

Will restricting u.s. carbon emissions damage the u.s. economy? essay sample

[Science](#), [Chemistry](#)



An important issue affecting the world today is climate change due to the increase in the amount of greenhouse gases that is released into the atmosphere. Greenhouse gases are gases that accumulate in the atmosphere due to human activity and the earth's natural biological and chemical processes. The four major greenhouse gases are carbon dioxide, methane, nitrous oxide, and fluorinated gases (U. S. Environmental Protection Agency, 2011). The main contributing factor to climate change is the abundance of carbon dioxide in the atmosphere. Due to the burning of fossil fuels, solid waste, trees, and other chemical reactions carbon dioxide is absorbed into the atmosphere enhancing the greenhouse effect.

Carbon is an element essential to all living things on Earth. It undergoes two cycles that are necessary to stabilize the environment: the biological carbon cycle and the geological carbon cycle. In the biological carbon cycle, carbon is absorbed in plants and the inorganic carbon is converted to its biological form through photosynthesis via plants and phytoplankton ("Carbon cycle," 2008). During respiration, carbon dioxide reenters the air after being broken down for energy (ATP) carbon dioxide gas. Carbon that remains in the oceans sink are buried into the earth's crust. When humans extract oil and coal for energy usage the byproduct carbon dioxide is released affecting the geological carbon cycle. The biological cycle is affected in two ways. When forests are cleared for land usage, the burning causes a release in carbon dioxide and the cleared land can no longer assist in the process of photosynthesis or the removal of carbon dioxide from the atmosphere ("Carbon cycle," 2008).

Since the Industrial revolution, large amounts of carbon dioxide have been released and continue to be released in the atmosphere. With the decrease in forests and continuation of the burning of fossil fuels, earth's biological processes cannot convert and replenish the carbon at the rate that carbon dioxide is accumulating. To decrease carbon emissions, the U. S.

Government as well as other world organizations are trying to create policies that will reduce carbon emissions through some methods such as the cap and trade system and carbon taxes. The goal is to reduce carbon emissions to a level that is sustainable and also causes a decrease in the rate of climate change.

The implementing of a cap and trade system and/or carbon taxes in the U. S. would have dramatic effects on our economy and our way of life. The biggest impact would be felt by the consumers and the manufacturing sector. The manufacturing sector would experience a decline in demand for the products and services. While the consumers will be expected to pay the costs of the taxes and many will become unemployed due to companies transferring their plants offshore.

One method being discussed to decrease carbon emissions is to enforce carbon taxes. Although carbon taxes would be efficient in reducing our nation's carbon emission, complications would also arise. The carbon tax that businesses would have to pay to manufacture and ship their products would be passed down to consumers. As the price of goods and services rise consumers will spend less money on domestic goods and begin to purchasing imported goods. As the demand for high energy products and

services decreases, businesses will look for energy substitutes leading to counterproductive activity. In the example given by (Lippke & Perez- Garcia, 2008), wood is used as a substitute.

As the price and demand for wood increases, the timber industry has to compensate for the demand leading to an increase in deforestation causing an increase in carbon emissions. Another disadvantage with carbon taxes is that no cap or maximum limit of carbon emissions is set (Metcalfe, 2009). The ideology is solely dependent on how much an industry is willing to pay in taxes to produce their product. However, a steadily increasing carbon tax will produce reductions in carbon emissions. There will be a decrease in the number of companies that can afford to pay the taxes as well as their normal manufacturing costs, while still holding their costs for consumers at reasonable levels. In (9) article, a \$25 carbon tax would result in a net decrease in net profits and investment across all energy industries and manufacturing industries (Nordhaus, 1991).

The cap and trade method as an alternative to the carbon tax that would occur on an international level. This method is efficient at decreasing carbon emissions on a global level, however on a national level the results could vary. This is due in large part to the trade portion. If the U. S. were to reach our maximum cap of carbon emissions we could buy carbon credits from another nation that has not reached its capacity. In 2007, Europe gained \$40 billion due to credit trading; however, the carbon emissions still increased by 1% (Lippke & Perez- Garcia, 2008). Due to the fact that all living things and manufacturing/production processes involve carbon uptake and emissions, it

would be challenging for the cap and trade system to regulate every carbon emission output. (Lippke & Perez- Garcia, 2008)

Competitiveness in the U. S. Market would also change due to the cap and trade. (Kuik O., Mulder M., 2004) In one way Grandfather clauses would allow companies to purchase allowances only if they increase their emissions above their current levels. These companies would not undergo immediate emissions cuts and would be able to sell their free allowances to companies that need the carbon credits. These grandfather clauses would change the competitiveness of the market by making it difficult for new companies to enter. On an international cap and trade system, other countries could charge the U. S. high rates for their extra carbon credits. As noted before the extra costs that the companies have to pay will be passed back to consumers.

The increase in costs for firms to reduce emissions could result in relocation of their industries to countries that do not participate in cap and trading systems or do not impose carbon taxes (Baranzini, Goldemberg & Speck, 2000). The outcome of relocation would cause an increase in the unemployment rate in the U. S. The increase in the unemployment costs could exert a rise taxes for taxpayers to compensate for the loss in federal funds.. With more people unemployed, consumers would spend less money; resulting in a decrease in demand and an excess in supply. The excess supply creates a net loss for the firms. In such case, some firms could be motivated to start establishing low-energy technology into their production

and manufacturing processes. However, the costs to implement these new methods would still be passed down to consumers.

An environmental policy is needed for carbon emissions output, however, it should be a policy that is well thought out and does not neglect the negative impacts that the carbon taxes and cap and trade system have on our economy. Both methods could be amended to help alleviate the financial burden that would be placed on the consumers and manufacturing/energy industries. If carbon taxes are to be implemented, it should include all carbon pools and just fossil fuels. This amendment would offset an increase in wood substitutes and decrease deforestation (Lippke & Perez- Garcia, 2008). If a cap and trade system is called for, it would be beneficial for legislation to implement an additional cap on the maximum price a carbon credit can sell for as well as a cap on how many trades a company can accumulate (Pauwelyn, 2007). This would eliminate companies from charging extremely high prices for their extra credits and cease companies from emitting overwhelming amounts of carbon emissions. Creating an effective policy can be done, but it will take time, cooperation and much needed effort from scientists, industrial leaders, and government officials.

References

Baranzini, A., Goldemberg, J., & Speck, S. (2000). A Future for Carbon Taxes. *Ecological Economics*, 32(3), 395-412. Carbon cycle. (2008, August 7). Retrieved from [http://www. enviroliteracy. org/article. php/478. html](http://www.enviroliteracy.org/article.php/478.html) Kuik O., Mulder M., (2004). Emissions trading and competitiveness: pros and cons of

relative and absolute schemes. *Energy Policy*. 32(6), 737-745. Lippke, B., & Perez- Garcia, J. (2008). Will either cap and trade or a carbon emissions tax be effective in monetizing carbon as an ecosystem service. *Forest Ecology and Management*, 256(12), 2160–2165. Metcalf, G. (2009). Designing a Carbon Tax to Reduce U. S. Greenhouse Gas Emissions. *Review of Environmental Economics and Policy*, 3(1), 63-83. Nordhaus, W. (1991). To slow or not to slow: the economics of the greenhouse effect. *The Economic Journal*, 101(407), 920-937. Pauwelyn, J. (2007). U. S. federal climate policy and competitiveness concerns: The limits and options of international trade law.

NIWP 07-02 U. S. Environmental Protection Agency. (2011, April 20). Us environmental protection agency. Retrieved from <http://www.epa.gov/climatechange/emissions/index.html>