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Aziz, Ghazala

Department of Economics, Aligarh Muslim University, INDIA

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Dr Ghazala Aziz (Guest Faculty)
Department of Economics
Aligarh Muslim University
Aligarh INDIA
Ghazl2313@gmail.com

Phone: 9760027326

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Abstract

Considerable amount of concern has been expressed for environment in the recent time. Various summits, negotiations and conferences have been held at various levels with the widest possible participation. The question that arises is despite the sincere concern and the recognition of the causative factors for environmental degradation and consequently the climatic changes, why viable international framework / treaty is still elusive? Since environment involves extensive externalities an international binding agreement is essential. Still each country wants to do little while expects others to do a lot.

The basic problem lies in the fact that environment is not the private good and therefore market can not offer solution. The issue demands a public policy intervention as well as cost. Fulfilling the obligations of any international agreement would require public policy interventions that would upset the current status-quo. Besides, capitalist countries are probably still to accept the reality of the limitations of the market mechanism in this regard.

The paper seeks to trace the causes for the disagreements. The position that they take in the negotiations are traced to their domestic political and economic compulsions. Recent global crises that resulted from the lack or the absence of the regulations in the market economies may be treated a reminder to make them realize that the neo-classical wisdom may not be panacea for every evil.

Global Concern for the Environment – Rhetoric or Real

In the current century a renewed concern for the climatic change can be observed the world over. There is now broad recognition that addressing the problem of climate change is an urgent but challenging task, one that requires collective efforts. The only solace received so far been the priority that eventually began to be accorded by the countries across globe to climate change. Now it appears to be fairly high on the national and international agenda of public policy. Unfortunately successor agreement to the Kyoto Protocol¹ which was supposed to be wrapped up in Copenhagen in December 2009 could not be materialized as the international agreement with ‘binding clause’ still remains elusive. In its place, the chair announced that the Conference would "take note of" a three-page political document known as the "Copenhagen Accord", originally brokered by the USA together with Brazil, South Africa, India and China (the so-called "BASIC" countries). The Accord reiterated core elements of the Bali Action plan², but it was short on new commitments. To reach at a complete deal, major gaps between developed and developing countries must be narrowed down. Negotiations are now expected to extend through the South African UNFCCC³ conference in 2011.

Problem at Global Level

Nevertheless, despite visible differences in approach that exist between developed and developing countries on the subject the silver lining appeared in the form of realization that something needs to be done on priority as climatic conditions are deteriorating faster than anticipated earlier. Consequently the climatic change has begun to be place fairly high on the agenda of public policy of almost every country.

But environment is a public good with externalities that stretch beyond political and geographical boundaries. This calls for an international agreement which remains elusive till

¹ The Kyoto Protocol is a protocol to the United Nations Framework Convention on Climate Change (UNFCCC or FCCC), aimed at fighting global warming.

² The Bali Action Plan did not introduce binding commitments to reduce greenhouse gas emissions but included the request for developed countries to contribute to the mitigation of global warming in the context of sustainable development. In addition, the Bali Action Plan envisaged enhanced actions on adaptation, technology development and on the provision financial resources, as well as measures against deforestation.

³ international environmental treaty with the goal of achieving "stabilization of greenhouse gas concentrations in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system."

date because of the difference in perception among the countries over the question of bearing the cost of reducing / containing environmental degradation. The net gain in this context so far has been, as stated above, the universal realization that some of the problems need to be addressed without further delay.

The Nature of the Problem

The immediate task is to reduce the emission of the green house gases that include carbon dioxide, methane, nitrous oxide, sulphur hexafluoride and two groups of gases hydrofluorocarbons and perfluorocarbons. The task involves switching to new technology that would reduce the emission of toxic gasses. As the environment is a public good over which property rights cannot be properly defined together with externalities market mechanism cannot be expected to be efficient. In the absence of property rights environment is not a efficiently tradable good. In view of these complexities the only way out is the government intervention through public policy as the corrective taxation is capable of internalizing an externality

Clear cut divide can be observed between developed and developing countries in the approach to environment. Developing countries, while realizing the significance of cutting greenhouse gases' emission globally, do not want their development trajectories to be severely impaired by restrictions resulting from any global agreement. While the developed countries stress the inclusion of fast growing developing countries for the binding agreement if at all it has ever to take place. That is why there still remains wide disagreements about what should exactly be done, who should do what, and who should bear the burden of any proposed changes.

Problems with Developing Countries

Developing countries argue it is developed countries that are not only responsible for the environmental degradation but are biggest polluter even today should bear the greater burden in reducing the greenhouse gasses emission. Developed countries on the other hand hold the fast growing economies of Asia and Latin America equally responsible for the problem in today's context.

This divide is not restricted to global north and south but could be found within the continent as well. The case in point is Asia. The disagreement within Asia is because of the heterogeneity of Asia itself. Asia is a continent with diverse group of countries having per capita income varying from just over \$1,000 (in purchasing power parity terms) to around \$10,000. Despite very rapid growth over the last decade or two, their average of per capita incomes of around \$2,500 are well below the average of high-income countries at \$30,000. Their per capita carbon emission rates reflect a corresponding difference to some degree. Whereas the Asian average is about 0.9 tons per person per year the figure for countries with high-income average is over 4 tons.

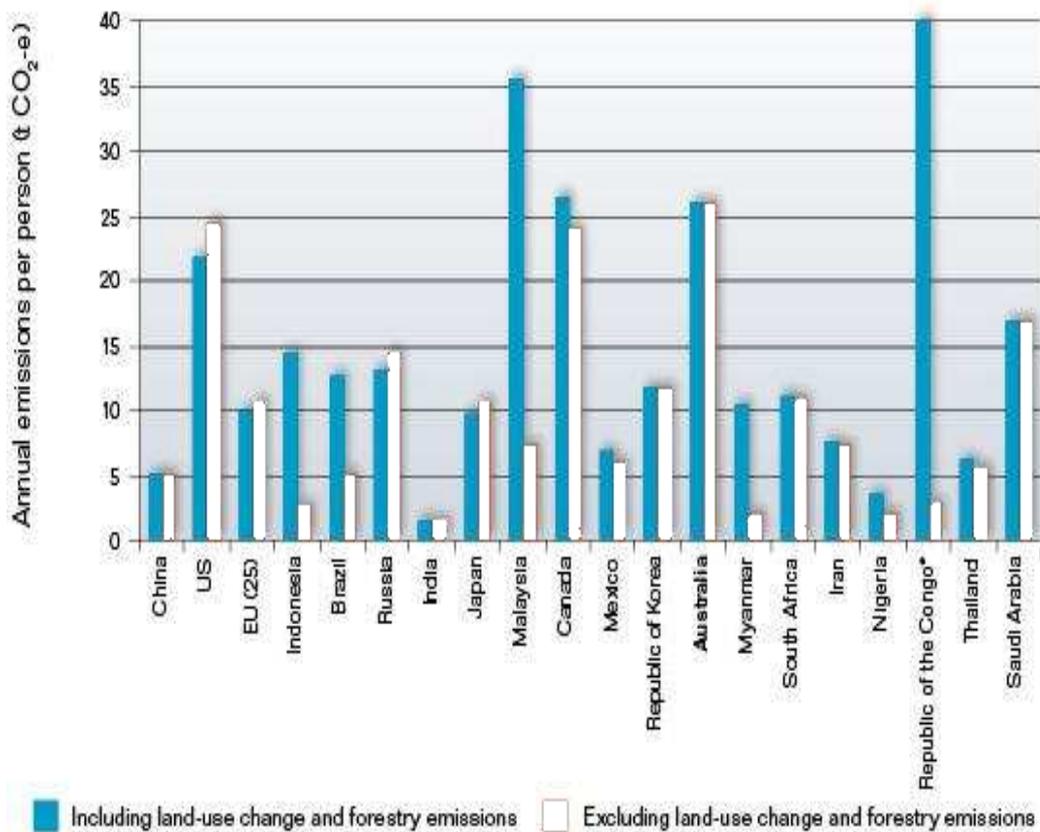
In Asia's developing economies the carbon concentration in absolute term is more than twice the average for high-income countries, and over four times as high as Japan's carbon intensity. Of course, Asia also includes China, the largest emitter of green house gases. The only gain achieved so far has been the unilateral and voluntary commitment on the part of some nations to restrict their emission level but they are opposed to any binding commitment.

The argument advanced by developing countries does have merit that emerging nations assert that developed countries must take the lead in reducing emissions because, on a historical basis, they have contributed most to global warming. The problem of developed countries is that they know that no effective improvement will emerge from unilateral action of any single country. It is much more costly for one country to achieve a specified degree of improvement alone than it would be for that one country to achieve the same level of improvement within a global agreement. The high costs of some countries in achieving high improvement targets unilaterally may demonstrate to others the difficulty rather than the feasibility of action.

From the given table-1 it is clear that the percentage of World's total emission of carbon gases by the developed country is still more than the developing countries except China but in per capita terms this would appear to be quite low. Carbon dioxide emission per capita in Australia, United States and Canada is still much higher than any developing country.

Figure-1

The 20 largest greenhouse gas emitters: per capita emissions including and excluding emissions from land-use change and forestry, c. 2004



Note: Estimates of forestry-related emissions are subject to large uncertainties in many of the main emitting countries.

* Dark blue bar is truncated; per capita emissions including land-use change and forestry emissions are 105 t.

Sources: UNFCCC (2007) 2004 data for US, EU (25), Russia, Japan and Canada; Department of Climate Change (2008) 2004 data for Australia (using UNFCCC accounting); and World Resources Institute (2008) for other countries (2000 data except for CO₂ emissions from fossil fuels, which are for 2004) and for population (2004).

Therefore it seems unfair that developing countries should accept major commitments to improvement in the early stages of their economic development, when the countries that grew rich before them were not so constrained at similar stages of their own development. At the same time it is reasonable to expect of developing countries to decide about the minimum efforts they are ready to undertake.

Table-1

Total greenhouse gas (GHG) emissions top 15 countries in 2005					
Rank	Country	Million metric tons of CO₂e	% of World total	CO₂e per capita	GHG intensity (tCO₂e/mill.US\$)[‡]
1	China	7,219	19.1	5.5	1,354
2	United States	6,964	18.4	23.5	562
3	European Union (27)	5,048	13.4	10.3	387
4	Russian Federation	1,960	5.2	13.7	1,154
5	India	1,853	4.9	1.7	759
6	Japan	1,343	3.6	10.5	347
7	Brazil	1,014	2.7	5.4	641
8	Canada	732	1.9	22.6	647
9	Mexico	630	1.7	6.1	537
10	Indonesia	594	1.6	2.7	840
11	Iran	566	1.5	8.2	881
12	South Korea	549	1.5	11.4	534
13	Australia	549	1.5	26.9	850
14	Ukraine	485	1.3	10.3	1,843
15	South Africa	423	1.1	9.0	1,064
	Top 15 total	29,927	79.3	7.1	646

Source: Climate Analysis Indicators Tool (CAIT) Version 6.0 (Washington, DC: World Resources Institute, 2009).

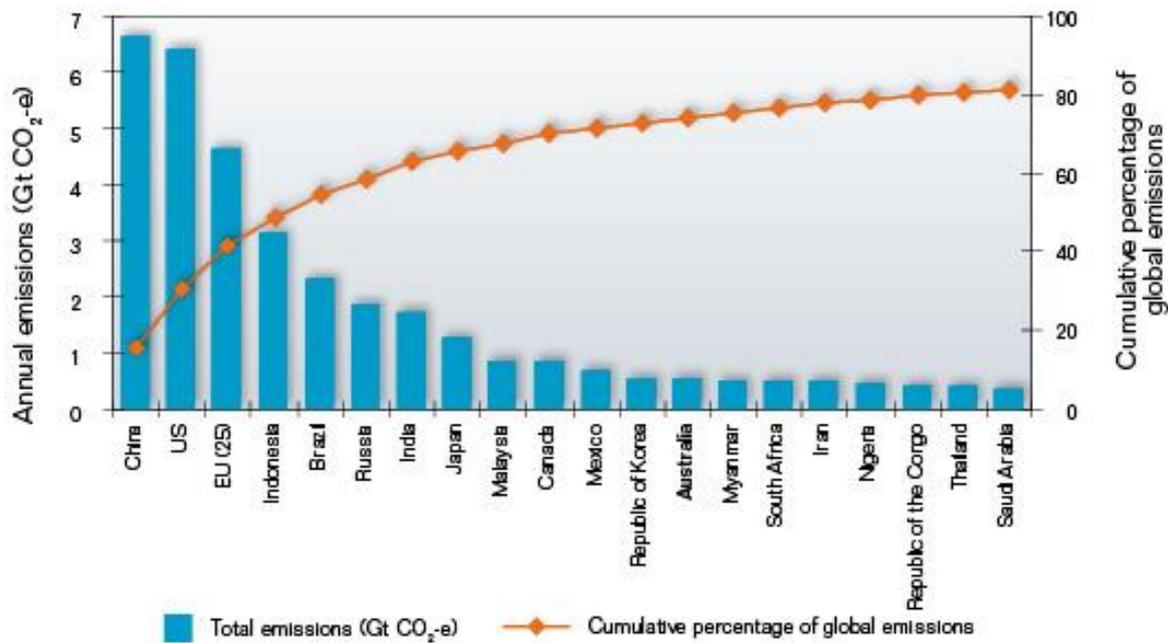
[‡]GHG emissions per unit of national GDP expressed in international dollars (purchase power parity).

Possible Agreement Condition by Developed and Developing Countries

Even if the emission of green house gases is pegged at the present level the danger posed to the environment is unlikely to get mitigated. Therefore the task before hand is to immediately reduce the emission from the current level. There is increasing international focus on the need of holding concentrations greenhouse gasses in the environment at or below 450 ppm, or to a rough equivalent, in order to keeping the probable increase in temperature to about 2 degrees Celsius above pre-industrial levels.

Figure-2

The 20 largest greenhouse gas emitters: total emissions and cumulative share (%) of global emissions, c. 2004



Sources: Garnaut climate change report 2008.

There are twenty countries selected for the study as in (Figure – 2) for the greenhouse gas emissions where China, US and EU (25) share the first three positions for the highest emission of CO₂ which is higher than the rest of the world. The requirement therefore could be for the global budgetary allocations for the realization of targets for global emission concentrations objective in a time bound manner. There needs to be an agreement on allocation of that budget among countries. Agreement has to be based on principles that are widely seen as being fair.

The agreement for controlling emission is based on entitlements and not on actual emissions may have more acceptability as can make the environment a tradable good with some degree of property rights. It is likely to be effective in climate change improvement if there is freedom to trade entitlements. Those countries in which improvement is relatively cheaper are encouraged to reduce their emissions below their entitlements and sell the "surplus" entitlements to countries where it is relatively costlier.

The developed countries need to agree to take the lead in public support for research, development, and commercialization of new technologies. The Garnaut Climate Change Review⁴ suggested that the countries with per capita income in excess of \$11,000 per annum should provide public support to the extent of \$ 100 billion per annum for the purpose of low emission technological innovations (Garnaut, 2008)⁵.

Poor developing countries lack financial resources, human expertise and institutional support in magnitude required for the task. It is not unreasonable to demand adequate financial commitments to support developing countries in their endeavor to find climate friendly developmental strategies.

Public Policy in the Wake of Global Crises

Whatever agreement emerges at international level it is clear that to implement the same would require some public action domestically. The action in all likelihood would upset the present status quo. The countries whose public policy is influenced by the neo-classical doctrine of minimal government interference are therefore uncomfortable with the idea as any policy intervention would result in advantage to some section and disadvantage to other.

Recent global financial crises have once again created an opportunity for the acceptability of greater government intervention. The crises have provided justification for the bail out packages for the big private sector companies and financial institutions. These companies have been bailed out by generous budgetary allocations for the larger public interest. As the stakes of millions of people were involved it made absolute sense to use tax

⁴ The Garnet Climate Change Review was a study by Professor Ross Garnet, commissioned by then Opposition Leader, Kevin Rudd and by the Australian State and Territory Governments on 30 April 2007.

⁵ The interim report of the Garnet Review was released on 21 February 2008.

payer's money for the cause. What emerged in the process is the belief that neo-classical wisdom may not be that sacrosanct not to allow its dilution.

As stated above the environmental taxes are one such option. Such taxes would make the polluting units to weigh their long and short run options to switch to environment friendly technology or to bear additional tax burden. The additional revenue generated through these taxes would help government to raise its expenditure level so as to compensate for the possible loss of demand on account of some goods becoming costlier.

Conclusion

In spite of the realization of the danger for the planet earth of the climate change it appears the action commensurate to the problem is yet to come by. So the concern for climate change largely remained rhetoric. The major obstacle to in international agreement which is absolute must in this case has been the adjustment in the domestic public policies. Developed countries with allegiance to neo-classical policies are normally averse to upset the status quo. But the present crises have made people realize about the greater role of the government and might have created new tolerance level among the people about the degree of government intervention. Environmental taxes could be one measure to achieve the reduction in the greenhouse gasses.

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