

# CHART OF THE WEEK

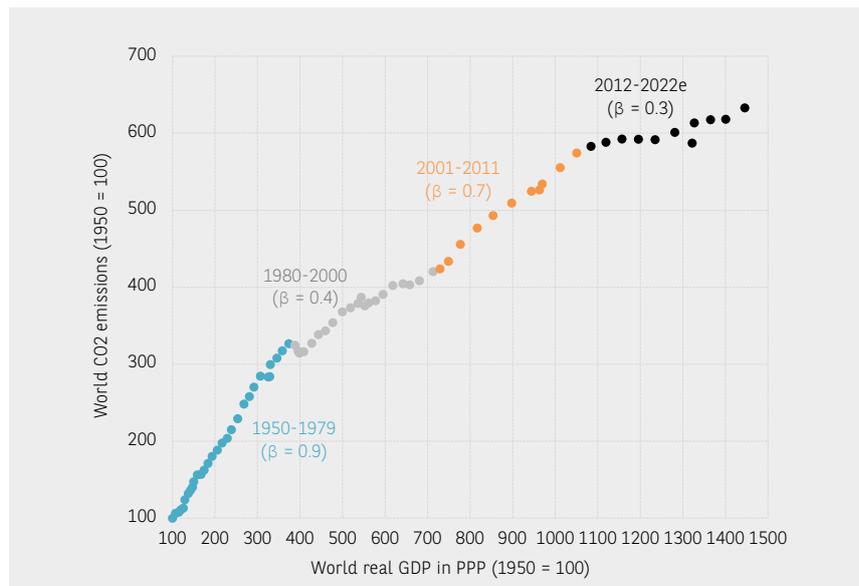
CHART  
OF THE  
WEEK

4 January 2023

## GDP AND CARBON, A UNITED COUPLE

Jean-Luc Proutat

### CO<sub>2</sub> emissions elasticity ( $\beta$ ) to world GDP



Source: World Bank, IMF, The Global Carbon Project, BNP Paribas

From Adam Smith to the present day, nations' wealth has been built on fossil fuels. Coal, oil and gas have become a vital part of our lifestyles. In 2021, they still account for 82% of the world's primary mix, that is to say what essentially feeds economic activity.

The link between gross domestic product (GDP) and carbon dioxide (CO<sub>2</sub>) emissions therefore remains strong, although it may have experienced highs and lows over time: an inseparable bond during the post-war boom of thirty years, distended after the two oil crises of 1973 and 1979, and then very strong again in the 2000s, when it came to fuelling the economic take-off of the two Asian giants, India and China.

Whilst being the leading greenhouse gas emitter, the latter also invests the most in renewable energy. Its green transition has begun, while the most carbon-intensive phase of its development - the infrastructure boom - has already progressed well.

Over the past ten years, global CO<sub>2</sub> emissions have shown reduced elasticity (around 0.3) compared to GDP, but still positive. Reducing them without a corresponding loss of activity is therefore hardly conceivable in the short term, at least globally. The countries that achieve this are a minority and often (although not always) among the most advanced; the others, which make up the majority covered by the International Monetary Fund (around three-quarters) are increasing their emissions as they develop. They are still the ones that, over the past decade, have contributed the most (two-thirds) to global growth.

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