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"Hoarding" Causes Deflation, Not The Other Way Around

By: Timothy B. Lee – April 14, 2013

I keep seeing people making the argument that Bitcoin's limited supply leads to deflation, which leads to "hoarding," which kills Bitcoin's value as a currency. This argument gets things exactly backwards.

To see why, we have to start with a thought experiment. Suppose there's an economy in which everyone has $1000 in the bank. After a terrorist attack, the consumers all want to double their savings, and so they cut back on their spending.

Unfortunately, it's mathematically impossible for everyone to increase their cash holdings simultaneously by spending less. One person's spending is another person's income. So as everyone simultaneously reduces their spending in an effort to save more, they find their incomes are declining at exactly the same rate.

In the frictionless world of economic textbooks, this problem can be solved with falling prices. Businesses should notice falling spending and react by cutting their prices. The dollar value of peoples' cash holdings can't be increased, but as prices fall the inflation-adjusted value of everyone's savings will double.

Unfortunately, this doesn't work very well in the real world because prices in the conventional economy are "sticky." When a firm sees falling demand for its product, it doesn't respond by cutting its workers' paychecks. Instead, it usually lays workers off. Similarly, people who borrowed money generally can't get the bank to reduce the principle by a factor of two, so people go bankrupt. So in practice, when everyone tries to save simultaneously, the result is a recession.

Fortunately, in countries with a central bank, there's an easy solution. The central bank can increase the money supply. If consumers want to double their cash holdings, the central bank can double the money supply. Then everyone can have the money they want without triggering an economic slowdown.

There are a few lessons from this tought experiment. First, "hoarding" produces deflation, not the other way around. When people want to hold more cash, they reduce their spending, and firms respond by cutting prices. The opposite story, in which consumers stop spending in anticipation of falling prices, doesn't make sense. Who's going to delay buying a cup of coffee today because they expect it to be 0.1 percent cheaper next week?

Second, recessions occur because prices *don't fall fast enough* in response to increases in the demand for cash. If businesses responded to falling consumer spending by immediately cutting their prices and wages in half (and banks forgave half of peoples' debts), there would be no recessions. It's because firms don't cut their prices quickly enough that lower nominal spending leads to reductions in real output.

Critics are right to be concerned that an entirely Bitcoin-denominated economy—one in which peoples' salaries and debts were specified in terms of bitcoins—would be prone to macroeconomic problems. With no central bank, a Bitcoin-based nation would be prone to recessions every time consumers wanted to hold more cash.

On the other hand, if most Bitcoin vendors automatically adjust their prices based on the current exchange rate between Bitcoins and their "native" currency, then the Bitcoin economy will work like the frictionless economy in the economics textbook. If the market suddenly decides it wants to hold twice as much Bitcoin-denominated wealth, then the value of each bitcoin will double and the Bitcoin-denominated price of goods and services will decline by a factor of two. And because this adjustment happens quickly, there won't be any significant decline in real Bitcoin-denominated spending.

Happily, that's exactly how Bitcoin vendors behave in the real world. Which means that changes in the value of bitcoins do not have the kinds of harmful macroeconomic effects that changes in the value of dollars do.

So the claim that Bitcoin's limited money supply will cause deflation, which will lead to "hoarding," gets things precisely backwards. The fact that Bitcoin-denominated prices fall so quickly and easily in response to changes in Bitcoin's value insulates Bitcoin-based commerce from the harmful macroeconomic effects that normally accompany a decline in aggregate demand.

Disclosure: I own some bitcoins.