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WHY ECONOMIC GROWTH IS GOOD FOR THE ENVIRONMENT

By Vincent Geloso

It is popular in certain circles to attack the very idea of economic growth. This series¹ of brief studies examines some common misconceptions behind these attacks.

One criticism sometimes made is that economic growth hurts the environment. Yet in many ways, economic growth can be a powerful tool for improving the environment, especially in economically free societies.

A common caricature of the effects of economic growth on the environment is one of endless consumption and waste generation on a finite planet. There are, however, two major problems with this pessimistic view.

First, it assumes that most people do not place any value on a clean environment and will never adjust their behaviour to guarantee they live in such an environment. This is contradicted both by observation and by economic data. And because they in fact do care, there is a point at which income will be high enough that people will start considering that a clean environment is something worth paying for.² At that point, they will demand goods and services that actually protect the environment.

Second, it assumes that economic growth is generated by doing more while using ever more resources. That is incorrect.



Economic growth is about improving productivity, and that means liberating resources for better uses. For example, productivity growth in agriculture since 1960 has allowed three times more people to be fed, with a larger number of calories, using more or less the same quantity of land.³ In fact, since 1998, the Food and Agriculture Organization notes that total agricultural land use has fallen, even as the food supply has increased.⁴ This means productivity growth has been so rapid that it has liberated land from being used. In rich countries that enjoyed the fastest growth during the 20th century, this trend has been even more pronounced.⁵

THE ENVIRONMENTAL KUZNETS CURVE

The result of these two factors is the inverted “U” of what is known as the Environmental Kuznets Curve, named after Nobel

laureate Simon Kuznets.⁶ The idea is that environmental quality may fall as income rises, but only up to a point. Beyond that point, more economic growth improves environmental quality. Such a relationship has been observed for fisheries, waste production, biodiversity, and multiple forms of air pollution.⁷ There are even strong signs of this, under certain conditions, for greenhouse gases.⁸

The clearest example is forest cover over the course of the 20th century. As Western countries industrialized and populations grew, forest cover shrank.⁹ However, productivity gains in agriculture eventually led to fewer acres needing to be used. Innovations in transportation meant that production could be concentrated in areas where growing conditions were best, even if they were further from points of consumption.¹⁰ Automobiles and tractors allowed millions of acres formerly dedicated to raising horses and mules to be returned to nature.¹¹ Simultaneously, undisturbed nature, wildlife, and activities in the outdoors gradually became more highly valued. In sum, once a certain critical point in economic development was reached, forests made a comeback.

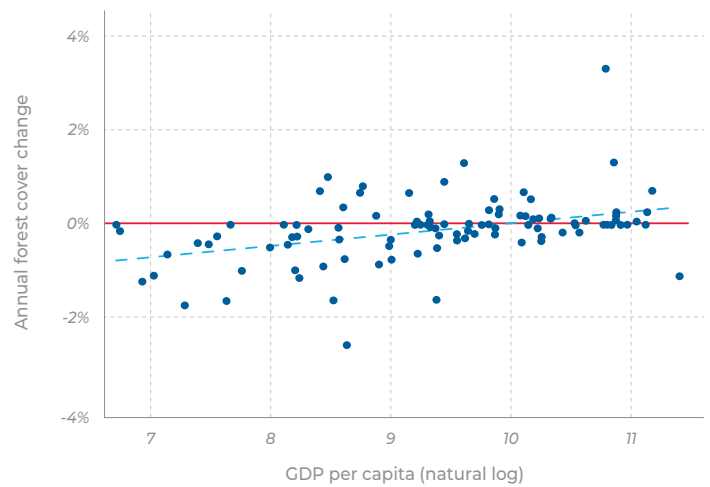
This still holds true today. As can be seen in Figure 1, richer countries tend to experience gains in forest cover, whereas poorer countries tend to deforest. Thus, a 10% increase in income increases the net forest cover by 0.02 percentage points. This may seem small, but it is equal to a fifth of the average change for all 103 countries in the graph.

INSTITUTIONAL CONDITIONS

The Environmental Kuznets Curve has its limitations, as many scholars point out.¹² Generally, critics argue that the curve fails to materialize for certain categories of environmental indicators such as greenhouse gas emissions, or that certain conditions must be present for the curve to exist. However, one understudied category of criticism is that of economists who empha-

Figure 1

Annual forest cover change (2015 to 2020) and GDP per capita (2015), 103 countries



Notes: Author's calculations. Annual forest change is a 5-year average from 2015 to 2020. For GDP per capita, because of the spread of the data, a logarithmic scale is the most natural way to express it. To convert, "7" on this scale means $e^7 =$ approximately \$1,097 where e is Euler's constant (roughly 2.71828); "8" means $e^8 =$ \$2,981; and so on, expressed in constant international dollars which adjusts for inflation and cross-country price differences. **Source:** Our World in Data, Annual change in forest area vs. GDP per capita, 2015, consulted June 5, 2023.

size that the benefits of economic growth are conditional on the presence of economic freedom (limited government regulation, small government, strong property rights, open trade, and sound money).¹³

There are three reasons to emphasize the importance of economic freedom to the Environmental Kuznets Curve effect. First, economic freedom fuels economic growth and development.¹⁴ This means an economy takes less time to arrive at the critical turning point where the environment starts improving as incomes increase. Second, thanks to strong property rights (one component of economic freedom), innovators can more easily secure the fruits of technological innovation.¹⁵ This stimulates innovation that could be environmentally beneficial, while fewer regulatory barriers may facilitate the adoption of new technologies by other firms. Third, strong property rights make it easy to assign liability. Parties affected by poor environmental

situations can thus more easily use the courts to seek remedies, and given such legal possibilities, firms have an incentive to cut back on polluting activities from the start.

Economically freer countries therefore tend to reach the critical point faster, with less environmental damage. Studies that have tried to account for the importance of economic freedom tend to find strong signs of the Environmental Kuznets Curve in economically free and rich nations.¹⁶

The reality is that economic growth can be good for the environment in the long run. However, this is conditional on governmental policies that protect property rights, encourage innovation, and foster entrepreneurship.

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