David Hume Institute Seminar
The Economics of Climate Change Policy in Scotland - 15th November 2007.

Professor Nick Hanley provided us with a very thorough assessment of the means by which carbon emissions in Scotland could be reduced and the appropriate means, from an economic perspective, of optimising the approach to emission reduction. The seminar, the fourth in our autumn series, was most ably chaired by Professor David Sigsworth, who is Chairman designate of the Scottish Environmental Protection Agency. The seminar was sponsored by the Economic and Social Research Council, and the Binks Trust supported the research project and the accompanying publication, which is available to buy (for just £5) from the David Hume Institute.

Nick Hanley began his presentation by stating clearly that he was not going to debate whether or not climate change existed, that there were targets for reducing greenhouse gases (GHGs) and that his paper addressed the best means, in economic terms, to meet these targets. He outlined the key sources of GHGs in Scotland – namely energy production, transport, business, agriculture and households and highlighted that energy demand is rising, raising the stakes. He also noted that, whilst some sectors have experienced falling emissions, e.g. business and industrial processes, the trend for others e.g. transport has been upwards.

Key to Professor Hanley's argument is that to reduce carbon emissions in the most effective economic manner, marginal abatement costs (i.e. the costs businesses and households face in reducing carbon emissions) should be equalised across sources. These costs include:

- Investing in energy saving technology.
- Switching to lower carbon content fuels for production, heating and transportation.
- Reducing output.
- For farmers, reducing their stocking levels to reduce methane emissions.
- For airlines or bus operators, replacing their fleet with more fuel efficient planes or buses.

Hanley suggests that these costs should be quantified and compared across sources in order that society gets its pollution control as cheaply as possible. He also highlighted the role of 'sinks' i.e. planting forests to absorb carbon and, on farmland, re-creating wetlands to aid the reduction of GHGs.

The main aspects of current UK policy were highlighted with the view that economic instruments, for example, pollution taxes or tradable pollution permits, are more efficient than regulation (command and control measures). The EU Emissions Trading Scheme was highlighted as a positive step forwards since it provides a price for carbon, which allows comparison across sectors.

Moving the discussion on to Scotland and how to best meet Scottish targets, Professor Hanley compared 'marginal' abatement costs across important emissions sectors. There were a number of caveats to his analysis, not least due to data constraints, but the results were fascinating in that some aspects of renewable energy, under this scrutiny, appear to be very expensive in reducing carbon

emissions. Also, households could significantly lower their contribution to GHGs at a **negative cost**; yet they do not choose to undertake the upfront investment which would ultimately both provide them with cost savings and reduce carbon emissions from this sector.

Having examined the key carbon producing sectors in Scotland and the costs of reducing emissions from these sectors the, perhaps controversial, question was posed that, since Scotland is a small country, would it make more sense to spend money on mitigation or adaptation i.e. invest in how to reduce expected damage costs? Hanley concluded that despite the pros and cons of this debate, we don't have much choice over whether to mitigate or not – we have targets to meet and we should try to ensure that our mitigation actions are cost effective. We must also attempt to achieve a correct balance between mitigation and adaptation.

Having reached his interesting conclusions, the Chair provided a thoughtful response to Hanley's presentation, highlighting that it is difficult to compare costs across sectors using a point estimate of the price of carbon as this is in its infancy and, as such, is very volatile. He also suggested that command and control measures were not as inefficient as suggested in the presentation. A very lively Q&A session followed, some comments echoing this last point. The last contribution from the floor came from Richard Wakeford of the Scottish Government, who asked Hanley to imagine it was 2050 and that carbon targets in Scotland had been reached – how did we get there and what did this brave new world look like? This is a fascinating proposition and one we may pursue at the David Hume Institute. Having had to cut off the Q&A session as we had run out of time, the participants continued the discussion over a glass of wine, with many of the audience lingering to take part in further debate.

A good dinner discussion followed, with the subsequent key conclusions:

- Whilst some of the methods to reduce pollution in Scotland are reserved matters, others are within the scope of the Scottish government and can be considered; for example, it is possible to have Scottish only trading systems.
- There are some areas where large gains could be made for a minimum effort e.g. a plastic bag tax.
- It needs to be made easier for households to make energy savings e.g. a council tax rebate could be given to households making energy efficiency savings.

The last word went to the Institute's Director Jeremy Peat who succinctly summed up the evenings discussion by suggesting that the long term implications of climate change should be highlighted, that climate change should be moved up the political agenda with a new look at policy and the timing of policy measures and that economic instruments, including a carbon price, had a role to play in reducing carbon emissions. Most importantly, however, was the point that Scotland can do much on its own.

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