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Agricultural Insurance Subsidies: What Should Count and What Shouldn't

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Background

- Producer Subsidy Equivalents are deeply flawed, and inherently meaningless measures of the effects of policies on output, prices and trade flows (Hertl, 1991)
- But if we insist on using them, because they have some political credence (shame on us by the way) as a notional summary statistic, then crop insurance's contribution should at least be measured correctly.
- And if we ever measured trade effects properly, it would also be useful to have the right number.

The Economics of Crop Insurance Programs

Thing One:

- There is no evidence of a viable private/commercial market for the most widely form of subsidized insurance: multiple peril crop insurance, either in the developed or the developing world (Wright and Hewitt, 1991; Kramer 1983; Goodwin and Smith, 1995 and 2012; Smith and Goodwin, 2010; Smith and Glauber, 2012).
- Single peril products have been made available on a commercial basis (livestock mortality insurance due to lightening; crop lost from hail or range fire
- Moral hazard and adverse selection are significant problems for MPCI; also indemnifiable losses are potentially frequent and can be small resulting in high premiums.
- Opposite holds true for single peril products, resulting in low premiums for potentially large but rarely occurring losses.

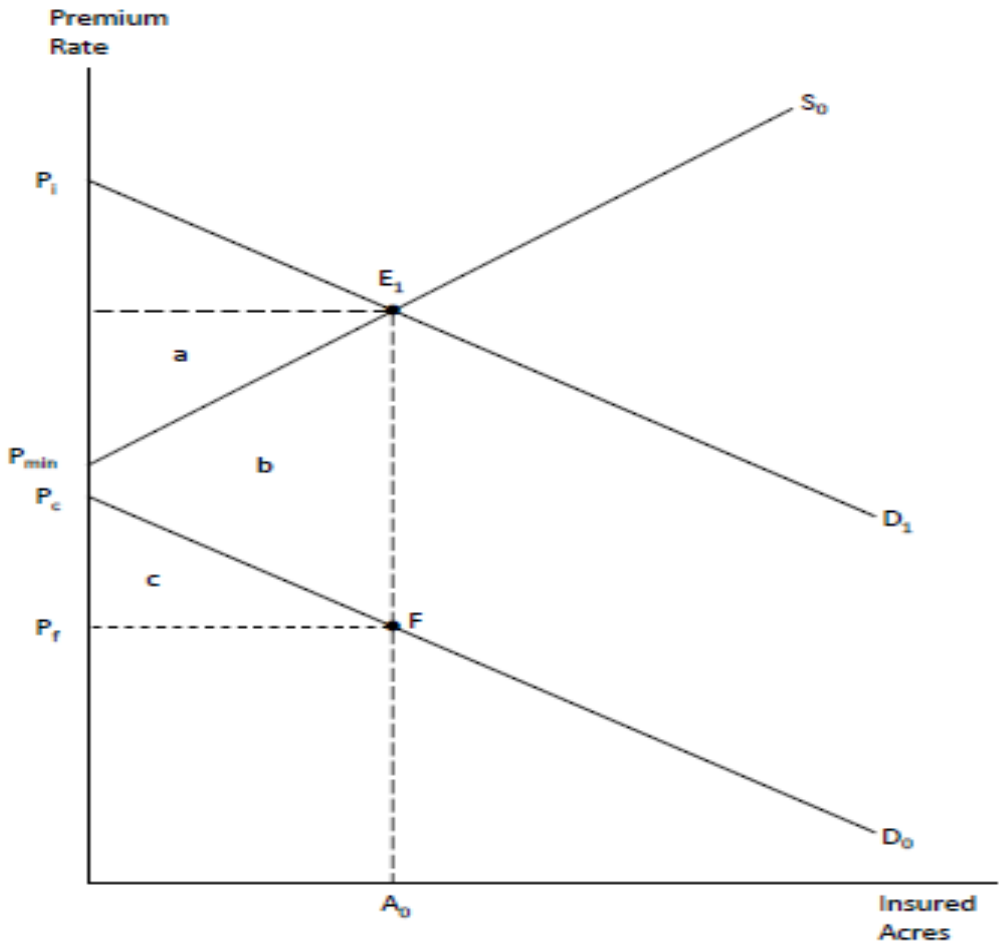
The Economics of Crop Insurance Programs

Thing 2:

- If a country has a multiple peril crop insurance program with any participation then:
- It will be subsidized heavily by the government unless:
- Participation is mandatory to obtain benefits from other subsidy programs.
- Economists have known this since at least 1986 (Hazell, Pomerada and Valdez), and probably before that.

The Welfare Economics of Crop Insurance Subsidies

- Standard Supply Demand Framework


Premium
Rate
S_0
P_i
E_1
a
P_{min}
b
P_c
D_1
c
P_f
F
D_0
A_0
Insured
Acres

The Welfare Economics of Crop Insurance Subsidies

- No intersection in the positive quadrant courtesy of the gap between willingness to pay and marginal private delivery cost
- As Goodwin and Smith have pointed out: no credible market failure story to justify intervention (green box credible or otherwise)
- As Goodloe and Glauber note, no compliance with paragraphs 7 and 8 of the Agricultural Annex for most insurance subsidy programs

What Should Count as a Subsidy

- The difference between the price required to generate the desired amount of insurance from the private sector (P_i) and the price farmers pay for that amount of insurance (P_f)
- This is not what is reported

Actuarially Fair Premiums and Loading Factors

The private supply price has two components:

- The actuarially fair premium which covers indemnity payments
- A loading factor which covers the company's costs of proving the insurance
- For commercially offered MPCI products, the loading factor is likely to about 60-70 percent of the actuarially fair premium (somewhat similar to the loading factor for auto insurance)

What is Reported as Amber and Green Box AMS

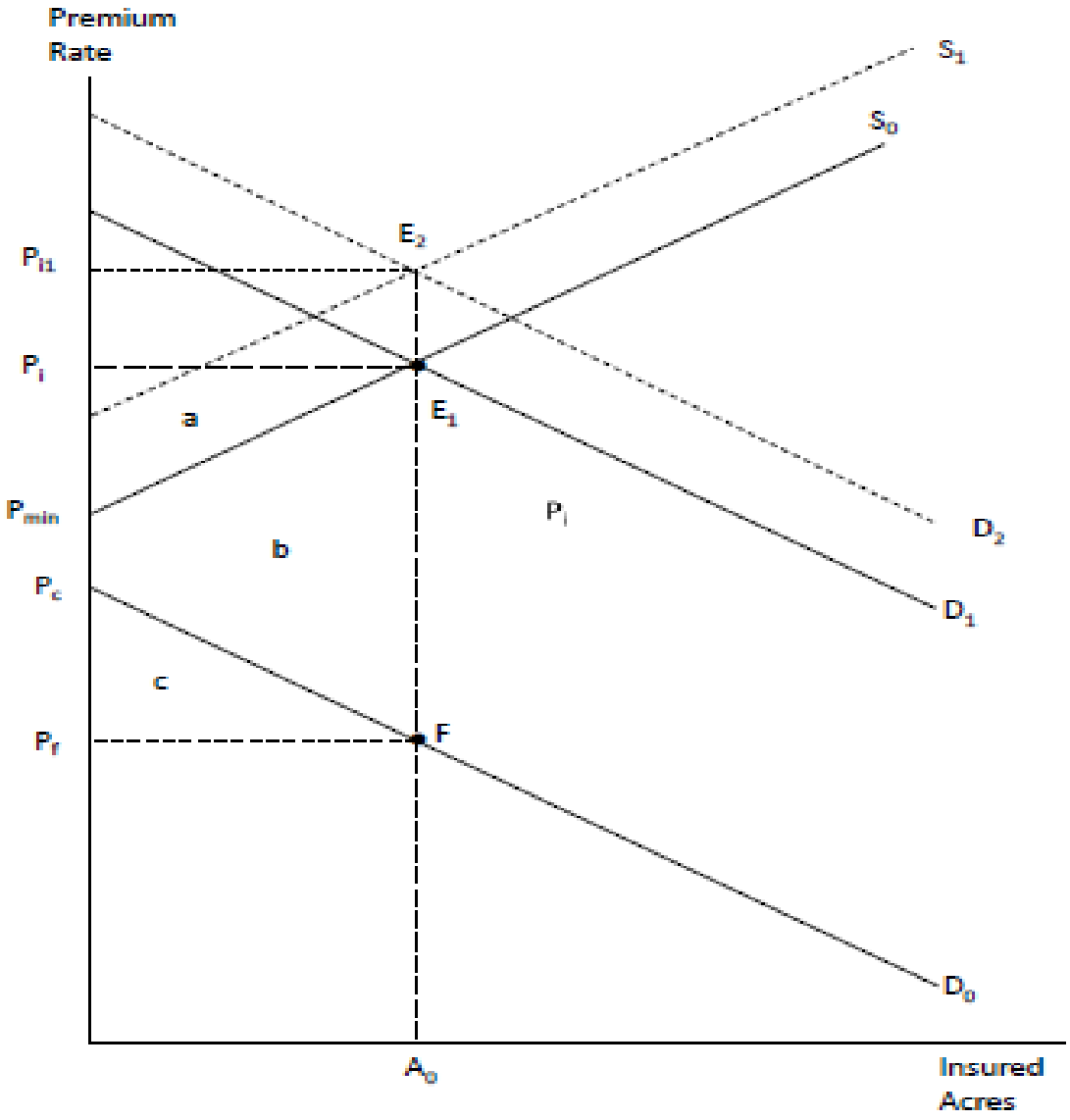
- Most countries report only the subsidy for actuarial fair premiums (US, Canada, etc.)
- Delivery cost subsidies, if reported at all, are reported as green box infrastructure subsidies (the US, which has one subsidy for farmers' premiums and another for insurance companies to cover delivery costs, is a poster child in this context)
- Canada delivers crop insurance subsidies through the public sector and claims that delivery costs are very small (Mahul and Stutley).

How Substantial Are Delivery Costs (does the issue matter from an economic and policy perspective)

- The answer is yes
  - U.S. premium subsidies are projected to average $7 - $8 billion a year over the next ten years
  - U.S. subsidies to crop insurance companies are projected to average about $2.5 to $3 billion (CBO), roughly 20 percent of total subsidies
  - This is a lot, and, given crop insurance subsidies are really crop specific, has the potential to create real WTO compliance problems for the U.S.
  - Similar issues potentially exist for Canada and other countries.

A Rent Seeking Wrinkle

- Dan Sumner has said that whenever he hears the phrase “public-private partnership” he checks his metaphorical back pocket wallet and, sure enough, as a tax payer he has just been ripped off.
- Recent work by Smith, Glauber and Dismukes indicates that agricultural insurance companies in the U.S. (with their partnership with the USDA Risk Management Agency) have obtained substantial rents from the program
- The implications are as follows:


Premium Rate
S_1
S_0
E_2
P_{i1}
P_i
E_1
a
P_{min}
P_l
D_2
b
P_c
D_1
c
P_f
F
D_0
A_0
Insured Acres

Appropriate Measures of Subsidy Distortions

- The observed per unit subsidy is $P_{i,2}$ - P_f but the true distortion is $P_i - P_f$.
- So only $P_i - P_f$ should be counted.
- Does the difference matter?
  - In 2010, U.S. insurance received about $3.5 billion to sell and service crop insurance policies.
  - They would almost surely have supplied the same services for between $1 and $1.5 billion (about what they received in real terms to sell and service the same number of policies in the early 2000s
  - Rents accruing to the insurance industry almost surely amounted to more than $2 billion
  - So the difference matters (both from a trade distortion and economic waste perspective).