

Interactive comment on “Continuous national Gross Domestic Product (GDP) time series for 195 countries: past observations (1850–2005) harmonized with future projections according to the Shared Socio-economic Pathways (2006–2100)” by Tobias Geiger

Anonymous Referee #1

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1 General Comments

The author presents a data set and methodology for harmonizing GDP trajectories across a broad historical time scale with projections provided by the Shared Socio-economic Pathways. Historical data comes from a variety of sources, most notably the Penn World Tables and the Madison Project. The primary methodological advances

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deal with converting currencies from units of GK1990 to PPP2005, the presentation of which needs further clarification. The resulting data set will be highly useful among the climate impact community when used in conjunction with other data sets (e.g., historical and projected population trajectories) to assess past and future impacts from climate change, natural hazards, etc.

2 Specific Comments

1. Please provide equations used for primary calculations, e.g., translating between currency units
2. A table summarizing Section 2 (which data set was used for which aspects of the analysis) should be provided

2.1 Section 2.4

1. When generating GK1990 to PPP2005 conversion factors, the author should explain why it is sufficient to develop factors only assessing the first 5-year period - overlapping data is available between the two data sets for much longer periods of time
2. Please show for a few representative countries time series of calculated conversion factors across the entire overlapping time series to show that the conversion factor is robust across time
3. Please report how many (and what kind) of countries required a mean conversion factor
4. The author should provide a (perhaps brief) analysis as to how sensitive are the results to the methodology used to generate conversion factors.

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5. Figure 2b is entirely illegible; additionally, there is no presented logic as to why ISO codes are placed along the x-axis. Please rework this into a easier-to-digest representation of the main point of the figure. Please highlight in that figure outliers and countries of note with specific labels. The previous section breaks down the MPD into different regions which would be a reasonable approach here (e.g., different histograms for different regions). Additionally, if the figure is presented next to another figure (Figure 2a), the y-axis should have the same bounds.
6. If the 2008 financial crisis is the primary source of error between PWT and the SSP projections, why is 2005 taken as the base year of interpolation? Would it not be better to use 2008 in order to capture the dynamics of the financial crisis? Please provide a sound basis as to why 2005 is chosen as the base year for merging historical data with SSP data.

3 Technical Corrections

The final column in the posted datafiles is suffixed with ';' which is interpreted as a string in most programming languages. This should be fixed so that all values are numeric when read in by an automated process

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