



## Income Convergence in the EU: Within-country regional patterns

Cinzia Alcidi, Jorge Núñez Ferrer,  
Roberto Musmeci, Mattia Di Salvo, and Marta Pilati

*Income convergence is clearly taking place within the EU as a whole, but contrasting trends emerge from one country to another, calling for a closer look at regional economic development.*

Since 2000 the level of income across EU regions and member states has been converging towards the EU average, and overall, differences in GDP per capita have been reduced (see the first Commentary of this series [here](#)). This result is mostly driven by the fact that poorer regions and member states, mostly in Central and Eastern Europe (CEE), initially experienced higher income growth rates. Conversely, richer countries and regions, both in Southern and North-Western Europe, initially grew at a slower pace. While the cumulative result of these developments is convergence, some interesting dynamics emerge within member states.

This contribution presents the income per capita growth behaviour of NUTS2 regions compared to the national average of the country they belong to, over the 2000-15 period. Hence it investigates patterns of regional convergence and divergence within member states. Beta convergence is measured by plotting the change in income level between the initial and the last year of reference period (y-axis) against the initial income level (x-axis), as is done in the figures in the Annex.

Within-country convergence takes place when relatively poorer regions grow faster than the richer ones; thus their income gets closer to the national average. In the figures in the Annex, a trend line with a negative slope would support the hypothesis of internal convergence. Conversely, a trend line characterised by a positive slope would indicate that richer regions have been growing faster than poorer ones, suggesting a pattern of internal divergence.

This contribution is the second in a new CEPS series on economic and social convergence in the EU, focusing on the features of income convergence across regions within each member state.

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Central and Eastern Europe<sup>1</sup> is worth analysing in detail. In comparing the income growth behaviour of CEE regions with the EU average, their performance is outstanding (see Alcidi et al., 2018). Since 2000 all CEE countries and regions have grown faster than the EU average in terms of GDP per capita, catching up with the rest of the Union. However, once regions' performance is compared to their own country's average, the picture is different. Each CEE country<sup>2</sup> is characterised by an outstanding performance of the capital region, which is very different from the rest of the country. Regions, in which the capital is located, registered income levels higher than the average already in 2000, and they have also experienced higher growth rates than the rest, thereby further improving their relative position.

Czech Republic, Poland, Romania, Bulgaria and Hungary all exhibit the same pattern: the capital region is an outlier in the country, situated high in the top right quadrant, while several regions that fell below the average income in 2000 have experienced a further deterioration in their relative position. This means that the capital region, accompanied sometimes by a few others, has become a 'champion region', while other regions are 'left behind' and cannot keep pace. This pattern results in a trend line with a positive slope, suggesting that  $\beta$ -convergence is not taking place; on the contrary, regional incomes are on a diverging path within these countries.

Interestingly, Denmark and Sweden show a similar pattern. In both cases, the capital region has been growing faster than the rest of the country, starting from an already privileged position in 2000. At the same time, the other regions of the country are lagging, with several of the initially relatively poorer regions showing lower growth than the average. It is worth noting that, as a matter of fact, all countries exhibiting internal divergence (with the capital region diverging to the top) are not members of the eurozone.

By contrast, (most of) old EU member states (and euro area members) exhibit regional convergence, even if at different speeds. The two exceptions are Greece and Italy, where the convergence line has a positive slope but is statistically insignificant, suggesting no relevant relationship between regional growth rates and initial levels of income. In Italy, only three out of twenty regions have had a relative change larger than 5 points, showing that the relative income position of regions has only slightly changed since 2000, as most regions stagnated in their status. This explains why Italian regions are among those showing the poorest performance compared to the EU average (see Alcidi et al., 2018).

The other Southern countries are more heterogeneous. Spain exhibits an almost flat trend line, but suggesting convergence. By contrast, Portugal shows a very strong converging trend: its initially poorer regions have grown faster, and the initially richer capital region is losing its earlier momentum.

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<sup>1</sup> In this series, regional clusters of countries are defined as follows: Central and Eastern Europe: BG, CZ, EE, HR, HU, LT, LV, PL, RO, SI and SK. North-Western Europe: AT, DK, DE, FI, FR, LU, NL, SE and UK. Southern Europe: CY, EL, IT, MT, PT and ES.

<sup>2</sup> Estonia, Lithuania and Latvia are composed of only one NUTS2 Region, which corresponds to the national average, so a regional-level analysis is not possible.

Within North-Western European countries, regional dynamics point to clear-cut convergence. Austria and Germany show a negatively-sloped trend line, with statistically significant coefficients. In Austria the trend is driven by the strong deterioration of the capital region's position with respect to the rest of the country, which shows higher-than-average growth since 2000. Belgium is in a similar situation. The Brussels region was about twice as rich as the rest of the country in 2003,<sup>3</sup> and has since considerably lost its relative advantage. In the Netherlands and United Kingdom, convergence is taking place as well, although at a much slower pace. It is interesting to observe that in the UK several regions have experienced a deterioration of their relative position vis-à-vis the rest of the country (bottom left quadrant).

France is quite special case. The country seems to exhibit overall convergence regardless of the isolated position of its capital region. The country's picture changes radically, however, when its five overseas départements,<sup>4</sup> all situated in the top left quadrant, are excluded. The situation of metropolitan France is one of strong divergence, entirely due to the position of Île-de-France. Once the latter is excluded, however, the converging trend is also present again.

One general, interesting point relates to the position of capital regions, which are outliers in virtually every member state. They are outliers in most cases in terms of strong over-performance, but also, in a few cases, strong under-performance, relative to the average. In non-euro area member states and France, capitals strongly outperform the other regions, leading to internal income divergence. By contrast, in member states that were strongly hit by the crisis like Finland, Italy and Portugal, but also in countries such as Austria and Belgium, capitals had a high income as a starting point, but they lost track relative to the rest of the country over time.

In conclusion, while income convergence is taking place within the EU as a whole, contrasting trends emerge when looking within one country. This is especially the case for Central and Eastern European countries. Their regions perfectly fit in the EU convergence process, and are fast moving towards the EU average. But their internal dynamics are characterised by strong diverging patterns, usually led by the outstanding performance of the capital region. Conversely, many old EU member states, which seem to have slowed down, or even lost track, in the EU convergence process, have been internally converging, thereby reducing income disparities across regions. This suggests that a closer focus on regional economic development is crucial for an accurate analysis of the process of economic convergence in the EU.

## Reference

Alcidi, Cinzia, Jorge Núñez Ferrer, Roberto Musmeci, Mattia Di Salvo and Marta Pilati (2018), "[Income Convergence in the EU: A tale of two speeds](#)", CEPS Commentary, CEPS, Brussels, 9 January.

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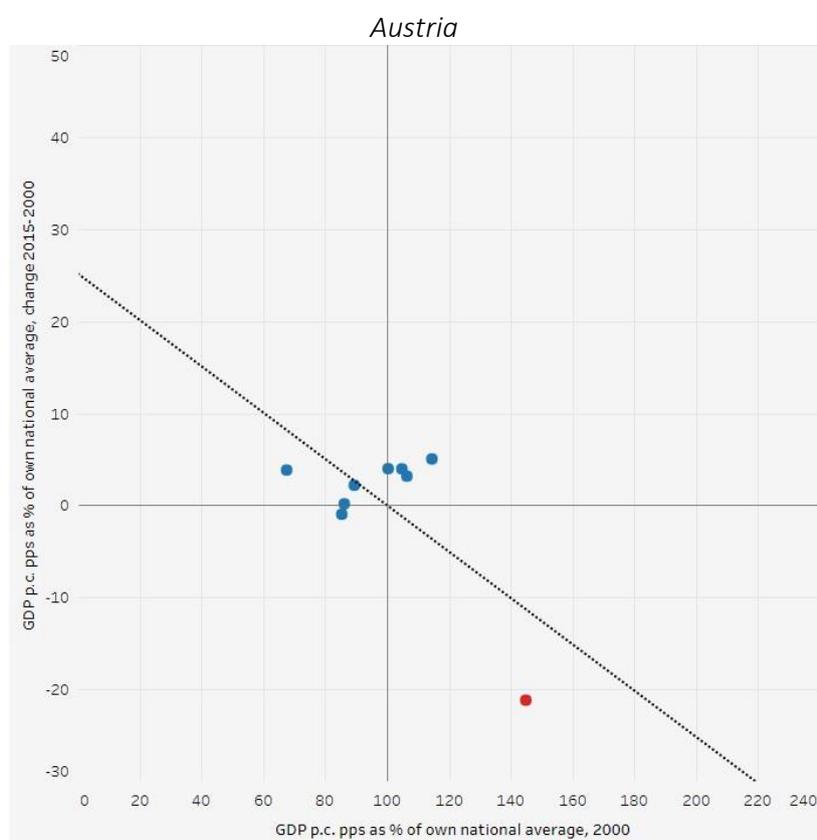
<sup>3</sup> The oldest regional data available for Belgium is 2003.

<sup>4</sup> Guadeloupe, Martinique, Guyane, Mayotte and La Réunion.

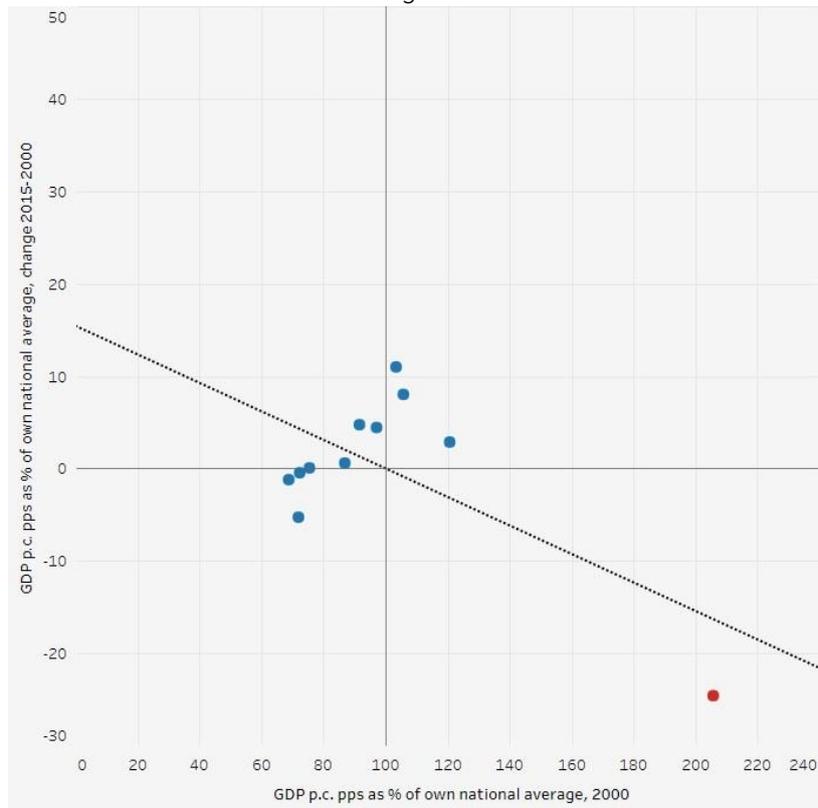
### Annex: Beta convergence within selected EU member states

*Note:* Cyprus, Estonia, Lithuania, Luxembourg, Latvia and Malta are not in the figures in this Annex because they are composed of only one NUTS2 region, which corresponds to the national average. Irish regions: latest data available is 2014. Belgian regions: oldest data available is 2003. United Kingdom: Inner London West excluded. The graph shows four capital regions because London is composed of five NUTS2 regions (Inner London West, Inner London East, Outer London West and Northwest, Outer London South, and Outer London East and North East).

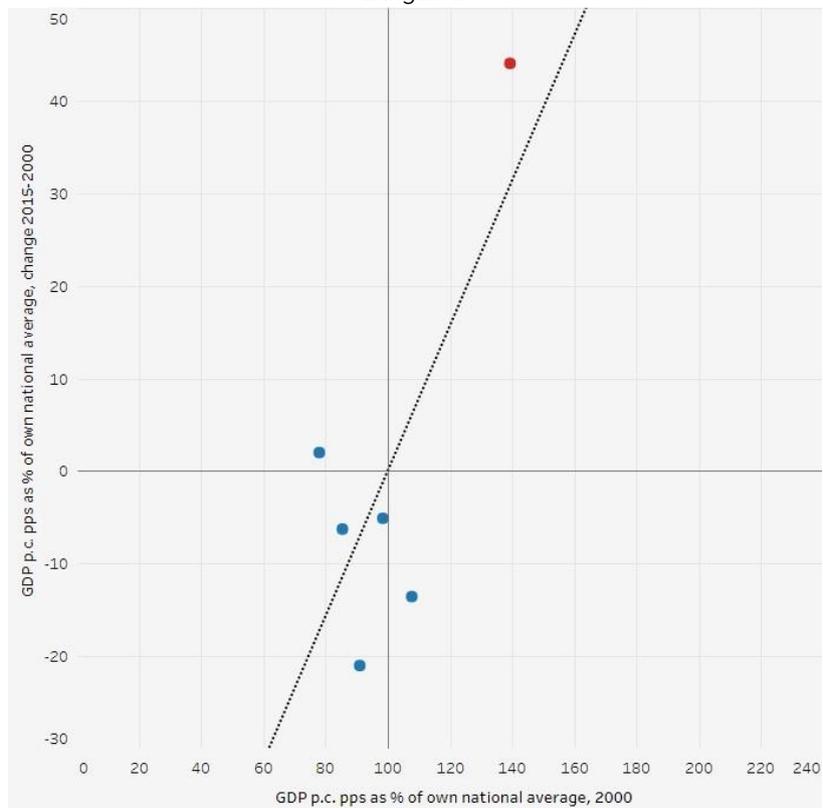
*Source:* Authors' calculations based on Eurostat [nama\_10r\_2gdp] (Purchasing power standard (PPS) per inhabitant).



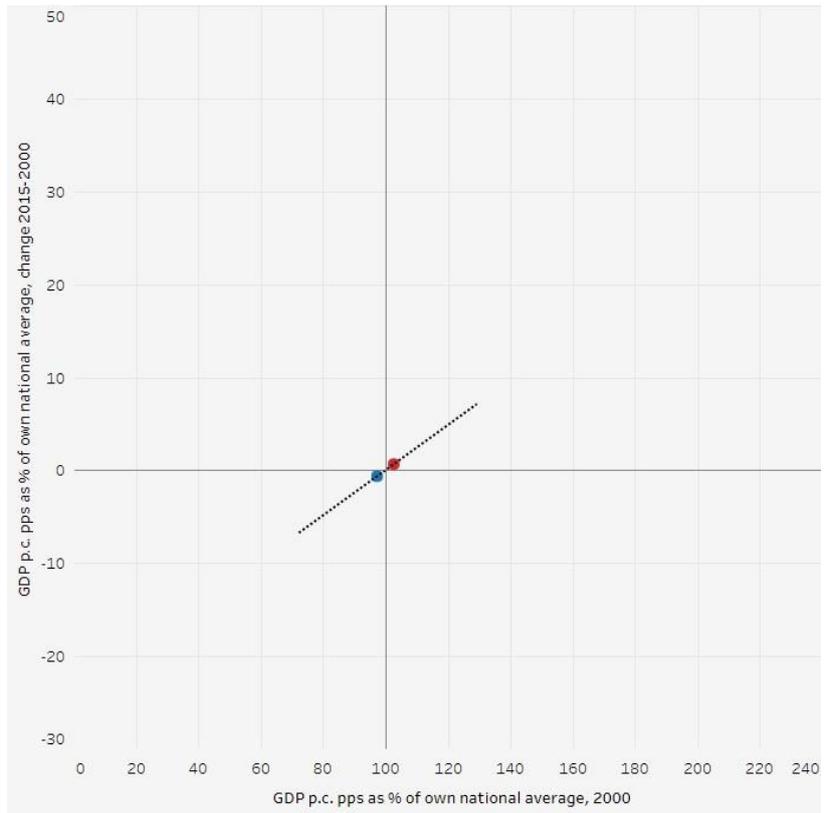
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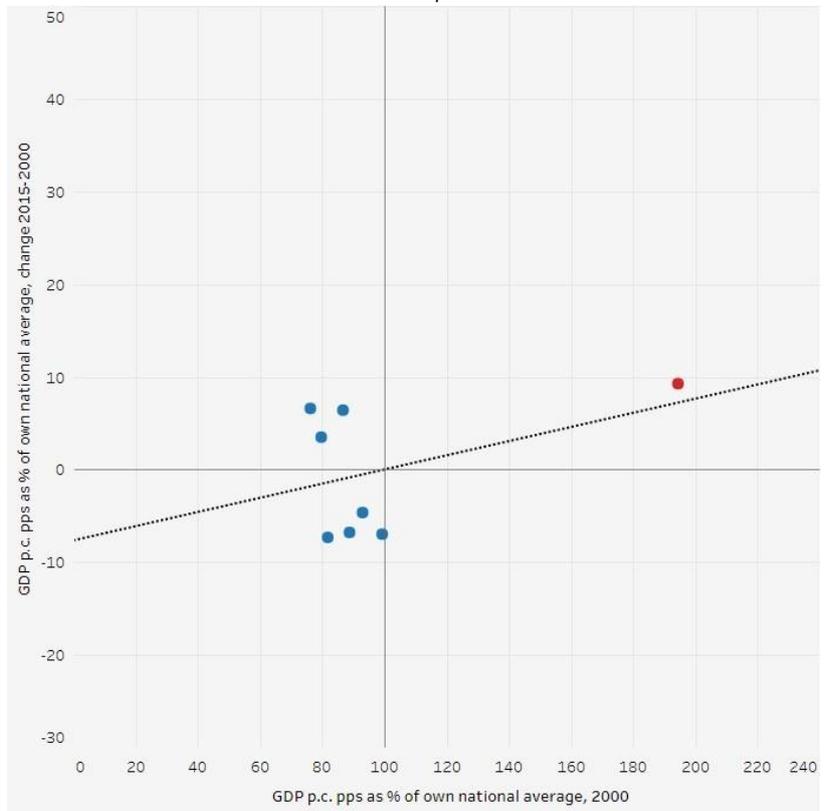
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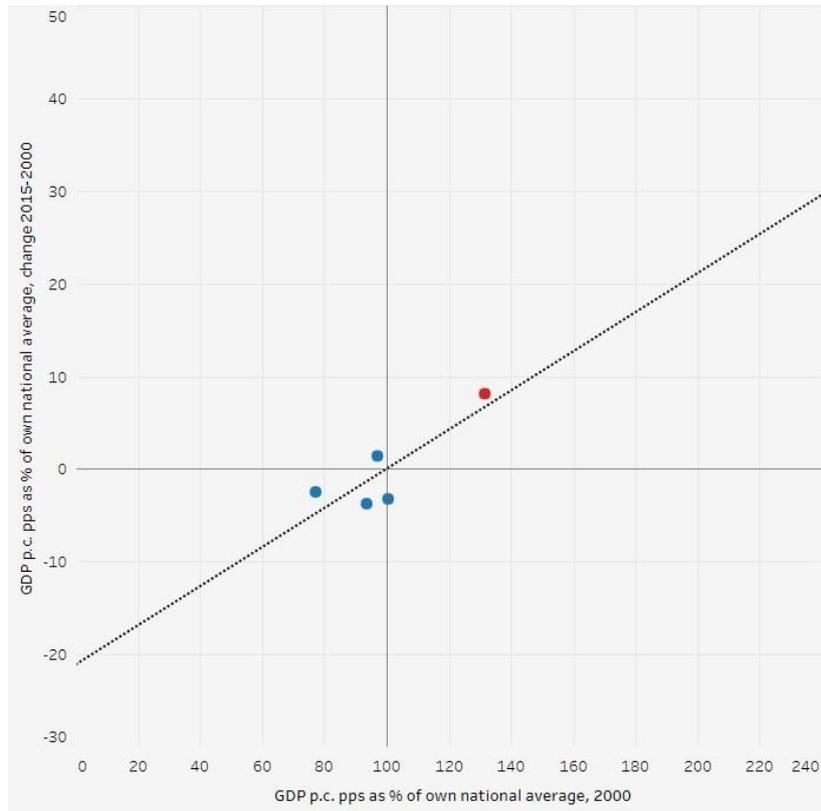
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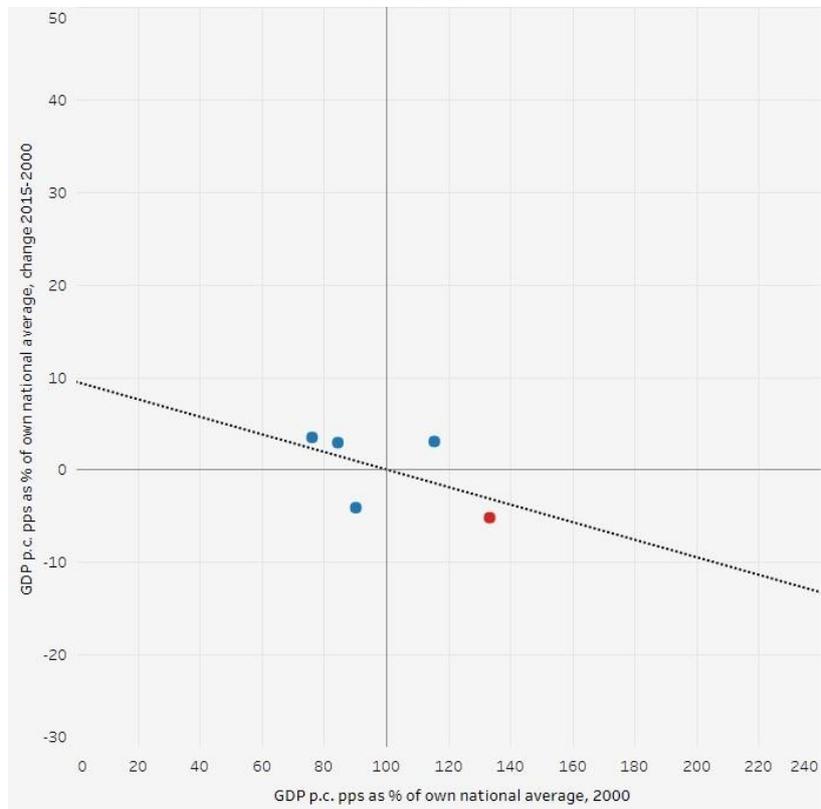
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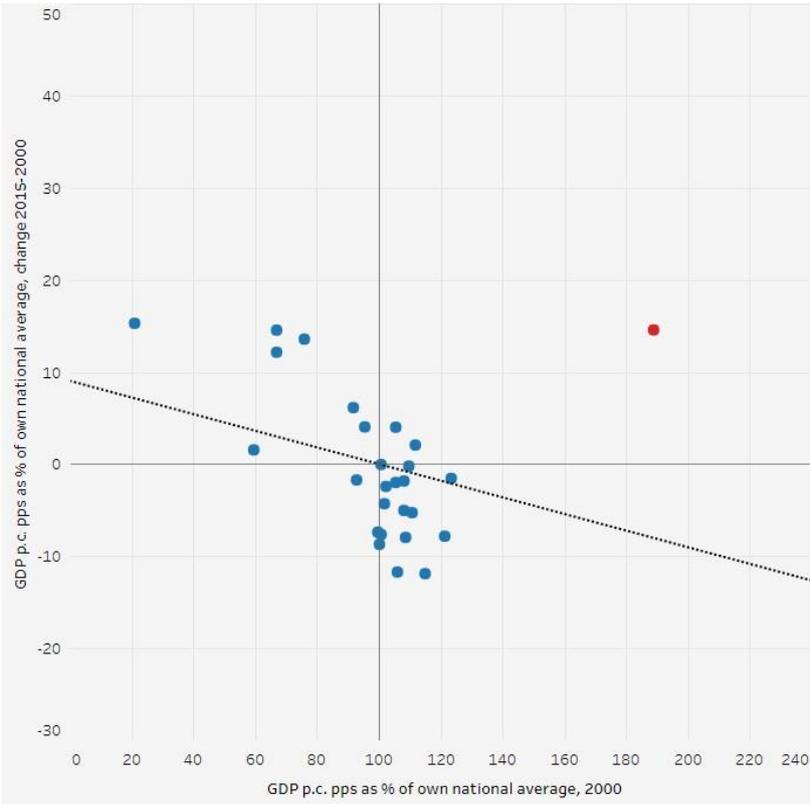
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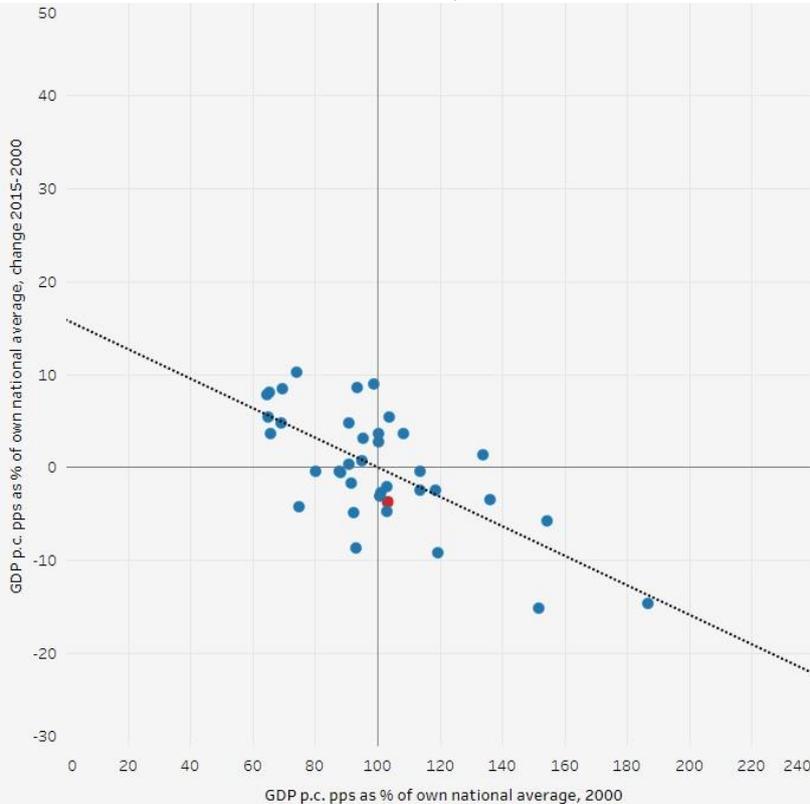
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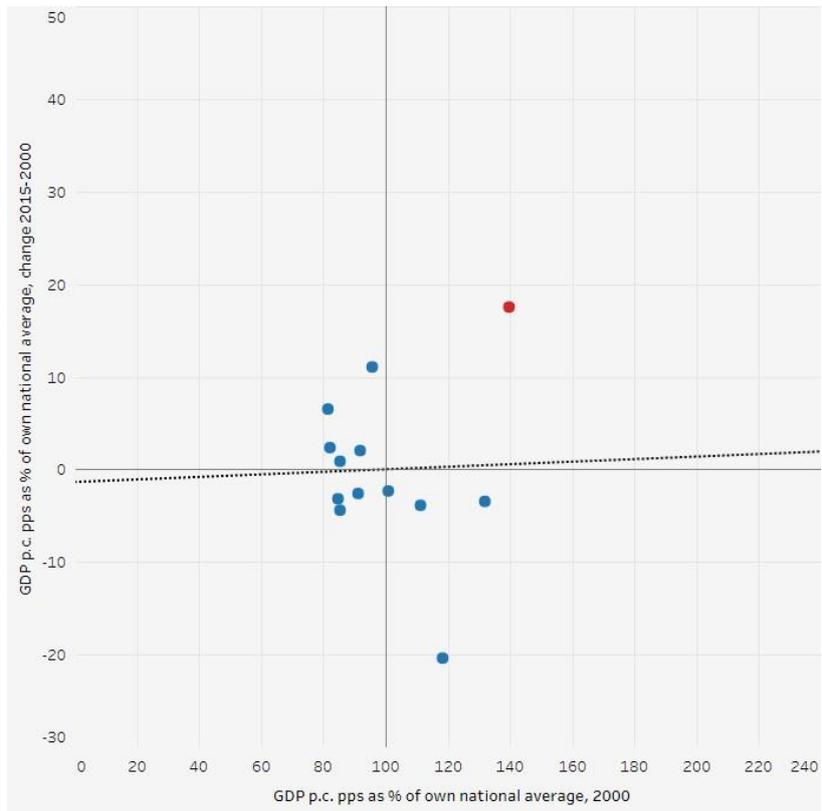
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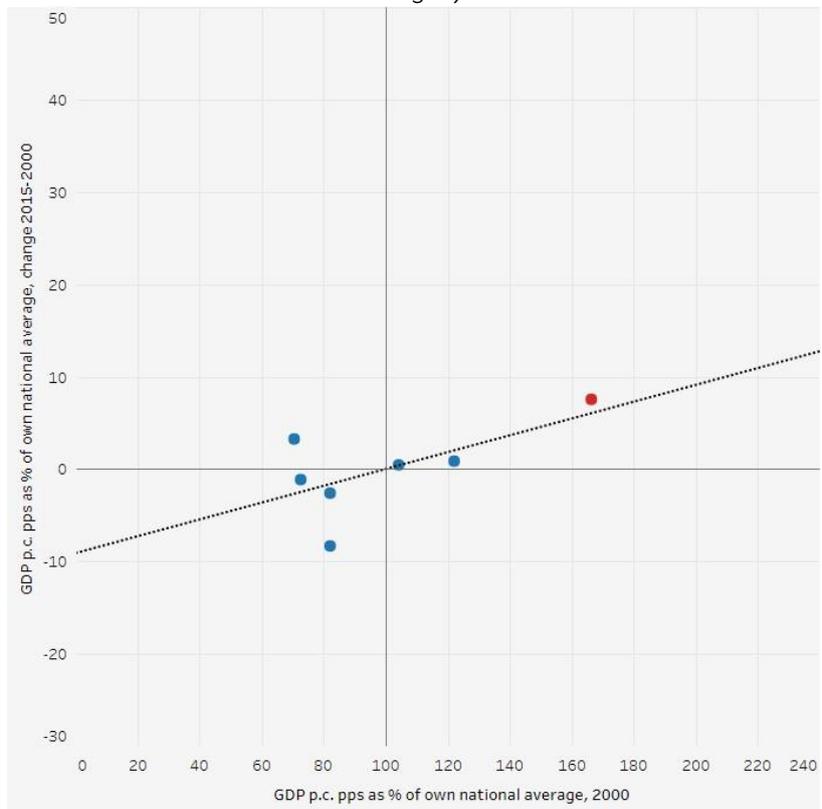
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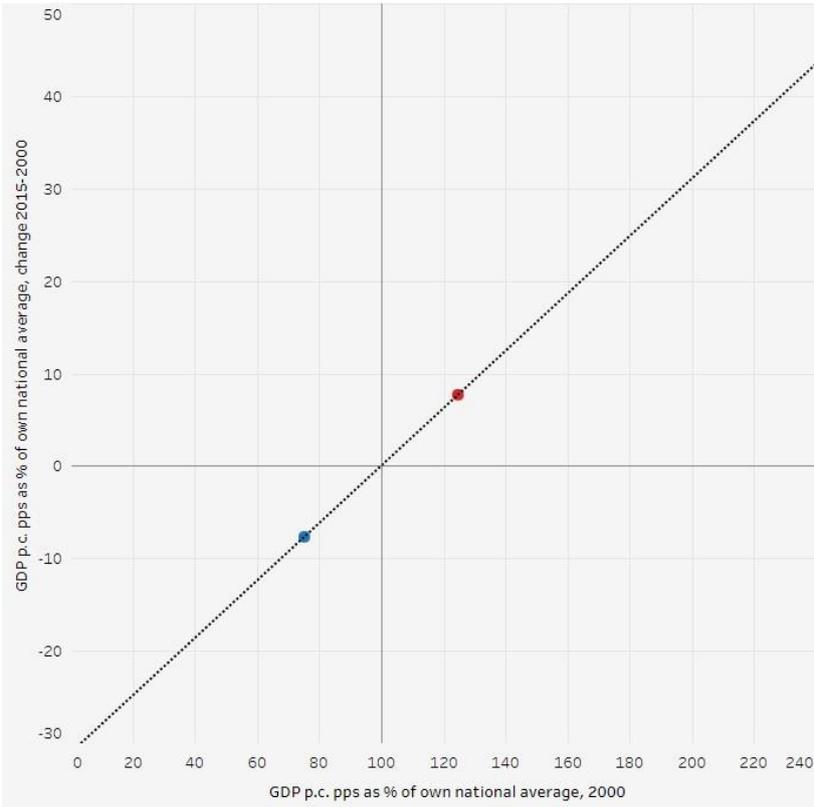
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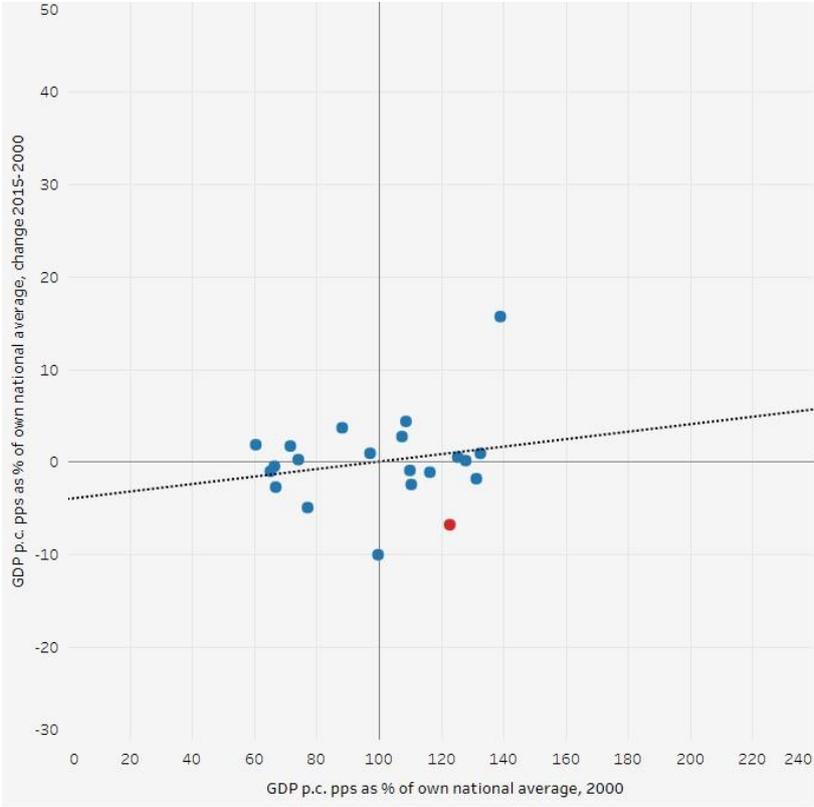
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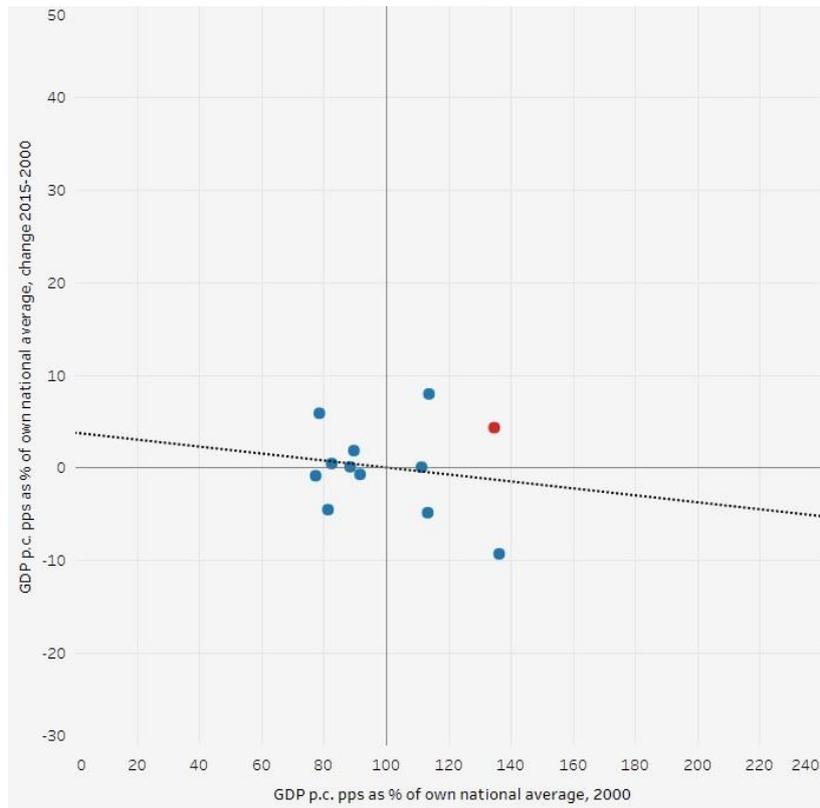
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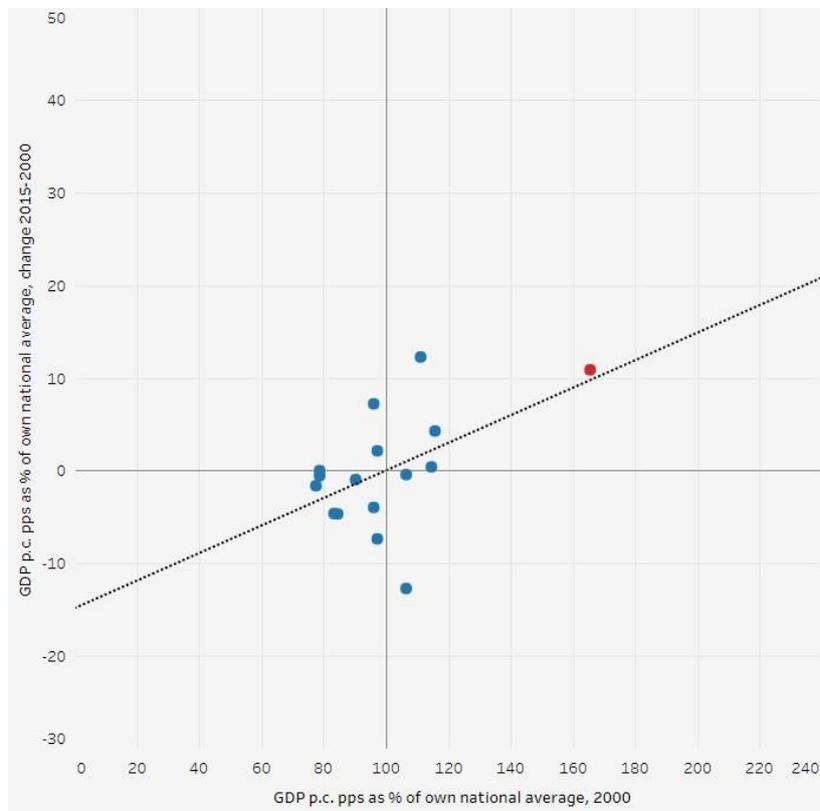
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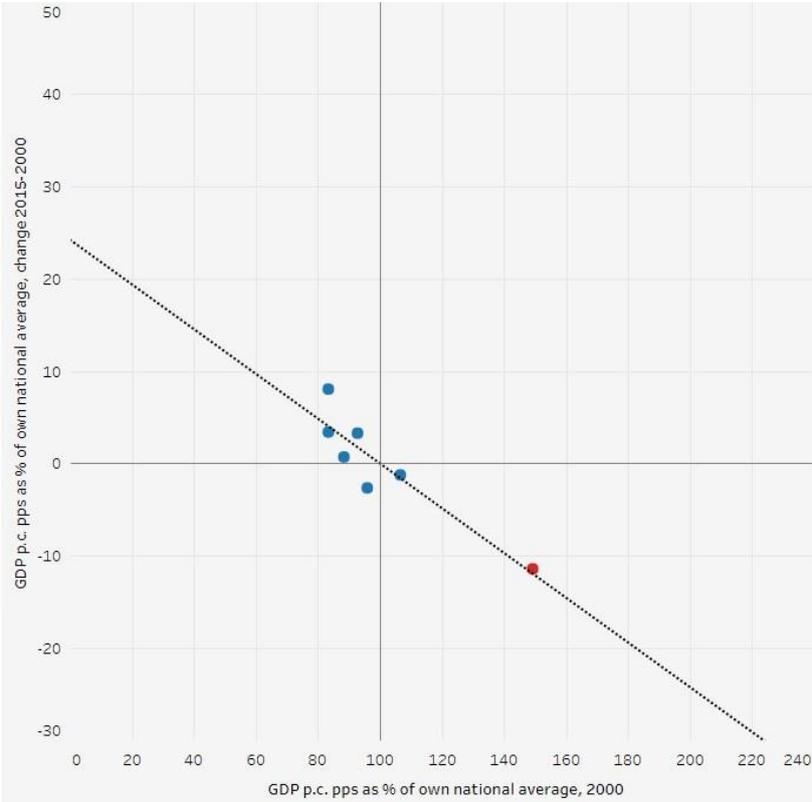
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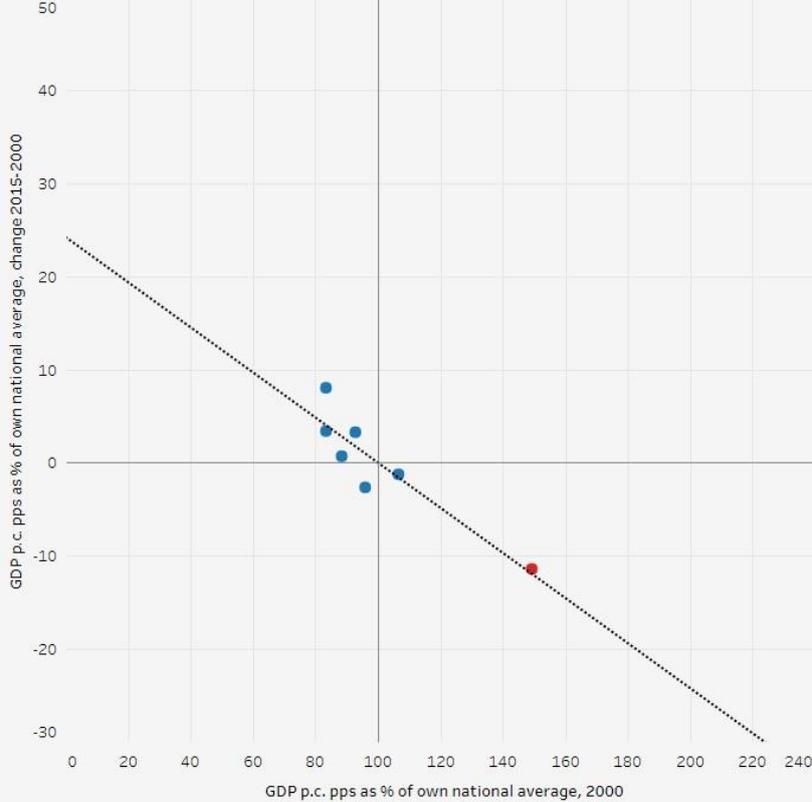
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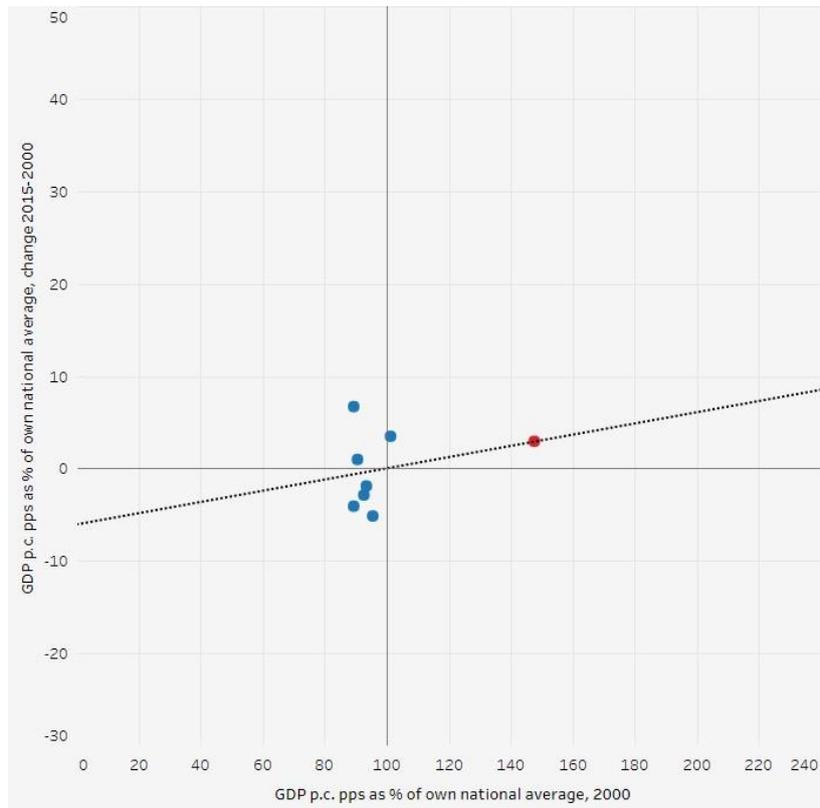
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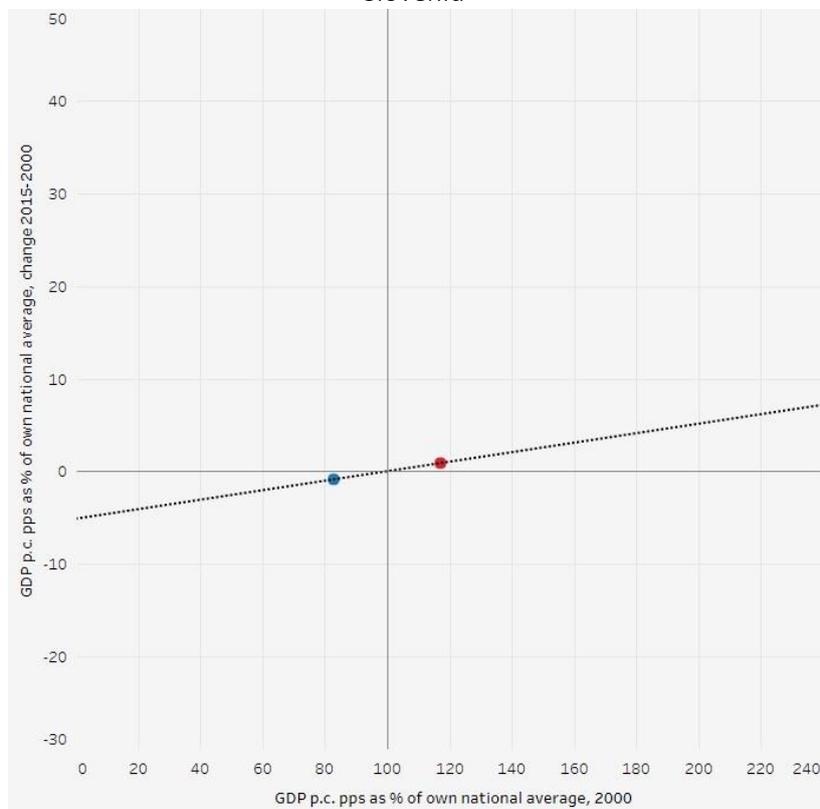
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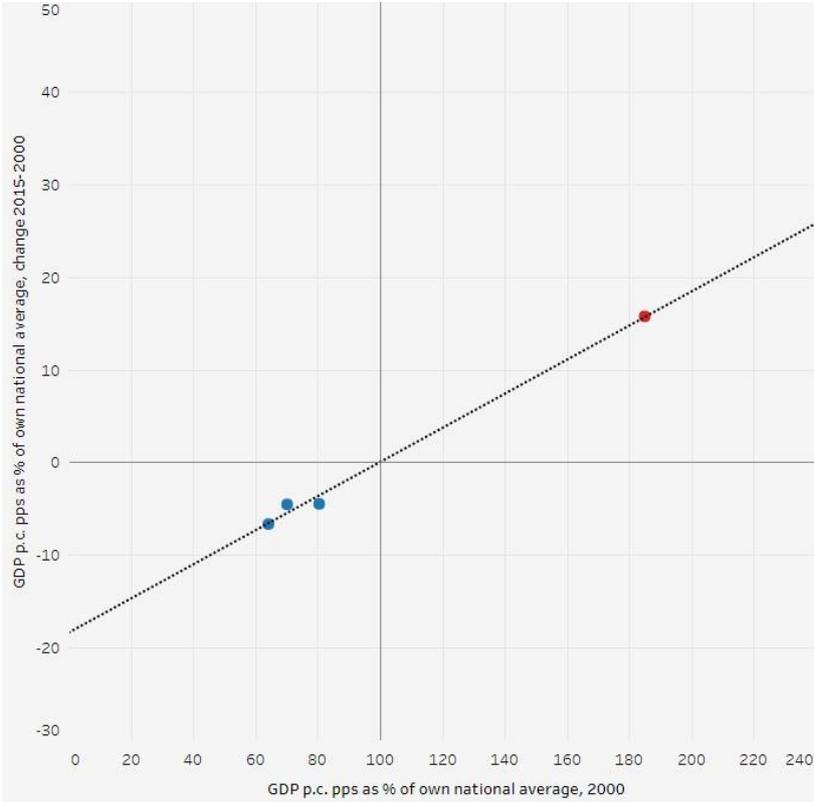
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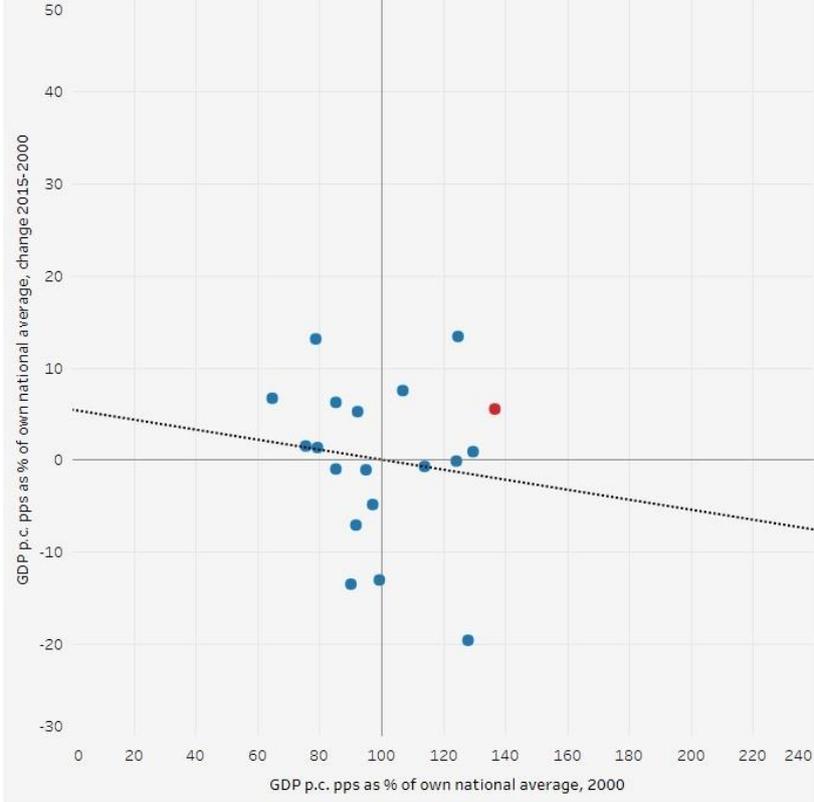
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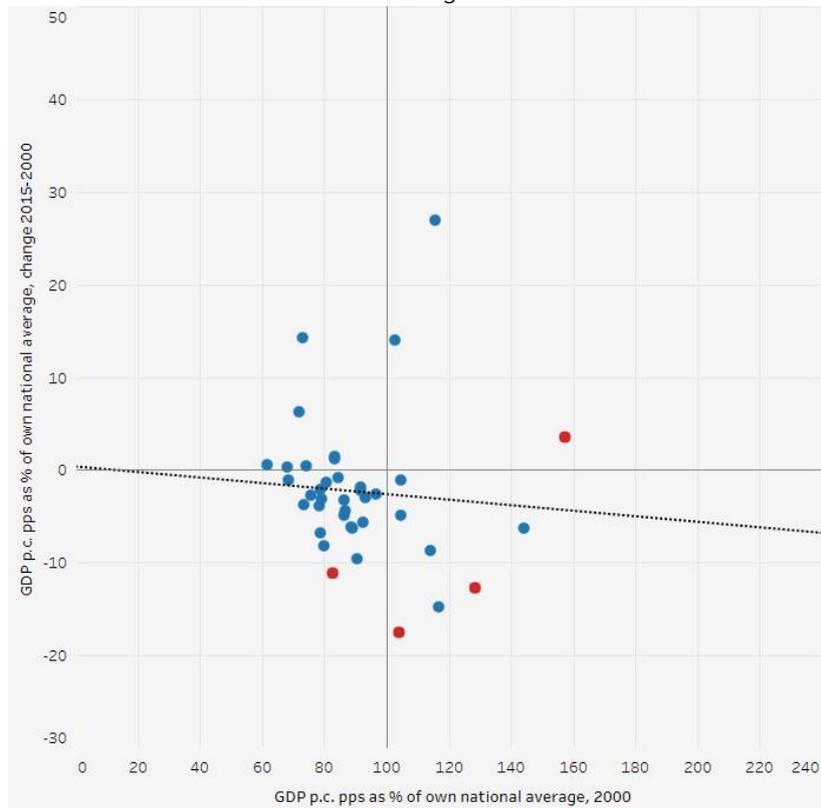
Slovakia



Spain



*United Kingdom*





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