

Analysis of the REMI report on the economic impact of a gradually increasing carbon fee & dividend.

1. The following analysis was created by Stephen Thomas Biggs for the North Wind Regional CCL Conference, November 7-9, 2014 in Des Moines, IA.

2. General

When you invoke the “REMI Report” lead with two facts. First, since REMI is a prestigious corporation that regularly works for state governments, private corporations, and many other organizations, they would not risk their reputation by telling customers such as CCL “what they want to hear”.¹ Second, they found that implementing CCL-style fee and dividend legislation would both drastically reduce domestic emissions of greenhouse gases and would help our economy.

The REMI report provides the basis for responding to a wide array of objections to the legislation that CCL proposes. What follows identifies some of these objections and explains how findings from the REMI Report allow you to provide responses to them. But I do not explain how the report reaches its findings; rather, I take for granted that the report is accurate—though see the final footnote for how to engage with someone who denies that the report is accurate.

3. On “Implementing CCL’s Legislation Would Hurt the Economy”

3.1 Harm to US Consumers

Objection:

- (1) Since producing energy by fossil fuels costs less than producing equal amounts of energy through “green” sources, implementing CCL’s legislation would increase the cost of energy, and thus, would increase the cost of production for nearly every consumer good.
- (2) If implementing CCL’s legislation would increase the cost of production for consumer goods, then it would harm consumers—we would spend more and wind up getting less.
Therefore,
- (3) Implementing CCL’s legislation would harm consumers—we would spend more and wind up getting less.

Reply: Premise (2) is false. REMI found that, for most people, the dividend would more than cover the increase in cost of living. Implementing the legislation that they modeled would increase prices by 1.7-2.5%, depending on region, as of 2035—the increase would be 2% for our region (see figure on p. 33).ⁱⁱ The monthly dividend for a family of 4 with two adults in 2035 would be \$396 (see figure on p. 32). If prices of consumer goods increase by 2%, and your family spends \$10,000/month on consumer goods, then you’ll spend an extra \$200/month on those goods as a result of the fee. Compare that to your \$396 dividend (assuming that you have a family of four). The bottom line is this: where “real income” is the amount of money you make relative to the cost of living, real incomes would begin rising as soon as we implement the legislation and would rise steadily thereafter. By 2035, real incomes would increase \$700/person as a direct result of the fee and dividend (see figures on p. 37-38). One reason for this is simple: most of us pay less in fees than we receive in dividend payments.

3.2 Harm to US Producers

Objection:

- (1) Since producing energy by burning fossil fuels costs less than producing equal amounts of energy through “green” sources, implementing CCL’s legislation would increase the cost of energy in the US, and thus, would increase the cost of production in the US, but it wouldn’t increase the cost of production outside the US.
- (2) If implementing CCL’s legislation would increase the cost of production in the US but not outside the US, then it would give foreign producers a competitive advantage over US producers.
Therefore,
- (3) Implementing CCL’s legislation would give foreign producers a competitive advantage over US producers, and thus, it would hurt US manufacturing.

Reply: Premise (2) is false. CCL’s legislation includes a “border adjustment” that operates on both imports and exports. The price of any good being imported to the US from a nation that does not have a comparable carbon fee or tax would be adjusted at the border. REMI’s modeling found that, because of the border adjustment, implementing the fee and dividend legislation would not give foreign companies any competitive advantage. In fact, they found that, all things considered, implementing the fee and dividend legislation would boost our Gross Domestic Product (see figure on p. 21).ⁱⁱⁱ

3.3 Harm to Local Economies

Objection:

- (1) If an economy depends mostly on producing fossil fuels, then implementing CCL’s legislation would devastate it.
- (2) Many regional economies in the US depend mostly on producing fossil fuels.
Therefore,
- (3) Implementing CCL’s legislation would devastate many regional economies in the US.

Reply: Both premises (1) and (2) are false. REMI modeled economic impacts by region. They divided the US into 9 regions, such as the “West North Central” region, which includes Minnesota, Iowa, Missouri, North Dakota, South Dakota, Nebraska, and Kansas (see figure on p. 15). Contrary to (2), they found that implementing the fee and dividend would benefit the economy in 8 of the 9 regions (see figure on p. 22), including the “West North Central”. Contrary to (1), they found that the losses for this region were fairly small, nothing like devastation.

Objection:

- (1) Implementing the legislation would hurt one region—and surely many local economies.
- (2) If implementing CCL’s legislation would hurt one region, then it would be unfair.
Therefore,
- (3) Implementing the legislation would be unfair.

Reply: Premise (2) is false. Whenever one industry replaces another, some people lose their jobs. The US had more people making buggies (for horses to pull) in 1900 than we have today. Should we have blocked the invention of the car to save communities that focused on producing buggies? No. Perhaps if implementing the legislation would lead to massive job loss with comparatively few gains, we would have good reason to block the legislation. But REMI found that by 2035 the CCL legislation would cause us to gain 2.8 million more jobs than it would cause us to lose (see figure on p. 7). The REMI report details the gains by industry and by region (see figures on pp. 22-29). The report also suggests that the jobs we would gain would be good paying jobs (see on figures on p. 39).^{iv}

4. On “Implementing CCL’s Legislation Would Not Help the Climate”

4.1 Domestic Failure

Objection:

- (1) Implementing CCL’s legislation wouldn’t reduce domestic production of greenhouse gases enough to significantly impact the US contribution to climate change.
- (2) If (1), then we should not implement it. Therefore,
- (3) We should not implement CCL’s legislation.

Reply: Both premises are false. Regarding (1). REMI found that implementing the legislation that they considered would reduce CO₂ emissions by 52% by 2035. That would put the US at 50% of 1990 emission levels (see figure on p. 8), which is cited as what our goal should be. So, we would be “doing our part”. Moreover, implementing CCL’s legislation would surely achieve even greater reductions than what REMI found because REMI modeled the effect of implementing a carbon fee that would start at \$10/metric-ton of carbon dioxide, but the CCL-legislation would start at \$15/metric-ton, and REMI intentionally assumed both that no other steps are taken to reduce emissions and that no new technologies that would reduce emissions come online.

Regarding (2). Even if we set aside climate change mitigation, we should adopt CCL’s fee and dividend legislation because it is good for the economy and it is fair—because it forces people to pay for the harm they do to others when they consume dirty energy; REMI found that implementing CCL’s legislation would prevent 230,000 premature deaths by 2035 (see figures on page 43).

Objection:

- (1) We can’t produce enough “green” energy to satisfy demand for energy.
- (2) If (1), then a fee wouldn’t impact climate change. Therefore,
- (3) Implementing CCL’s legislation would not help to mitigate climate change—it would just send energy prices skyrocketing.

Reply: Premise (1) is false. REMI found that energy demand could be met rather easily with existing technologies (see figure on p. 40).

4.2 World Failure

Objection:

- (1) Implementing CCL’s legislation wouldn’t reduce worldwide production of greenhouse gases enough to significantly mitigate the adverse effects of climate change—we need China and India to act.
- (2) If (1), then we shouldn’t implement it. Therefore,
- (3) We shouldn’t implement CCL’s legislation.

Reply: Both premises are false. Regarding (2). We might as well get the economic benefits of implementing CCL’s legislation, even if climate change will eventually destroy us all. Regarding (1). Because of our unique role as the dominant importer in the world, if we implement CCL’s legislation, much of the rest of the world will follow our lead.^v Why? If CCL’s legislation were implemented, foreign governments would have two options. First, they could refuse to implement an appropriate carbon fee/tax, in which case their exporters would pay border adjustment fees *to the US government*. Second, foreign governments could implement a carbon fee/tax, in which case that foreign government would receive the money from its own carbon fee/tax. Given these options, any sensible government would choose to implement its own carbon fee/tax, rather than sending more money to the US.

Objection: Instead of implementing their own fee/tax, foreign governments would encourage their companies to abandon the US market.

Reply: Imagine Nike or Adidas saying, “New Balance, you can have the US market.” It’s absurd. We consume *far, far* more than any other country. No (large) company could replace their US sales by exporting elsewhere (even if they wanted to).

Objection: Nations whose only industry is fossil fuels will refuse to implement a carbon fee or tax

Reply: Suppose a country that predominantly exports fossil fuels does not implement an appropriate carbon fee/tax. Whenever their fuel is exported to the US, they must pay our fee—\$10/metric-ton and rising. The same considerations as above suggest that such countries would prefer to collect the fee themselves rather than have their companies pay it to the US.

Objection: But we still won’t get everyone to follow.

Reply: We don’t need everyone to follow. And, luckily, the nations we need most (e.g., China and India) have diverse economies, which suggests that they would benefit economically from carbon fee and dividend legislation, which suggests that they would adopt it rather than having their producers pay fees to us.

Objection: Foreign governments have another option: they can retaliate against the border adjustment with sanctions against goods coming from the US.

Reply: Any border adjustment or sanction must comply with international trade agreements. The CCL legislation complies with all trade agreements that bind the US. Responsive sanctions are unlikely to be compliant.

More importantly, why should we predict that any large nation would respond with sanctions, rather than by implementing a carbon fee or tax? Given how significantly a carbon fee and dividend would benefit the US economy, we can reasonably predict that it would benefit many other economies, especially similarly diverse economies. That gives us reason to think that others would rather follow our lead than fight us.

Objection: There’s too much speculation about what others would do. We should *know* before we act.

You: Of course, some nations may not follow. It’s even possible than none would follow. Predicting how other nations will react to any policy is hard. Anyone who claims that other nations will *undoubtedly* react with sanctions or will *undoubtedly* follow our lead is being dogmatic. But does uncertainty give us reason not to act? No. There is always uncertainty about what the consequence of our actions or inactions will be. There are always risks to our actions and inactions. But when we have good reason to believe that many other nations, including crucial nations, would follow our lead, and we have good reason to believe that *that* would reduce emissions significantly, and we have good reason to believe that implementing CCL’s legislation would help our economy, regardless of whether others follow, then we have every reason to implement it.^{vi}

ⁱ REMI clients in our region of CCL have included the Iowa Department of Transportation, Montana Department of Transportation, and North Dakota Department of Transportation. Other REMI clients have included the American Gas Association (AGA), the Nuclear Energy Institute (NEI), the National Federation of Independent Business (NFIB), the National Education Association (NEA), the International Brotherhood of Teamsters, Booz Allen Hamilton, EY (formerly Ernst and Young), PWC (formerly Price Waterhouse Coopers), and ICF International.

ⁱⁱ All references are to the full REMI Report, which is available here: <http://citizensclimatelobby.org/wp-content/uploads/2014/09/The-Economic-Climate-Fiscal-Power-and-Demographic-Impact-of-a-National-Fee-and-Dividend-Carbon-Tax-6.9.14.pdf>.

ⁱⁱⁱ How does the border adjustment work?

First, consider how it works for imports. Suppose a foreign company that manufacturers in a nation that does not include an appropriate fee or tax plans to sell shoes in the US for \$50/pair. Suppose that at a given time we calculate that the company would have to sell the shoes for \$51/pair to achieve the same profit if the nation in which the shoes are manufactured were to implement an appropriate carbon fee or tax. The US would levee a \$1 fee for each pair of shoes that the company imports to the US. The company would either pass that cost on to consumers, selling their shoes for \$51/pair, or have a lower profit on each sale. Accordingly, manufacturing their products outside the US does not give anyone a competitive advantage when they are selling in US markets.

Second, consider how the border adjustment works for exports. Suppose that a US company that manufacturers shoes in the US plans to sell the shoes for \$51/pair in a foreign country that does not have comparable legislation (either does not have comparable carbon fee/tax or does not have its own border adjustment). Suppose also that we calculate that the company would have been able to sell the shoes for \$50/pair if not for the US carbon fee. The US would return \$1 to the company for each pair of shoes exported. (The money returned to US companies would come from the fees collected on imports from nations without an appropriate carbon fee/tax.) So, manufacturing inside the US never burdens a company with a competitive disadvantage when selling in foreign markets.

^{iv} Objection: There's no way we would have 2.8 million people installing solar panels. More broadly, there's no way that every person who mines coal or whatever would get a job producing "green" energy. Reply: Some of the new jobs predicted by REMI are directly related to the energy sector. But most would result from increased consumer spending, which would result from people having higher incomes as a result of the dividend.

^v Importantly, the claim that CCL's proposal would benefit the economy is entirely independent of this claim that the world would follow—we get the economic benefits even if the rest of the world does nothing. Rather, the claim that the world would follow is required only to show that implementing CCL's proposal would reduce greenhouse gas emissions enough to significantly mitigate the adverse effects of climate change.

^{vi} Whichever objection you encounter, your interlocutor may reject your response on the ground that the REMI Report is illegitimate. One who objects to legitimacy of the report has two options.

First, the objector can hold that the kind of predictive economic modeling that REMI did is illegitimate *in general*. If your interlocutor raises this objection, then you can replay the same objection-reply dialogue without appealing to the findings of the REMI Report. You can respond to the objection that US consumers would be hurt, for example, by saying that most people will receive more from the dividend pool than they will pay into the dividend pool as a result of increased costs because most people consume less than the average amount consumed. You don't need any predictive economic modeling to tell you that; you just need common sense and the fact that some people consume *a lot* more than the average amount consumed—I have a detailed argument for this claim if anyone is interested. The objector who raises this concern must accept, moreover, that she cannot appeal to any economic modeling to counter your view.

Second, the objector can hold that, although the kind of predictive economic modeling that REMI did is legitimate *in general*, the REMI Report *in particular* is illegitimate. I doubt you'll encounter this objection. But if your interlocutor raises this objection, you should ask what REMI did in their modeling that renders it less legitimate than other modeling. If your interlocutor raises serious concerns, you should refer her to the email of the report's authors ☺.