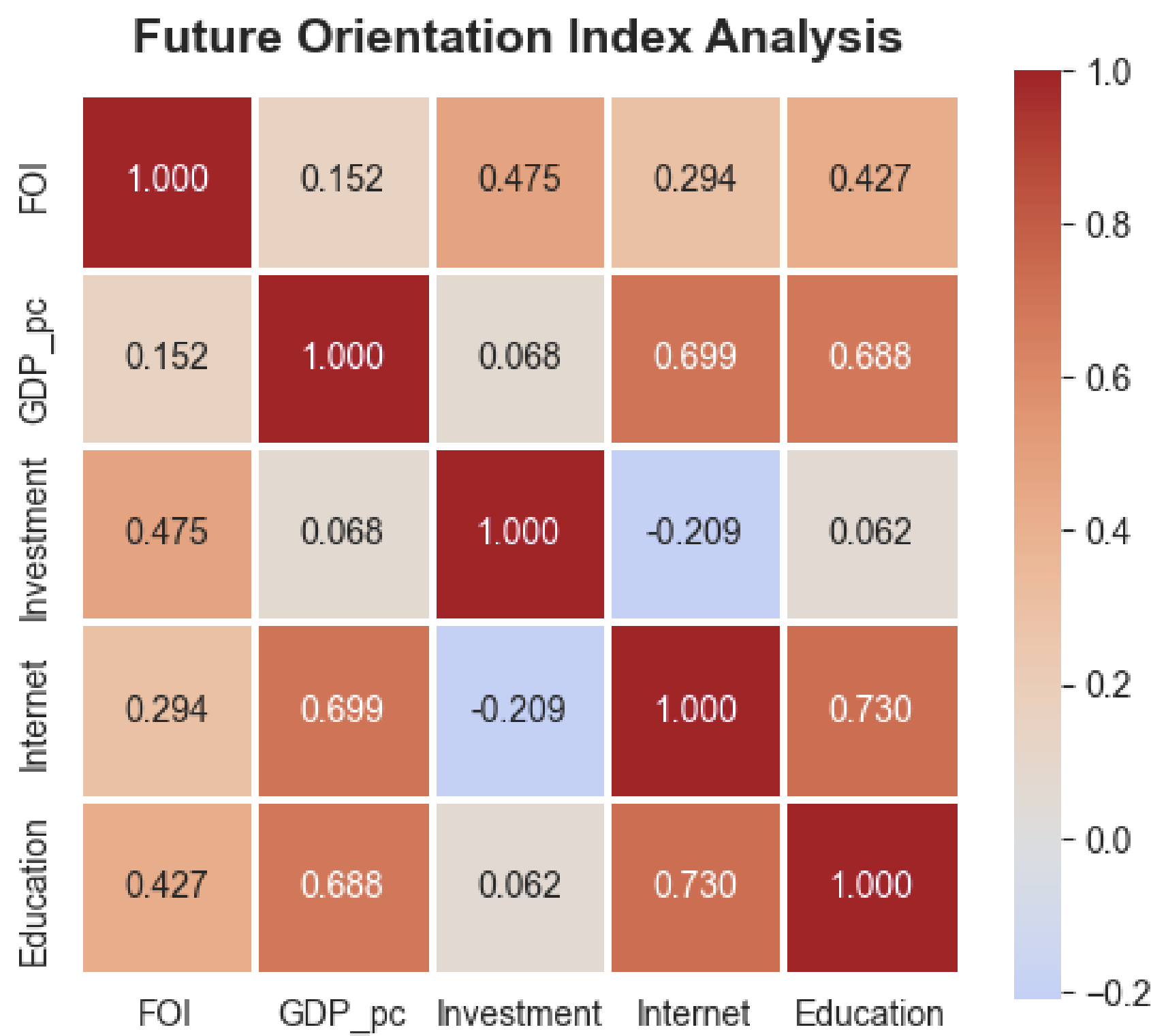
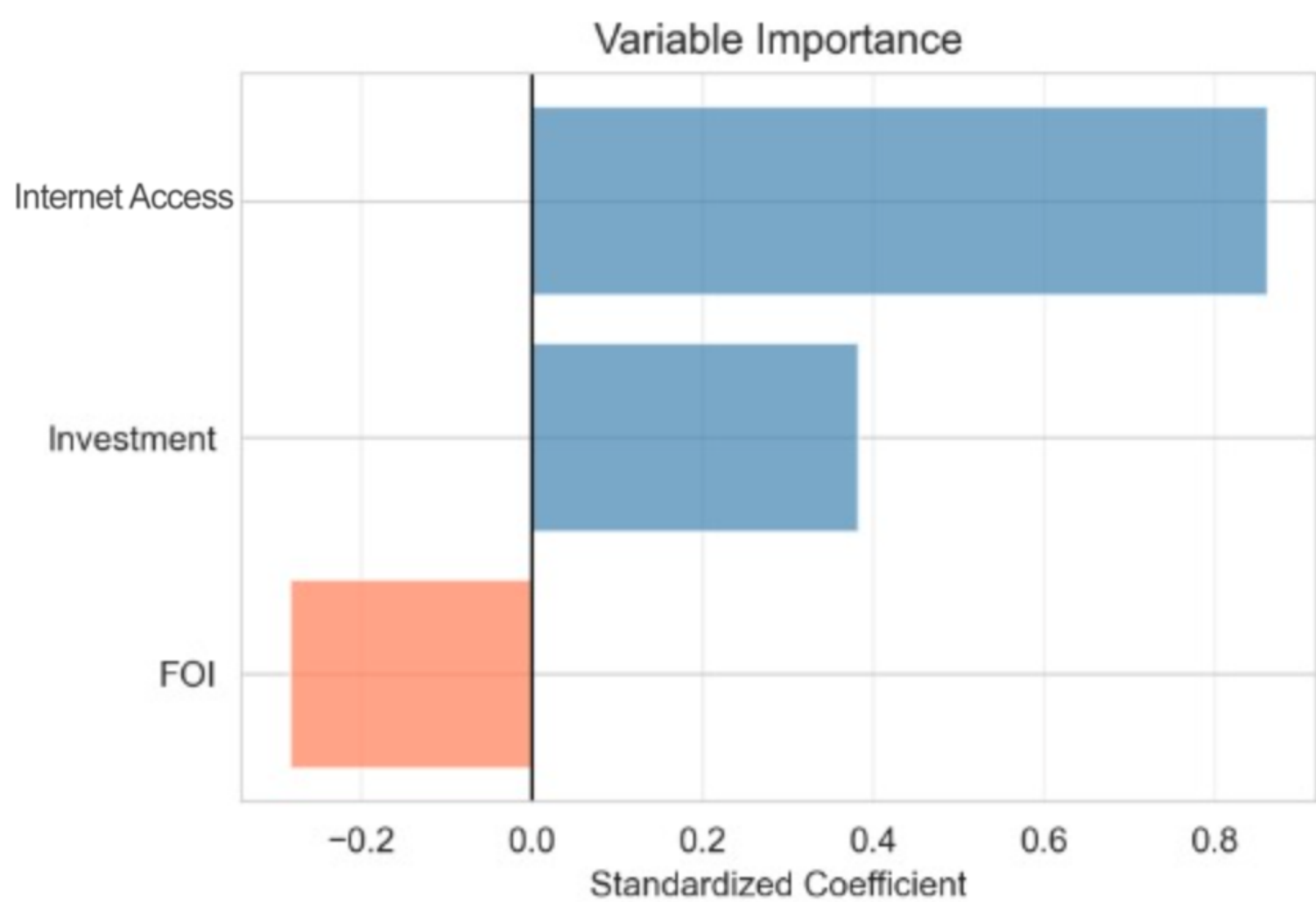
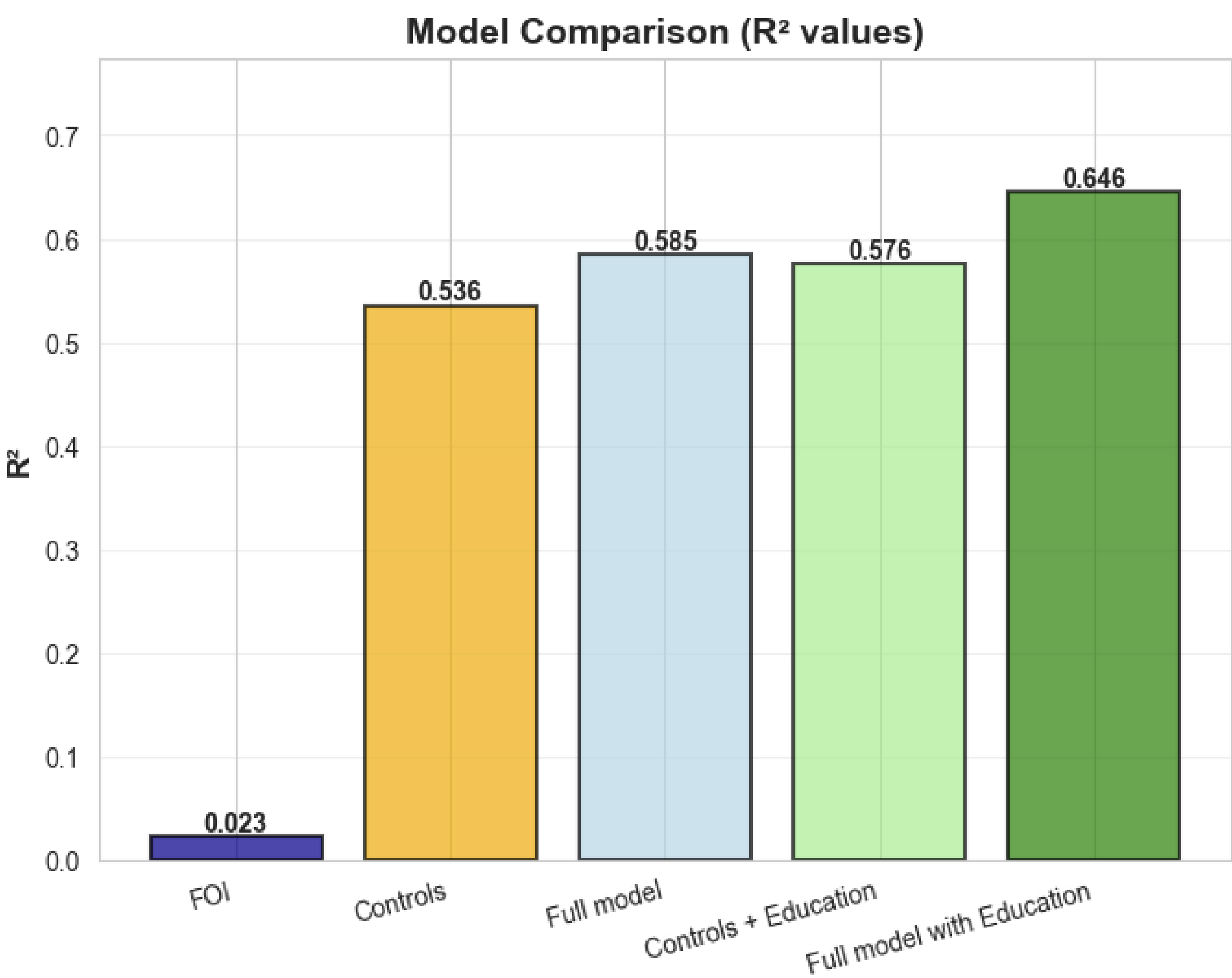
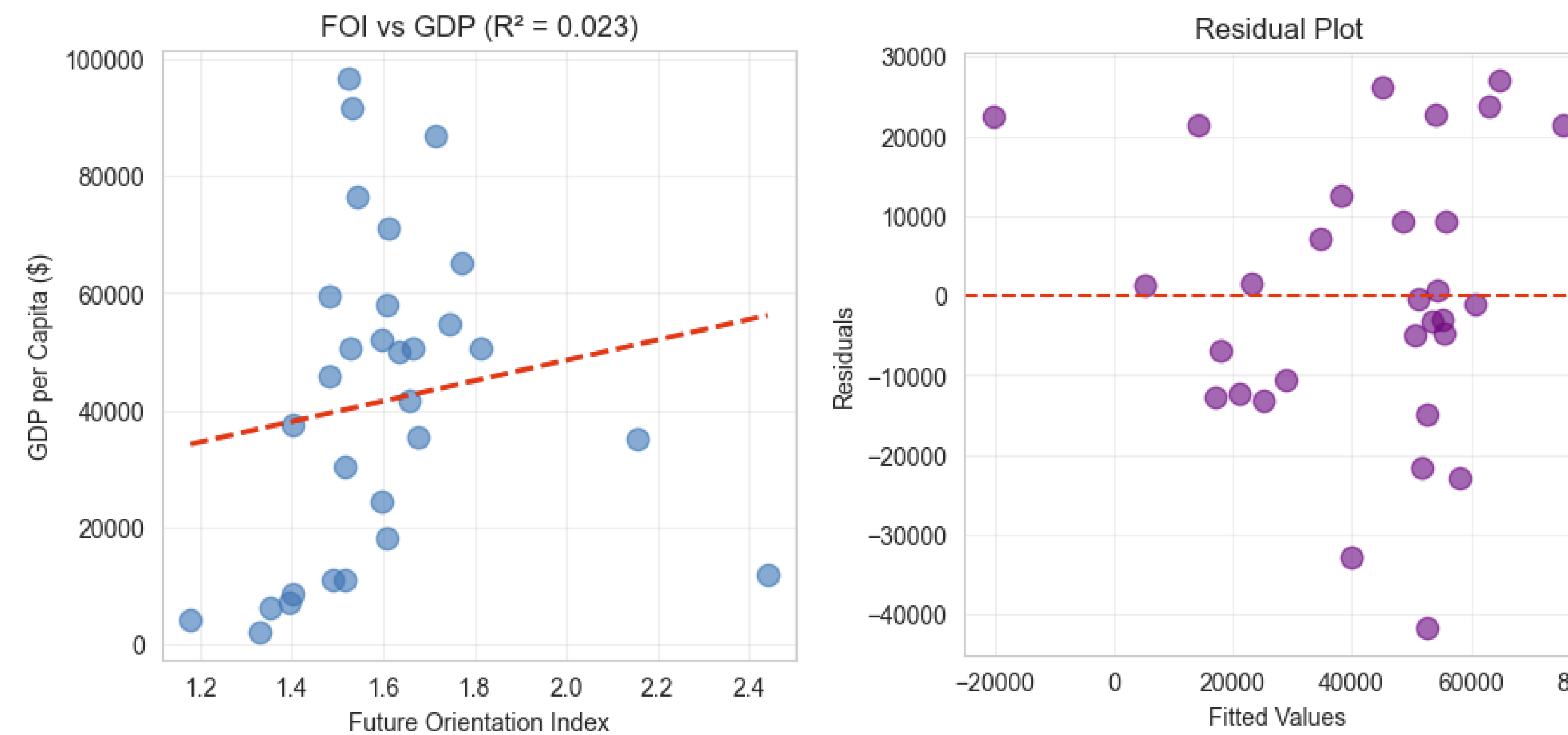
World Bank Group indicators:

- Gross Domestic Product (GDP) per capita
- Gross Capital Formation: Measure of an economy’s total investment
- Internet Users (percentage of population with access)
- Education Tertiary (school enrollment)

Methods:

- Averaged economic variables over a 5-year period and standardized them using Z-scores.
- Checked for initial link between variables via Pearson correlation.
- Tested the predictive power of FOI via hierarchical multivariate regression.

Results



Conclusion

FOI shows a small negative association with GDP per capita ($\beta = -0.284$, $p = 0.09$) in the full model after controlling for investment, internet access, and education.

This indicates that once structural factors are accounted for, higher future-oriented search behavior is associated with slightly lower GDP per capita; however, the effect size is negligible and statistically weak.

In contrast, education ($\beta = 0.688$) and internet access show substantially stronger positive relationships with GDP per capita, highlighting the dominant role of human capital and digital infrastructure in explaining cross-country income differences.

This may reflect measurement limitations of FOI or structural differences between countries

Literature

- <https://trends.google.com/trends/>
- <https://data.worldbank.org/>
- Preis et al. (2012, p. 1) conceptualize future orientation as the relative tendency of internet users to search for information about future years rather than past years.
- Varian (2014, p. 3) argues that online data such as search queries provide timely and behavior-based information that can complement traditional economic data sources.