Research in Economics and Management
ISSN 2470-4407 (Print) ISSN 2470-4393 (Online)
Vol. 7, No. 4, 2022
www.scholink.org/ojs/index.php/rem

Original Paper

Energy Trumps Ecology

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Received: October 19, 2022 Accepted: November 1, 2022 Online Published: November 16, 2022

doi:10.22158/rem.v7n4p37 URL: http://dx.doi.org/10.22158/rem.v7n4p37

Abstract

The outcome of the COP27 confirms the PD game nature of the work of this UN club, CUT defeated by EMIT (emissions). The same will hold for forward COPs, until such time that the tipping points change the game for the great players in this global environment club.

Keywords

public goods, commons, PD game, energy shortages

1. Introduction

The Ukraine war confirms that violence is not a solution method of global conflicts such as that between the West and the Communist-Iran block of states. Conflict over Taiwan, Himalayas and Yemen must be handled somehow before destruction sets in as in the Ukraine. The global economy is a series of linked marked economies. What more is needed?

Economic theory always implies that an effective market economy was *sine qua non*, but yet not enough. In addition, a country needs the so-called *public goods*, now more than ever.

2. The Basic Needs Diagram

The most powerful theory in the social sciences is the *equilibrium theorem* in theoretical economics. It predicts that competitive markets will achieve overall efficiency for fungible goods and services. But how about other needs?

The following Diagram 1 has different goods and services that people are in need of.

Diagram 1. Excludability (E) and rivalry (R)

	R	-R
-E	commons	public good
E	private good	toll good

Market allocation presupposes excludability so that free riding is impossible. Pure public goods like law and order is outside of the market, because free riding is feasible. People who boast of not paying tax also find it an attractive option in life. The core of the public sector is the state that is based upon money-market mechanisms like taxation and budgeting. Market allocation of infrastructure is only possible when fees can be levied or is desirable as with toll goods or services. On the contrary, market failure is complete in relation to commons since free riding can not be stopped.

3. Capitalism and Market Failure

When Schumpeter predicted the transformation of capitalism into socialism, his argument rested upon envy. Contrary to Marx, Schumpeter did not rely upon the working classes to bring forward socialism but the "intellectuals".

Just as Marx was wrong about the cohesiveness of the working class facing dismal pauperization, so Schumpeter failed to see that intellectuals might work for capitalism. In fact, French sociologist Tocqueville already before *The Communist Manifesto* pointed out that real wages would go up in the market economy. The chief protagonists of capitalism after the second world war were intellectuals at universities like Chicago, Virginia and Freiburg.

In any case, no socialism has been forthcoming. China today is hardly a socialist country like the USSR was. And North Korea is not what Schumpeter dreamt about as replacing capitalism. However, today's global market economy faces the very same problem that occupied Marx and Schumpeter, namely the enormously skewed distribution of income and wealth.

Look at the following Figure 1:

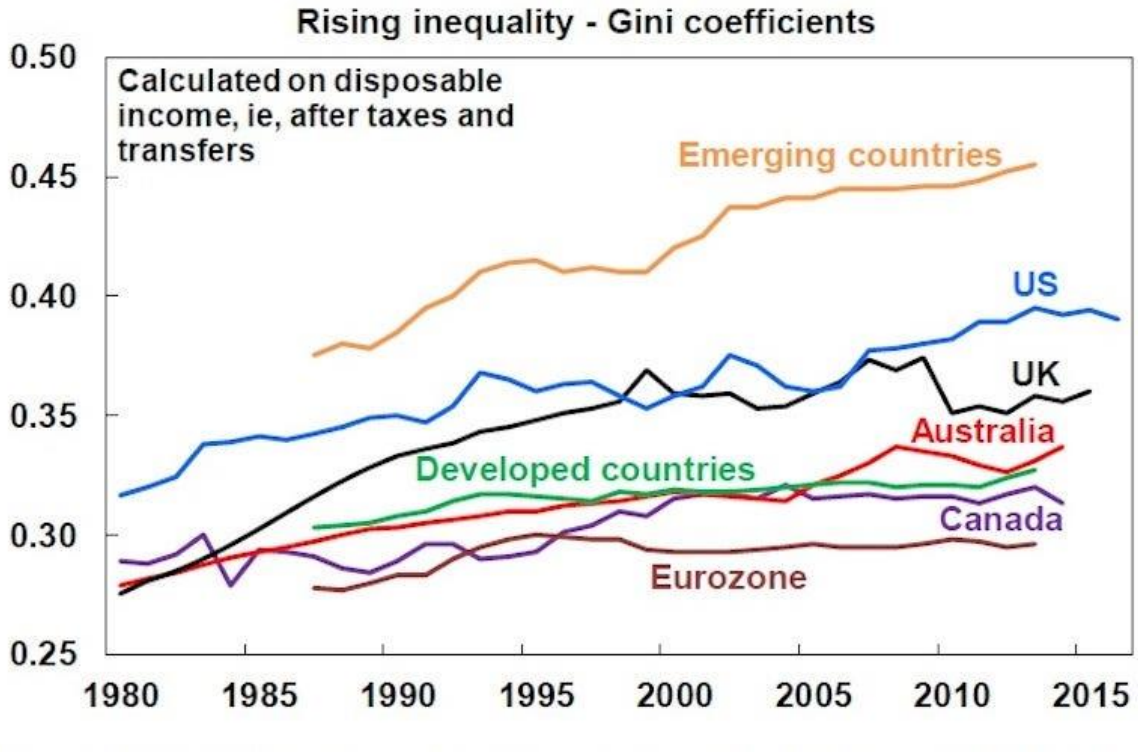

Figure 1. Gini Index by Country over Time (World Income Inequality Database, Business Insider, AMP Capital)

The skewed income and wealth distribution impacts upon global warming politics in two ways. First we have the argument that capitalist greed is a major cause of global warming. Second, we hear that climate policies must take into account the rich-poor cleavage, between countries as well as within.

The global market economy comprises a number of capitalist economies. Each of them faces a set of commons problems.

4. Welfare State

The only countries that came close to democratic socialism were the Scandinavian welfare states. Here, public sector spending and taxation were increased to around 50 per cent of GDP, offering a number of merit goods and services impartiality, like health, social, old age care free university training ae well as various transfer payments. The mixed economy was created partly under influences from Keynesian economics. However, recently the Swedish or Scandinavian model -"*folkhemmet*"- has lost its redistribution edge, allowing some privatisation as well as less progressive taxation. Several EU countries have some welfare state programs, but socialism is no longer on the political agenda with EU.

French economist Piketty (2018) advocates the relevance of a major system transformation to a socialist economy now. He argues that most of the time capital owners take a larger share of national income per year than labour. It seems that Tocqueville in 1840 was right when he underlined that capitalism might

benefit also labour. In any case, the future of the global market economy appears not in doubt, at least not the more institutional version (Williamson, 1985).

It has been argued the capitalism is the root cause of the ecological crises (Klein, 2015). However, the capitalists would suffer or perish too, advanced life becomes impossible. One can separate between institutional capitalism a la Williamson (1985) and criminal capitalism. Illegal capitalism no doubt hurts Mother Earth.

5. National and Global Commons

All countries have commons that they must confront somehow. Commons may be local, regional or national in nature, characterized by no private ownership or open access. Resources in common ownership may be e.g., water, land, forests or air. Thus, commons are e.g., sea, lakes, animals, mountains and the atmosphere or stratospheric. Their usage calls for state regulations.

Being non-excludable but rivalry holds, commons face overuse or misuse. The protection of commons differs from one country to another in terms of comprehensiveness and efficiency. In general, the better protection is offered by rich countries.

Climate change is a global commons phenomenon. It certainly affects national commons. Thus, there is much discussion of the extinction risks of species and the pollution of oceans as well as a decrease of ice. Although we find examples of strict and effective cases of commons protection, the overall situation is very negative concerning due to free riding:

- Overfishing
- Illegal killings of animals
- Destruction of rain forests
- Forest degradation
- Ocean pollution
- Air pollution.

6. Information, No Policy Coordination

Protecting global commons, one must see policy coordination. But it is inversely related to environment information. A plethora of sources indicate grave threats to the environment of the Earth but policy coordination is not up to tasks.

Thus the wider UN framework surveys regularly different aspects of global ecology, as do regional organisations survey regional ecology. The information is clear cut negative. One may separate between 2 kinds of literature or research.

First, the more exact information concerns the overall status of the global environment. It can be summed up as *0VER-EXPLOITATION*. Second, the less exact information deals with the so-called *TIPPING POINTS*. Whereas there are yearly data forthcoming on the misuse of Earth's resources, the tipping point literature is a set of predictions about what may happen 2030 or 2050 or 2100. A tipping point is a major

ecological change that is unstoppable. The ecological crisis contains a number of tipping points related to each other. The goal of halting global warming to 1,5 degrees is based upon such a tipping point hypothesis.

7. The Cop Approach

The *Conference of Parties* (COP) has been going for almost 30 years, without reaching an agreement on halting CO2 emissions. The COP has managed a lot though like focusing the governments of the states of the world upon CO2 emissions and energy, deciding *upon* the major goal of 1,5 temperature unscrew and setting up a fund for compensation of poor countries for climate change damage. After the COP meeting in Egypt it seems that the 1,5 goal is no longer attainable 2050, because no limits on emissions were agreed upon. Why?

The information appears overwhelming in favour of global warming theory, emphasising emissions, especially CO2 and methane. The emissions theory is corroborated by both data and physics. Besides the COP publications other research groups have the same result, namely that emissions must be halted as well as decreased. When global warming theory was launched in the 1990s, it was easy to ridicule it by cornucopians. But now the warming signals have much of veracity. The new llomborg 2020 position that global warming is true but yet not worth combating is not tenable. Two factors or circumstances explain why mankind is in a struggle for positive evolution at the risk of extinction.

8. Energy Trap

Energy units in various forms is necessary for economic growth and development. The enormous economic expansion since 1945 would not have been possible without a formidable increase in emery consumption. And it is until recently based upon fossil fuel resources. Fossils have several advantages but on major drawbacks, i.e., the emissions driving global warming.

Fossils are very unevenly distributed on the planet, which leads to massive trade affecting the bourses around the world with speculation and volatility. Countries that lack fossils must import hugely. Only water power and wind as well as solar power are the alternatives besides thermal and nuclear energy.

Typical of fossils in particular and energy in general is that demand is higher than supply resulting in high prices and shortages except for the Oil Monarchies. The risk of natural gas dependency on Russia has increased volatility, especially after Ukraine invasion. The same applies to the fear for atomic power accidents.

Most governments plan for increases in energy consumption. They regard renewable energy as a means to more of energy and less as an alternative to fossils in the short run. Since energy is sought after but scarce in supply, the major powers in the world will not accept cuts in fossils, thereby increasing emissions.

Energy traps may evolve by misguided policy-making. For Instance, Germany and Sweden now face a serious energy shortage because several nuclear plants were closed down prematurely. Both country

turned back to fossils. Denmark is the only country with a full supply of wind power. Actually, the EU is in the energy trap after loss of Russian gaz so is the UK. Before we bring up the second cause -*free riding*- of the COP failure we look at the great sinners.

9. The Great Powers: Energy Need and CO2s

None of the below heavyweights have driven the COP goals. Instead they continue with fossils, even coal power (Table 1).

Table 1. Great Powers: emissions and economy

Country	CO2 emissions 2019 / Gigatonnes	GDP 2019 / Billion USD
China	10,7	14280
United States	4,8	21373
India	2,5	2832
Russian Federation	1,7	1693
Japan	1,1	5123
Germany	0,7	3888
Iran, Islamic Rep.	0,6	291
Indonesia	0,6	1119
Korea, Rep.	0,6	1651
Canada	0,6	1742
Saudi Arabia	0,5	804
Mexico	0,4	1269
South Africa	0,4	388
Brazil	0,4	14280
Turkey	0,4	21373

Source: World Bank national accounts data, and OECD National Accounts data files.

Given both energy shortage and magnificent plans for even more of energy in the future, one understands why the big countries want to hold all options open, even with the immense risks involved. All future promises about CO2 reductions are in any case renegable.

10. Free Riding

The problem of free riding -non-excludable but rival goods or services- has received two contrary solutions. One the one hand, one may insist upon complete market failure, which gives us the tragedy of

the commons, as argued by Hardin (1967). We have then a double sided PD game with CUT = -3 and EMIT = 2:

Diagram 2. One time emissions game

		B	
	Cut		Emit
Cut	- 3, -3		10, 2
		A	
Emit	2, -10		-5, -5

The COP game as a whole of meetings -27- has one outcome or Nash equilibrium.

On the other hand, one may change the game in order to find the Pareto optimal solution:

a) Threat
b) Repeated play
c) Meta strategies
d) No time horizon.

None of these additions to the predicament of energy shortages will result in another outcome.

11. Conclusion

The COP club has failed to resolve the PD nature of cutting emissions. When there is both non-excludability and rivalry we have severe market failure. Resilience is now the main strategy against the consequences of the tipping points. It will not restore any new equilibrium at +2 degrees.

The demand for energy is such that emissions will not be cut. The role of energy for foreign policy is vital for the Great Powers above.

Mother Earth will heat up so that advanced life may become impossible.

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