

Tackling Climate Change

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Introduction

- Expressing personal views
- Climate Change – the challenge
- An ethical question
 - Why the world should care
- Learning from human behaviour
- How to make a difference – collective action
- Conclusions

Climate Change

- Global solutions needed
 - So far Ireland reducing emissions by shift to services
 - However, need to do much more
- EU Policy:
 - Successful policy needs competitive solutions
 - Uncertainty for investors if policy not credible
 - Need a signal for investors – prices and policies
 - Problem of agriculture – must be part of long-term solution
- Problems with uncoordinated national policies

Climate Change

- The world faces dramatic changes as a result of human behaviour
 - However, these changes will take decades to play out, but not centuries
- This is more about future generations than our own
 - Cannot say –policy will be a big benefit to you today, or even your children.
 - The burden of a climate disaster will fall more on future generations
 - Reason for taking action – largely altruism, though there will be some benefits
- Climate change is a moral question
 - Action is required which will bring us little benefit, but significant costs
 - In nearly all other policy areas there are winners and losers
 - Coalitions of beneficiaries are possible

Communicating the Need for Action

- No simple answer but positive leadership needed
- Many distractions
 - EU: Financial and economic crisis, Greece, Asylum seekers, Brexit etc. etc.
 - Politicians are human and can only work 24 hours a day.
 - Getting necessary attention is difficult.
- How to communicate
 - Human behaviour – complex response to information
 - Ability of people to absorb information
 - The role of the market as a simple signal
 - However, the market is always imperfect

Climate Change – the Task

- No regrets policies
 - Cannot be certain of speed with which situation deteriorating
 - However, the cost of a really bad outcome is so high it is much better to take action immediately
 - The cost of doing too little is likely to be small compared to doing too much

Global Action

- What can practically be achieved?
 - The EU model is too complex to work at a global level. Impossible to get buy in to UN legal framework.
 - However, US, China etc. will probably agree to passing their own laws.
 - May not be ideal but will get some action immediately.
 - This approach reflects recognition by developed & developing of urgency
 - Question of who pays is another matter – climate justice.
 - Paris - good news:
 - 154 countries committed to action covering 90% of emissions
 - Paris – bad news:
 - Commitments will not keep temperature rise < 2 degrees – much more needed
 - Paris agreement can provide framework for future ambition

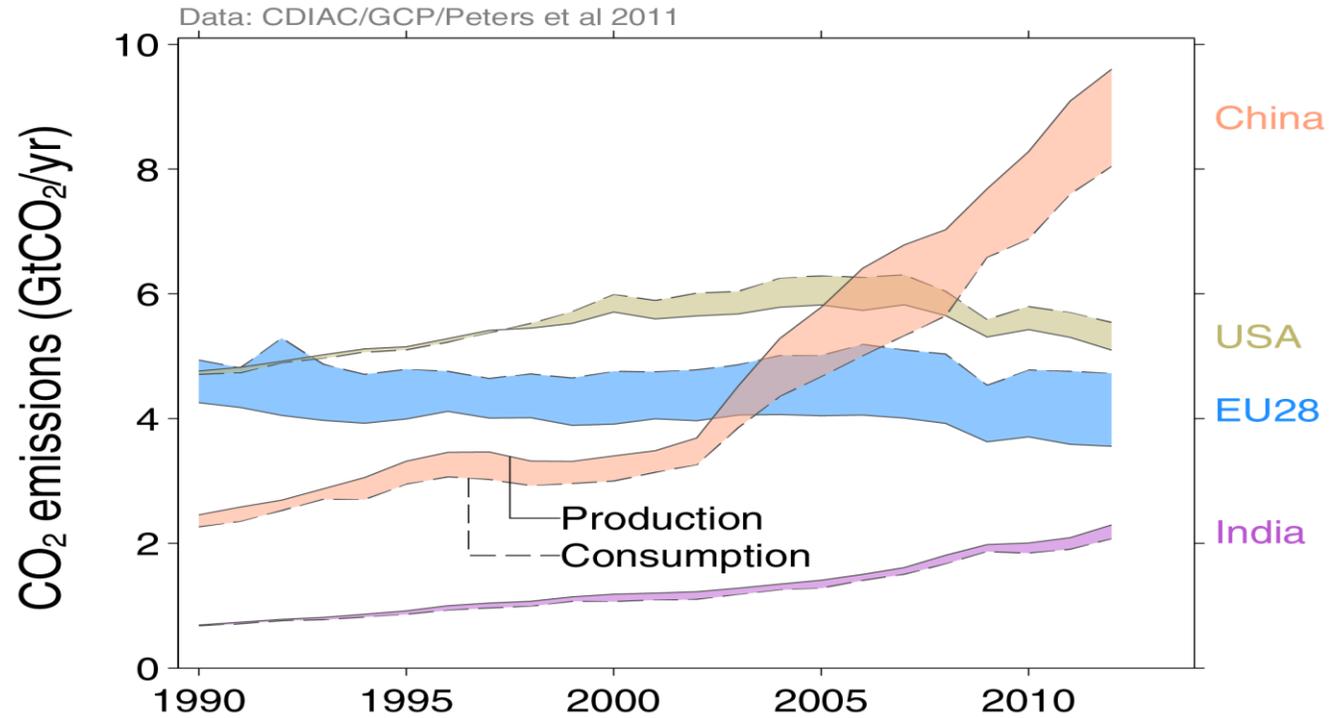
Tackling Climate Change will Cost us Today

- Just legislating to be good, to set targets means little.
- Need to recognise that tackling climate change will cost most of us.
 - Some will be affected more than others
- Need to take action that implements the cost increase.
- Unlike most public policy action the promise is that higher costs today will bring us limited benefit. Major benefits are for future generations.
- Attempt to disguise the cost and suggest that it will “benefit” us:
 - e.g. more jobs, etc.
 - e.g. exaggerate the cost to us today of global warming.
 - Transparency better

The Economics of Adjustment

- Measure carbon emitted by production or consumption?
- Need to change production to use less carbon
- Changing consumer behaviour may be more of a problem
- Exporting developed world's problem to developing world
- Carbon leakage
 - Some inevitable
 - However, could make things worse
 - Hence the need for a global agreement

Allocating emissions to the consumption of goods and services provides an alternative perspective on emission drivers



Consumption-based emissions are calculated by adjusting the standard production-based emissions to account for international trade

Source: [Le Quéré et al 2014](#); [Peters et al 2011](#); [Global Carbon Project 2014](#)

EU Action - 1

- Make greenhouse gases (carbon) more expensive
 - Signals to us all in a simple manner that greenhouse gases are bad.
 - Price best way of continuing to communicate a vital message to all citizens
 - Example of “food miles” v price
- Emissions trading: Limitation on pollution. Firms buy and sell the right to pollute
 - Aim is to raise electricity prices because permits should be costly to encourage carbon-neutral generation
 - Guarantees EU electricity production meets the specified limit on emissions
 - Higher electricity prices will make us all worse off – but encourage us to reform
 - To date it has not worked because it has not raised prices.
- Disadvantages
 - EU system means that overachievers will be automatically replaced by underachievers. Doing more guaranteed NOT to reduce EU emissions
 - A tax would be better. Given that that is ruled out, need reformed EU scheme. This is under way.
 - In 1992 the EU Commission proposed a tax. Ireland opposed it – a failure of vision. Different today

EU Action - 2

- For everything other than electricity EU sets national emissions limit.
- Solution left to national governments
 - Sounds like subsidiarity. However, it comes at a cost.
 - Best way to meet target is a tax. Keep on raising it till emissions fall enough.
 - However, need a very big price rise because difficult to change way of life
 - However, need other policies as price is not the only signal for consumers
 - Main way to reduce emissions in long run is new equipment, new technology
 - Incentivised by a high price

Agriculture

- One “theoretical” solution
 - Tax all greenhouse gases, including methane at same rate world wide
 - Would see some reduction in livestock based consumption
 - However, production would take place where produces least emissions
 - No chance of this approach
- Alternative “second best” solution at EU level
 - If tax greenhouse gases, including methane, at same rate
 - Would lead to some carbon (methane leakage)
 - In case of agriculture could be a serious effect (no benefit to environment)
 - Need to look at wiser approaches
- Not clear what is the correct answer
- However, there are many practical solutions being researched
- Getting land use right is important

Domestic Action

- In addition to tax / price
- Developing sustainable living
 - Sustainable cities – denser living, public transport
 - Planning – ending bungalow blitz
- Regulations and building standards have a role
 - e.g. Building standards
 - e.g. BER scheme has an effect
 - e.g. EU and US car standards

Need for Research

- World faced with a choice:
 - Dramatically reduce standard of living OR
 - Find new ways of producing clean energy that will maintain living standards
- Realistically, requiring China and India to halt rise in living standards, and Europe and the US to dramatically cut living standards, will not happen in near future.
- Most can hope for in next five years is a major slowdown in world emissions
 - Using approaches I have discussed
- There is an alternative for the period 2020-50 – develop technological solutions
- How to encourage necessary research?
 - Tax financed research an essential ingredient – part of US solution
 - However, governments are not very good at picking winners
 - Needs a market solution too.
 - A promise of a higher cost of carbon will encourage a myriad of firms to invest in research.
 - Already major progress in windmills, solar power, electric cars etc. However, still a long way to go

Understanding Human Behaviour

- Price is a simple and effective way of telling people that polluting is bad.
 - Can help tell us which goods are most polluting
- However, price is not always a good signal – need others
 - Example of smart meters. Unless give us information in a simple manner it fails
- Dealing with barriers to change
 - Problem of energy efficiency – disruption to life style more important than price
- Advertising, blogging, preaching has some, limited, effect
 - As in school, telling people to be good may work for a short time
 - Research shows that advertising the importance of energy efficiency failed
 - Needs a more sustained change in culture

Distributional Effects

- Distributional effects of **tackling** climate change
 - Who is hurt most by taking action?
 - Producers v consumers
 - Some producers hit particularly hard
 - Poorer consumers most affected in Ireland
 - Some countries affected more than others
- Distributional effects of climate change itself
 - What parts of the world will suffer most
 - May be because climate change is more adverse in some countries
 - May be because countries are too poor to adapt

Stopping Climate Change – who pays?

- Who spends a higher share of income on energy?
 - Heating costs especially affect the poor.
 - Transport?
- In Ireland
 - Research shows cost of change will fall more on poor households.
 - Solution is through welfare system, not exemption from prices
 - We all need to make changes
 - Also poor households cannot afford to invest in energy efficiency
 - See Northern Ireland Housing Authority – they financed change

Conclusions

- Action is a moral imperative – also because of self-interest
 - A cultural change is required
- Make the market part of the solution
 - Get prices right
- Technical change essential
 - Research and Development (also incentivised by prices).
- Behavioural change needed
 - Recognise complexity of human behaviour
 - Even a willing audience may not hear or understand complex answers