
Kissinger's Cartel, Double Dividends, and Global Fairness

Steven Stoft

(with assistance from Dan Kirshner)

The Consortium for Energy Policy Research at Harvard
Energy Policy Research Seminar
December 8, 2008

steven@stoft.com <http://stoft.com>

Things We Forget (1)

- The energy security camp. It's
 - Important
 - Powerful
 - A huge threat to the climate
 - Partly persuadable
 - Completely ignored by most climate policy analysis

- Consumer's market power. It's
 - The point of Kissinger's IEA
 - One outcome of Kyoto
 - The source of a huge and more-immediate payoff
 - Completely ignored by most climate policy analysis

Things We Forget (2)

- China won't accept a cap
 - They've said this for 15 years
 - They are willing to make commitments
 - Global carbon pricing is a commitment that could work
- Several ways to compare caps and taxes
- Fairness when distributing auction/tax revenues
 - We know a fair solution to the tragedy of the commons
 - We all agree on one policy that's not fair
 - We can solve the double-dividend puzzle

Don't Forget Energy Security

The Energy-Security Camp (a reminder)

- The ethanol subsidy may be our biggest energy policy
- U.S. oil shale is worth \$10 T in profit
- Orrin Hatch's 2005 Synfuel Act:
 1. Set in motion a joint effort of DOD, DOE & Dept. of Interior
 2. Backs up a military commitment to 50% synfuel by 2016
- Other political manifestations
 - Obama forced to back off-shore drilling
 - Bush just snuck through synfuel protections
 - Drill baby drill / Gas tax holiday / Drill in Alaska
 - Kissinger says we are in Iraq to protect its oil from Iran
 - Fear of peak oil
 - CAFE Standards
 - “Oil Shockwave” scenario exercise, with Robert Gates
 - Securing America's Future Energy (SAFE) National Petroleum Council is part of DOE
 - National Commission on Energy Policy (Ending Stalemate)

The Climate Change Camp

- Wind subsidy is largest, but 5 times smaller than ethanol. Congress “forgot” to pass it in 2007.
- Solar and carbon-capture programs are tiny.
- Other political manifestations
 - Cap and trade bills before congress
 - RGGI is a step, but permit prices are low
 - California's AB-32 makes promises without teeth
 - “An Inconvenient Truth” & “Day After Tomorrow”
 - Zero emission vehicles
 - Voluntary conservation
 - A broad, but shallow, popular concern with climate

Camp Comparisons

- The security camp is quieter but stronger
- The security camp is divided:
 - Find-more-fossil dominates
 - Fossil conservation could win out, with a lot of help
- The climate camp is weak but noisy
- The climate camp could win over much of the security camp if it paid close attention.

- *Carbonomics* recounts how ethanol & synfuel do not protect against oil shocks.
- This is not such a hard sell—Robert Gates' Oil Shockwave study makes the same point.

Re-Examine Old Energy Security Policy

- Henry Kissinger built a counter-cartel, the IEA, in 1974 but never said what it was.
- The G7 signed a cartel agreement in 1979 but never said the words. (But Kiichi Miyazawa did.)
- The NY Times said the G7 agreement was a “consumers' cartel” and called them the “dread words.”
- Once the dominant government policy, the consumers'-cartel concept has been forgotten by both climate & security camps.
- The key to turning much of the security camp from supply-side foes into friends of the climate camp is ...

A Consumers' Cartel

Is a Consumers' Cartel Far-Fetched? (1)

- Yes, if you think it's an organization the dickers with OPEC over the price of oil. But that's not it.
- The IEA, once the main US policy, was designed and implemented by Kissinger to be a consumers' cartel.
- All of its policies were aimed at this function
 - A floor price to reduce demand and lower OPEC's price
 - Strategic petroleum reserves to withstand OPEC's counterattack.

Is a Consumers' Cartel Far Fetched? (2)

- Every study of an international climate agreement that asks the question finds it will lower the world price of oil by reducing demand.
 - DOE, Wharton, EPRI for Kyoto
 - MIT for all proposed cap-and-trade bills
 - IEA for its Alternative Energy Scenario

Is a Consumers' Cartel Far Fetched? (3)

- Economic theory says it's inescapable.
- Any effective international climate organization will, by agreement, limit the demand for oil.
- An agreement to limit demand is a consumers' cartel.
- Reducing demand reduces price (OPEC or no OPEC).
- The same for natural gas, and now, even coal.

How Effective Is a Consumers' Cartel? (1)

- One parameter is difficult to evaluate:
 - The long-run response of oil price to oil demand.
(that's much weaker than the short-run response)
 - Assume for a minute, that
A 1% cut in oil demand → 1.5% drop in world price.
- Also assume:
 - 75% of consumption is covered by the cartel (US = 25%)
 - CO₂ is priced at \$50 / ton
 - Oil would otherwise cost \$75 / bbl
 - We use 20 Mb/d, import 12 Mb/d
 - Initial U.S. emissions are 6 B tons of CO₂ per year

How Effective Is a Consumers' Cartel? (2)

If	Then		
Oil Use Reduction	Social Cost	Savings on Imports	\$ Savings / Cost Ratio
30%	\$45B	\$55B	123%
10%	\$15B	\$31B	205%

- Social cost = $\frac{1}{2} \times \text{CO}_2 \text{ price} \times \text{Emission Reduction}$
- For example = $\frac{1}{2} \times \$50/\text{ton} \times (30\% \times 6 \text{ B tons}) = \45B
- Savings is figured on remaining imports, but not on the 8Mb/d of domestic production.

Oil Demand Down → Oil Price Down

Demand Δ 1% → Price Δ 1.5% → 1-to-1.5

- DOE's 1998 analysis of Kyoto → 1-to-5
- Wharton analysis of Kyoto → 1-to-4
- EPRI's analysis of Kyoto → 1-to-5
- **IEA's 2005 alternative scenario** → **1-to-1.5**
- IEA's 2007 high growth scenario → 1-to-12
- DOE's 2008 analysis of ANWR → 1-to-1.6
- Eyeballing the 1980 – 85 crisis → 1-to-3
- 2007 MIT study of an 80% cut by 2050 finds the price of oil would be 47% lower in 2050.
- I used the weakest ratio I found: 1-to-1.5

What Does a Cartel Buy Us?

Simple answer:

- Less carbon & lower oil prices

But, also a new incentive:

- For many, oil that's \$10 cheaper in 5 years trumps a climate that's 1 degree cooler in 50 years

This could provide:

- A reason for the security camp to join the climate camp
- A reason for China to join Kyoto II.
- A reason for the United States to join Kyoto II.

How to Organize a Consumers' Cartel ?

- We need China and India to reduce oil use
- Buying CERs (carbon credits) for oil reductions would be extremely expensive and unlikely to work
- China and India reject meaningful caps
- That leaves one good way to organize a cartel ...

Global Carbon Pricing

(In line with Nordhaus, Cooper, Stilglitz, Mankiw)

Global Carbon Pricing: What Is It ?

- Instead of arguing over 190 caps (actually free permit allocations), the world should agree on

One global carbon price target, P_t

- To hit this target, a country must collect carbon target revenue, R_t , such that

$$R_t = P_t \times \text{Their Emissions}$$

- Cap-&-trade, carbon tax, gas tax, coal tax—any mix at all is fine for a country or a group of countries.

Carbon Pricing: Enforcement

- It's OK to if your revenue, R , misses your target, R_t .
- Just pay a fine: $Z \times (R_t - R)$. ($R > R_t$ gets a reward.)
- Simple adjustments make this revenue neutral.
- If (world average P) $< P_t$, then increase Z .
- P will equal P_t on average. That's all we care about.

Carbon Pricing: Ultimate Enforcement

- Payment of fines is enforced through trade sanctions.
- Stiglitz argues this is possible under the sea turtle precedent of the WTO.
- The language of the decision seems exceptionally clear and emphatic.

Carbon Pricing: Global Fairness

“A tax may have less appeal because it eliminates the potential for an implementation mechanism to transfer resources to low-income countries.” —Aldy, Stavins

- Indeed, current proposals for a harmonized international carbon tax fail to include any fairness mechanism.
- Cap and trade could handle this by giving high “caps” (large allocations of free permits) to poor countries.
- Kyoto lets poor countries sell carbon credits to capped countries.

Carbon Pricing: Global Fairness (2)

- We would like a fairness rule which:
 1. Costs a lot less than Kyoto
 2. Does not require 190 arbitrary negotiations
 3. Does not disrupt of the harmonization of prices
 4. Improves incentives to reduce carbon
 5. Is fair in appearance

Global Fairness Payments Defined

- Define a fairness price F .
- $F = (e/E) \times P_t$
 - e = the country's emissions per capita
 - E = the world's emissions per capita
- Fairness payment paid per person = $Z \times E \times (F - P_t)$
 - Z reflects the average cost to the world of raising the target carbon price. It's the market price of pricing.
 - E converts price to dollars.
 - Simplifies to: payment = $Z \times (e - E) \times P_t$.

Global Fairness Properties

- Does it cost less?
 - China has average emissions. They are paid nothing.
 - $Z=10\%$, $P_t = \$30 \implies$ Cost to U.S. = \$45 / person-year.
 - But we could reduce e , or set $P > P_t$.
- Simpler?
 - Zero parameters, not 190 gamed negotiations.
 - Could easily add 1 parameter for flexibility.
- There's no incentive to change your own P .
- Better emission incentives?
 - Yes. An educational campaign that reduced e would increase fairness receipts.
- Fair in appearance?
 - Country with average per-capita emissions neither wins nor loses.

Is This a Cartel?

- Anything that works is a cartel.
- Focusing on the concept can improve the design and take advantage of its cooperation-inducing benefits.
- This is a good cartel design because:
 1. There's enforcement.
 2. A country that cares about oil prices can collect more revenue from oil.
 3. Since they have to tax something, why not oil?
- But, how should the U.S. implement carbon pricing?

Forgotten Tax/Cap Comparisons

(Supporting a tax: Krugman, Mankiw, Nordhaus, Sachs, Hansen)

Benefit: Caps Provide Certainty ?

- As Benjamin Franklin explained:
“In this world nothing can be said to be certain, except death and caps.” —1789
- As environmentalists now explain:
“Caps provide certainty about emissions levels.”
- I see just two problems:
 1. Emission certainty is the wrong objective.
 2. Caps don't provide it.
- Proof of #1: Economics—cost matters. QED
- Proof of #2: Canada. QED

Back to Energy Security

- Under cap and trade,
Trading equalizes the price of all carbon.
- So, oil and coal carbon are taxed the same.
- If that's good policy, they must have the same externalities.
- So, oil security externalities are of no consequence.
- Cap and trade sends a clear message to the energy security camp:

Adopting cap and trade says:

Energy security concerns are of no consequence.

Gas-Tax Holidays

- Say oil goes to \$150, and the carbon tax is \$25 / bbl.
- How do you explain the need for the \$25 tax?
- Every energy-climate model says \$175 / bbl is not needed. \$100 by 2030 is a typical estimate.

- A carbon tax can take a gas-tax holiday, but cap and trade cannot.

Investment Risk

- The Saudis cut output 75% in 1985, and the world adjusted.
- That plus supply growth, left excess output capacity until the last few years.
- The Saudis won't make that mistake again.
- A tight market with little elasticity on either side will suffer frequent and dramatic price swings.
- Sound familiar?
- Investors fear the downswings. One lasted 18 years.

- A tax can easily form a floor—but cap and trade cannot.

A Cap Discourages Local Climate Initiatives

- Under a cap, ...
 - Your block organizes to save energy.
 - Does it do any good?
 - Not a bit.
 - The permit market still clears and we hit the cap.
 - You pay extra for a hybrid so I can buy an SUV.
-
- Under a tax, ...
 - Does it do any good?
 - Sure. Your doing extra has no effect on the tax rate.
 - So others will do no less.

But how can a tax give out free permits?

- Just give money instead of permits.
- So why the big deal about free permits?
 - They don't look like money.
 - People never imagine that companies pass on the price of free permits
- The deception works on a small scale.
- But, Europeans caught on, and they spread the word.

“Transparent policies, such as pollution taxes, may be less politically tolerable than less transparent policies.”

—Keohane, Revesz, and Stavins

- True, but that was in 1998.

25% May Be More Than You Think

- A typical cap & trade proposal:
 - Pay half the revenues to companies that are hurt.
 - Reduce this linearly to zero after 25 years.
 - Average payment = 25% of revenues.
- For MIT's middle scenario (50% below 1990 by 2050), during the first 22 years the give-away would equal the social cost of the policy.

A Tax Can Start Slowly

- With banking of permits,
 - And a cap that targets an 80% reduction by 2050
 - Permit prices go from \$0 to \$50 on day 1.
(According to MIT model)
-
- A tax can start as gradually as we like.

A Tax Has Good Economics, Bad Politics

But, Consider an Untax:

- Good politics
 - Better economics than most caps and taxes
- An untax is a carbon tax with a 100% equal-per-person refund.
 - Taxes collect money for the government.
So an untax is not a tax—good politics.
(Some will argue, but we've got a pretty good case.)
 - But what is the untax's claim to economic fame?

The Gold Standard of Fairness

The “Tragedy of the Commons”

- Global warming is the ultimate tragedy of the commons
- If we could implement *any* solution,
What solution would be fair and efficient?
- We are looking for a benchmark.

The Gold Standard of Fairness

- Since no one has a special claim to the the commons (the climate) ...
- Give everyone an equal property right to the commons.
 - Let people trade their rights.
- This is the **gold standard** of fairness
 - This assumes there are no complications (coming soon).
 - With the right number of permits, it is also efficient.

Applying the Gold Standard

- Individual permits are wholly impractical.
- But the income distribution (fairness) of this system can be mimicked in two ways.
 1. Upstream cap and trade with auctioned permits and a 100% equal-per-person dividend
 2. An upstream carbon tax with the same dividend
- I call these two
 1. Equitable cap and trade
 2. An untax (for PR reasons)

But there *Are* Complications

- Complications suggest two uses for revenues:

Complication #1: Taxes are inefficient.

- So use the revenues to pay down an inefficient tax.
- Called a “tax swap”

Complication #2: The transition to a carbon price is an unfair change in government policy.

- So compensate losers.
- Called (somewhat pejoratively) a “give-away”
 - my shorthand for “carbon-pricing funded subsidies.”
 - = free permits with caps or free money with taxes

What's Recommended

1. Most economists, from Krugman to Jorgenson to Mankiw, recommend a tax swap.
2. A few economists and many environmentalists recommend give-aways (along with #1 or #3).
3. Even fewer economists, but also James Hansen, recommend an equal-per-person refund.*

* Hansen recommends equal-per-family

Consider a Tax Swap

- **First complication:** The town has a commons and an inefficient tax.
- A tax swap is not gold-standard fair,
- But it's more efficient.
- Is this a good idea?

- Dividing a pie equally among us will waste some crumbs. That's inefficient.
- Give it all to me, and I will waste nothing.
- Economics does not say “efficiency trumps fairness.”

A Poll Tax—the Key to Tax Swaps

- No one has shown that efficiency trumps fairness for a carbon tax swap.
- To make progress, we must agree on some fairness standard. We do.
- Neither economists nor society favors replacing current taxes with a poll tax swap, even though that would increase efficiency.
(Has anyone ever proposed this?)

(A \$1000 poll tax charges everyone \$1000.)

Applying the Poll Tax Standard

- Definition: $\text{untax} = \text{carbon tax} + \text{poll refund}$
- Definition: $\text{poll tax swap} = \text{poll tax} + \text{pay off tax T}$
- Definition: $\text{carbon tax swap} = \text{carbon tax} + \text{pay off T}$
 - = carbon tax
 - + poll refund
 - + poll tax
 - + Pay off tax T
 - Because the poll tax just cancels the poll refund

● Any carbon tax swap = an untax + a poll tax swap

Society Prefers an Untax to a Tax Swap

1. An untax is fair (gold standard).
 2. Society rejects a poll tax swap.
 3. An untax, being fair, can't make us like a poll tax swap.
(The fair use of the commons will not make us like a poll tax.)
 4. Society prefers an untax to any untax + a poll tax swap.
 5. Society prefers an untax to any carbon tax swap.
- And that's the answer to double dividends. Economists, if they are rational, should not want them. The efficiency gain from a tax swap is not justified.

Can We Just Ignore the Untax?

- I have not proved a carbon cap swap is bad.
- But any time society can choose a carbon tax swap, it can just as easily choose to distribute the revenues equally.
- Since an untax is available, choosing a carbon tax swap is choosing to add a poll tax swap to an untax.
- Choosing a carbon tax swap is choosing to do (a) something good and (b) something bad, even though the (a) gives us no reason to do (b).

Consider a Give-Away (1)

- **Second complication:** The town with the commons suddenly imposes equal property rights for the commons.
- Would a give-away be better than the gold standard?
- Economic argument for a give-away:
 - Business has invested on the assumption of free externalities. It is unfair to take these away without warning.
 - Unlike a tax-swap, this is a fairness argument, not an efficiency argument.
- A carbon cap with a give-away =
An equitable cap + a poll tax give-away.

Consider a Give-Away (2)

- Advocating a give-away is the same as saying:
- To surprise business with a fair system of property rights is unfair to some investors.
- Let us be fair and compensate those investors.
- Let us impose a poll tax on society to pay for said compensation.

- To make this an economic argument, we must add:
Because a surprise take-back of free externalities is more unfair than a poll tax.

What Underpins the Two Results?

1. Society does not approve of using poll taxes for tax swaps or business subsidies (give-aways).
2. The gold-standard-fair climate solution will not cause society to reverse its judgment on poll taxes.

The rest is just accounting.

#1 looks bullet proof.

Why We Should Like an Untax

- Most people now know that caps are taxes.
- Replacing tax T with a carbon cap/tax proves it's a tax.

- Taxes collect money for the government.
- An untax doesn't—so it's not a tax.
(at least a good focus for discussion)
- It really is more fair.
- Its impacts on the poor look more fair.
- This prevents a lot of criticism (both honest and cynical) about harming the poor.

Some Conclusions

1. Don't ignore the energy-security camp.
2. A consumers' cartel is
 - good for the climate
 - good for national and international cooperation.
3. Don't be afraid to say Kyoto is a “consumers' cartel.”
4. After 15 years, let's admit China won't be capped.
5. Price commitments are more plausible & enforceable.
6. An "untax" looks less like a tax than does a cap.
7. The fairness of an untax trumps the efficiency of a carbon tax swap.

The End