

THE CONTROVERSIES OVER THE CARBON TAX

The failure of the Copenhagen climate change summit to formulate a successor to the Kyoto Protocol has cancelled hopes for the foreseeable future for any enforceable regulatory framework to deal with the global warming issue worldwide. Commentators have pointed the reticence of emerging economies along with recalcitrance of the US administration and the lobbying of powerful industrial interests. In Europe, Tax commissioner Semeta's proposal for a future EU carbon tax was placed on the backburner due to uncertainties on its economic effects. Observers have thus been left with three overriding questions: Where are we in the theoretical debate? What could be the next steps in the development of a low carbon fiscal model? What will be the economic impact of any future changes?

The creation of a regulatory and fiscal framework to control the future of carbon emission has run up against its many inner contradictions and the public debate is in a terrible state of confusion. The first issue is its technical complexity because it's not simply a matter of reforming tax regimes with a few minor tweaks but creating a completely new model of production from the ground up. This revolution would affect emerging economies as well as industrialized nations. Through a snowball effect the issue has grown larger and more complex to the point where it defies any comprehension or logical explanation. The lack of clarity surrounding the debate has been exacerbated through the corrupting influence of powerful industrial lobbies as well as the clarion call of myriad of environmental NGOs. The white noise that is the result of too many opposing voices has seeped into the political arena and creates pressure for maneuvering and bargaining around each major political decision.

To get an idea of the challenge facing the global community it is useful to look at the way it plays out at the local level and the State of California provides a clear illustration of the forces in play. Governor Schwarzeneger has in recent years become a self-appointed champion of the global war against climate change and provided the political will for passage of the ambitious California Global Warming Solutions Act of 2006 ([otherwise known as AB 32](#)). Using market-based incentives the legislation aims to reduce greenhouse gas emissions to 1990 levels by the year 2020. This translates into a 25% reduction over the next ten years and promises to reduce levels to 80% of 1990 levels by the year 2050. One of the primary goals of the measures contained in the Bill is to stimulate the creation of jobs in 'green' sectors of the economy. The law was recently called into question in the autumn of 2010 through a ballot measure that aimed to reduce its impact. Proposition 23, which would have stripped the 2006 legislation of any real bite was massively underwritten by the petroleum industry and was a response to the belief that to continue limiting carbon emission would dampen job growth and raise the price of energy. On the other side, opponents to Proposition 23 argued that over the last five years job growth in green sectors of the economy had risen ten times faster in California than other parts of the United States. Over the same period the state's clean energy sector became a magnet for investment [attracting \\$9 billion in venture capital and creating scores of new businesses](#). Considering the dire state of California's economy, the fact that its voters gave a massive endorsement to the current laws when they rejected Proposition 23 suggests a deeply entrenched belief in the need for clean energy. It also suggests that the massive investment made by hedge funds and other financial interests through a PR blitz succeeded in convincing the electorate that their interests coincide with those of green business although it is the latter that have the most to gain from retaining the current legislation.

The process in California is emblematic of environmental legislation which doffs its cap to the welfare of the planet while focusing the bulk of its energy on matters of largely local or regional importance. Indeed, the supporters of Proposition 23 have remained notably silent on ill effects the AB32 legislation could have on the economic health of other regions in either the US or Mexico who depend on mining or heavy industry for their livelihood. Narrow thinking of this type can create unintended consequences and while each side of the argument, for or against legislation of this type, will invoke the public interest they will rather quietly continue to guard their own. On such a distorted playing field it is extremely useful to take a step back and look upon the issue with the kind of clarity that economists are trained to provide.

In one such study led by Robert Whaples in which he surveyed members of the American Economic Association holding a PhD, 65% felt that the U.S. should increase energy taxes. In 2007 the journalist Phil Izzo asked in a survey of economists what was the best way to encourage the development of alternatives to fossil fuels and 54% favored a fiscal system that would raise the price of carbon-intensive sources of energy.

The Pigou Club

The principles underlying so-called Pigovian Taxes were formulated from about 1920 onward by the English economist Arthur Pigou and were based on a desire to internalize the social price paid for certain economic activities. In “neoclassical” economic terms this often translated into subsidies designed to better integrate “negatives externalities” (such as air pollution from coal burning power stations) and create a collective responsibility for these effects. A less theoretical definition was handed down recently by the CEO of Exxon Mobil Rex Tillerson when he outlined his vision of a future where the cost of carbon becomes more transparent in order to encourage more clear

economic thinking in decisions which range from investment choices made by companies to fuel their requirements to the product choices made by consumers.

Supporters of a Pigovian Tax on carbon emitting activities are becoming increasingly vocal and widespread in number. Harvard Professor Greg Mankiw has gone so far as to create a “Pigou Club” which counts among its members some of the most influential economists and media actors on the planet such as Gary Becker, Paul Krugman, Alan Greenspan, Nouriel Roubini and Joseph Stiglitz. *The New York Times* columnist Tom Friedman as well as the conservative commentator Charles Krauthammer are also members of the club. To get an idea of the non-partisan nature of the group one can note that Paul Krugman was perhaps the most vocal Democratic critic of the economic policies of former President George W. Bush which were in part formulated by Mankiw when he served as Chairman to Bush’s Council of Economic Advisors.

The debate over the future of clean energy has expanded and is no longer limited to an argument over how to save the planet. Rex Tillerson has made increasing reference [to the need for energy security](#). Kenneth Rogoff, the former chief economist at the IMF, has been promoting clean energy since 2006 as a way for the U.S to reduce current trade imbalances and Gilbert Metcalf (Tufts University) has demonstrated that a carbon tax could be combined with policies to provide payroll tax relief in order to protect workers and business owners from the higher costs involved.

Mixed in among the murmurs of approval from the economic community have been some rather vocal criticisms of a carbon taxes. This has been less for any perceived negative effects of the taxes than because of fears that the currently proposed fiscal regimes would not go far enough in addressing our current

dependence on fossil fuels. [In a recent article](#), Lucas Davis (University of California, Berkeley) and Kilian Lutz (University of Michigan, Ann Arbor) have noted the remarkable flexibility consumers have demonstrated when responding to the evolution of energy prices. Still, the question remains: how do we impose regulations sufficiently rigorous to have a real effect without inadvertently creating another crisis resembling the oil shocks of the 1970s? This question remains one of the primary sticking points of contemporary discussion on the subject.

A fiscal or regulatory approach?

Aside from the debate over the desirability of a low-carbon future is the argument over which approach to take toward achieving this goal: taxes, tradable permits or a more robust regulatory framework? The controversy over whether taxes or permits provide the optimal solution has endured for over 30 years now and we have reached a point where there is a broad consensus over the hypothetical conditions that would permit the creation of a framework for limiting pollution by setting the price (through a tax) or targeting the quantity of emissions (through permits). Approaching the issue with permits through the system of “cap and trade”—where caps are placed on emissions of the primary polluters across the economy and they are required to purchase carbon permits if emissions rise above acceptable levels—is based on the principal that the market will provide the most efficient solution to rising carbon emissions. If permits are openly traded through regulated markets, prices will be set according to the laws of supply and demand and rising prices should compel industries to focus more effort on developing clean technologies. The system has come under fire [from numerous environmental groups](#) as well as some of the leading economists in the field [such as Columbia University’s Jeffrey Sachs](#) for the distortions that could arise from market manipulation, a lack of transparency, exploitation of economic rents by the principal polluting industries or even special arrangements where permits are freely given away to

avored sectors of the economy. The concerns have been exacerbated by the current economic climate but the bark of the naysayers has been rather worse than their bite and there has been little concrete proof of their claims. Moreover the European experience with cap and trade for the energy and heavy industry sectors, in place since 2005, provides concrete evidence of how to run a successful emissions trading scheme.

To be effective, policy must take into account the nature of the economic activity it wishes to regulate and adjust itself accordingly. Depending on the target industries, taxes, permits or efficiency standards can be combined or developed separately. The simplicity or complexity of the solution will very much depend on the nature of the challenge they are intended to meet. One example of this *one size doesn't fit all* approach has been noted by [Alain Grandjean](#), formerly of the Laboratory of Econometrics at the École Polytechnique and co-founding partner of consulting firm Carbone 4. “A tax on CO2 would be preferable for sectors where the cost of erecting a significant framework of permits would far outweigh any of the benefits they would be likely to create, primarily due to expenditures on managing the system.”

A widely read report on the economics of climate change [produced by the British economist Sir Nicholas Stern in 2006](#) assessed a wide range of evidence on the possible impact of climate change and synthesized it with a theoretical approach to the issue. For sectors of the economy dominated by heavy polluters the European cap and trade approach would provide the optimal solution and the next step is to further develop the market for tradable permits already in place and to provide a clear path for other sectors of the economy to be drawn into the system. This would place the European model at the vanguard of the global push towards a truly sustainable low carbon economy. The report envisages a combination of regulatory and tax based

initiatives to limit the emissions of sectors of the economy where cap and trade is not practical. Drawing his inspiration from some EU measures, [Jeffrey Sachs recently proposed](#) the introduction of “feed-in” tariff which would subsidize low carbon energy sources. It is important to note that Sachs is approaching the problem from a purely practical standpoint while casting a not so sidelong glance at the precarious state of the global economy which is enduring the worst financial crisis in recent history.

That a solution to man-made climate change makes sense economically has become a widely accepted fact. Whether the decisions are taken to tackle the problem will largely depend on the political will placed behind the various strategies being tabled as well as the actors involved. So far politicians have stymied progress fearing political backlash.

An ecological worldview: strategic tool or path to a green utopia

The temptation always exists to place our faith in the power of the market as the force that can balance economic realities with our needs for the future. After all, aren't energy prices destined to rise significantly in the coming years and won't increased prices provide all the motivation we need to become more efficient? In fact, according to Alain Grandjean rising energy prices are anything but a foregone conclusion and he has highlighted the effect that recent advances in our ability to exploit harder to reach gas deposits, broadly defined as unconventional gasses, have recently had on reducing prices worldwide. “In giving new hope to our aspirations for an abundant resource, emitting less carbon than coal does, these new extraction techniques could actually aggravate our current dilemma. With new gas resources coming online there will be less incentive to reduce carbon emissions today and there could be even less tomorrow. The overall reduction in energy prices caused by unconventional gas will reduce the competitiveness of more carbon neutral sources of

power such as nuclear, hydroelectric, wind or solar. The stakes of the current situation could not be higher and if we are to have any hope of meeting the challenge presented by climate change political actors will have to use their considerable power to create regulation that meets the needs of future generations.”

Trying to discern the future complexion of climate policy is difficult and defining the rhythm of the change and the means to create it remains open to discussion. Markets for the buying and selling of permits to control carbon emissions have been developing in a patchwork fashion worldwide and some countries are far more advanced down this path than others. Boris Solier, a Researcher attached to the Faculty of the Economy of Climate Change at Université Paris-Dauphine has thus noted that despite recent hopes that the United States would build a credible carbon trading market these expectations have been drastically scaled back over the last few months. Australia has had more success but in a country dominated by the economic interests of mining corporations a comprehensive market remains some way off in spite of the increasing sensitivity of the government to environmental issues. At the other end of the spectrum is New Zealand where a market has been in place for some time.

The leadership of China [has made the decision to place a tax on carbon from 2012](#) primarily in anticipation of hardening environmental standards that could limit access to the markets of its primary trading partners. These moves are also part of a wider effort to reduce the country’s dependence on its seemingly limitless coal deposits and deflect international attention from its heavy polluting industrial base. By steering their country in this direction the country’s leaders have rather shrewdly anticipated the possibility for increased barriers to entry that could be introduced discreetly under the banner of environmental policies and regulations. This was exactly [the point of a recent article published by Ben Lockwood \(Warwick University\) and John](#)

Whalley (Western Ontario University). These new policies are proof, if any were needed, of China's increasingly ambitious plans to move up the value added chain of industrial production and bring their economy into closer alignment with those found in the OECD countries. Over the coming decades the Chinese hope to create ever more favorable conditions for their industries and accelerate the implementation of the policies already in place.

The decision taken last August by the U.S Senate to delay climate bill legislation has blocked one of President Obama's top priorities and dampened enthusiasm for investment in clean energy technology. Kevin Parker of Deutsche Bank delivered his rather blunt assessment that the United States is lagging further and further behind other industrialized nations in developing clean energy. Because of the risks involved and uncertainty over the future of clean energy, 6 to 7 billion dollars that could have been invested in the US will be diverted to places more receptive to the new realities such as China and Western Europe.

Reducing carbon reliance has become less a utopian fantasy than a strategic tool that countries ignore at their peril. The path for future development is still uncharted but whatever form it takes will have profound structural consequences on the very fabric that holds together the world economy.

Business not as usual

In creating a roadmap for the future we cannot ignore the development of new areas of activity. Now more than ever innovation and research have become key strategies as was noted by Denis Clodic of the Faculty of Carbon capture, transportation, and storage at the Ecole des Ponts ParisTech. "Carbon capture and storage is coming to the fore and will increasingly compliment our overall efforts to harness the combined power of cutting edge technologies and more intelligent use of existing sources of energy." A recent report published by Pike Research

suggests that the technological aspect of energy infrastructure is set to expand and create a sustainable market over the next ten years in spite of the considerable obstacles to development. Incertitude over the costs of the new technology and the future price of energy along with a total lack of pipeline infrastructure complicate the matter even further.

A second trend will be a rethink of priorities to ensure less of the global energy mix be based on fossil fuels. This should act as a spur to innovation. Franck Carré of the Faculty of sustainable energy at the Ecole Polytechnique has noted the increased attention being paid to the threat posed by climate change and the effect this is having on the current wave of enthusiasm for nuclear energy as the fuel of the future. This development will make a durable contribution to global energy production but if the nuclear option is to reach its full potential as a cornerstone of sustainable development more resources will have to be directed to research and innovation in this domain.

A third identifiable trend will be an increase in the sensitivity of the economy to the impact energy prices have across a wide range of industrial activity. Using the European experience with CO₂ quotas as his reference point Boris Solier shows that the price of carbon can influence two types of decisions. In the short-term, carbon prices will cast their shadow over how we manage existing infrastructure in the most efficient manner by favoring—for example—the production of electricity produced from gas turbines over coal burning plants; coal produces more CO₂ than gas for the equivalent amount of energy. Producers could also be encouraged to substitute carbon with biofuels. In the long term, the price of carbon will also influence the direction of future investment as when industrial activities have a transparent marketplace, as is the case in Europe, it becomes much easier to plan for the future.

Finally, we can expect the rapid development of services under the umbrella of the low carbon economy such as those linked to complying with more stringent regulatory standards. Even before carbon taxes are introduced many industries are going to face tougher requirements when it comes to measuring their emissions through the introduction of carbon labeling schemes. While the market for services and software to assist company's better meet the new requirements is still in its infancy (\$380 million worldwide in 2009) [Pike Research has predicted](#) rapid growth prospects as clean emission standards mature and become more widespread.

Ultimately, we must not allow our thinking to become overly limited and there are numerous paths forward other than those identified here. What should be retained is that while some measure of doubt remains as to whether the political will exists to overcome the challenges of clean energy legislation the demand for a fiscal regime to limit carbon emissions is mounting significantly in volume. The economic strategy of the most forward thinking interests (countries, sectors, or businesses) and the standards they are able to set in their internal markets to ensure their continued health will play a role in the future of clean energy development equal to that played by international accords which are themselves becoming more unlikely with each passing day.

Source : <http://www.paristechreview.com/2010/12/09/tax-energy-limiting-carbon-emissions/>