

Carbon Cut Could Bring Us a Higher GDP

:Visualizing Current Demand-side Solution Research Findings to Climate Change Mitigation

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(1) Overview

Most people believe that carbon cut is the key solution to mitigate the climate change impacts. However, people concerning more about the GDP growth. Recent experiences show that carbon cut usually rises up the production cost and thereby drops down the GDP growth rate. Since the carbon emission is mainly calculated by the multiple of economic activity and carbon emission coefficient. In order to cut carbon emission, either the economic activity or the carbon emission coefficient must be reduced, which will apparently drop down the GDP growth rate. Luckily, recent papers (e.g. Koide, Ryu et al., 2021; Creutzig et al., 2022) show that the demand-side solutions to climate change mitigation is consistent with high levels of well-being. Because GDP is the index to measure people's well-being, so these authors argue that the carbon cut could bring us a higher GDP.

A short article with the title of "Benefits of Accelerating the Climate Transition Outweigh the Costs" published in the IMF (International Money Fund) Blog on December 5, 2023 by Jens Mehrhoff. Except revealing a figure which indicates the net GDP benefits increase by implementing climate transition policy, Mehrhoff also pinpointed that "Transitioning to a low-carbon economy will have **negative impacts on demand** from higher carbon prices and energy costs. But these can be partially offset by recycling carbon revenues into government investment and lower employment taxes. Most importantly, lowering emissions will reduce the physical impacts of climate change, which lowers macroeconomic costs". These authors agree with this viewpoint and we plan to draw more visualization figures to catch more attention for more people in the world.

(2) Methods

We use 7 WH questions to tackle our research of demand side solution to climate change mitigation as below:

Why we must cut carbon?

Answer: Except for mitigating the climate change impacts, recent literature reveals that the benefits of accelerating the climate transition already outweigh the costs in some scenarios.

What is the demand side solution?

Answer: Demand-side economics refer to the theory that the demand for goods and services drives economic activity. It include consumers' technology choices, behaviours, lifestyle changes, coupled with production-consumption infrastructures and systems, service provision strategies, and associated socio-technical transitions (IPCC, 2023).

How to implement the demand side solution policies?

Answer: ASI (Avoid, Shift and Improve) is the most popular method.

When should we begin to implement the demand side solution?

Answer: As soon as we can

Who should participate in the demand side solution policies?

Answer: Every of us since effective demand requires affordability, one of the necessary conditions for acceleration of mitigation through demand-side measures is wide and equitable participation from all sectors of society (IPCC, 2023).

Where should we implement the demand side solution policies?

Answer: Everywhere.

Which is the best demand side solution policy?

Answer: The comprehensive application of Incentive mechanism such as the design of more money

return with higher carbon cut. Almost all the people in the world would work harder to cut carbon once they know they can earn lot of money for cutting carbon. Without any question, current glorious private market is driven by the self-interest incentive mechanism. These authors believe demand side solution will be implemented by most people if we can duplicate a carbon cut world driven by another self-interest incentive mechanism.

(3) Results

Except illustrating every WH questions and answers more in detailed, we also draw at least a visualization picture for each corresponding WH question such as Figure 1below.

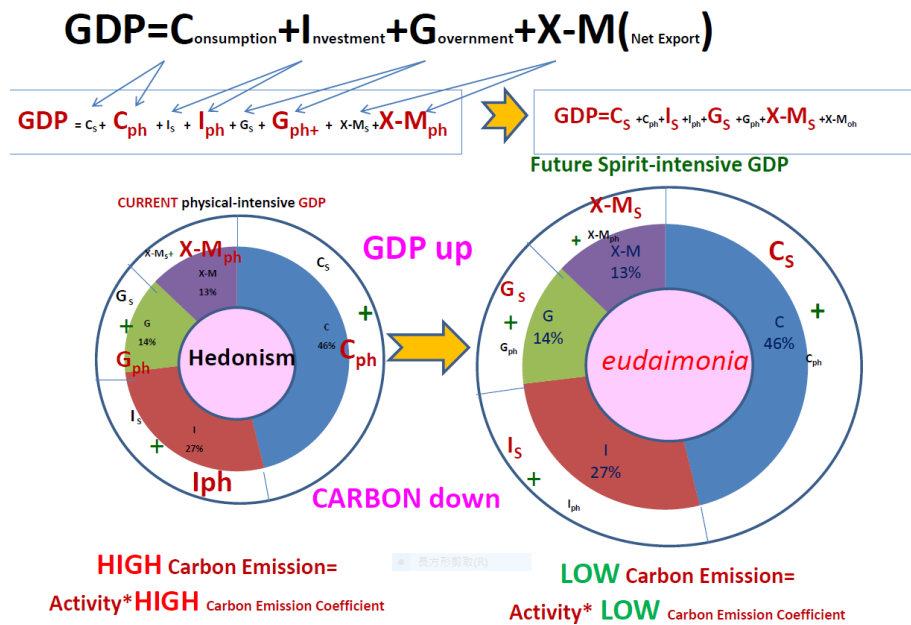


Figure 1: Carbon cut can bring us more GDP if we pursue eudaimonic life.

(4) Conclusions

These authors believe the situation of “Benefits of Accelerating the Climate Transition Outweigh the Costs” published in the IMF Blog is happening right now. Our paper would draw many visualization figures to catch the attention of more people in the world. This is because the demand side solution to climate change mitigation must rely on the participation of more and more people in the world.

Major References

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