

## Understanding economy key to recovery

**Colin Read: Everybody's Business**

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— We should be wary of those who claim we are in the midst of a depression, and hope to conjure up images of breadlines and dust bowls.

While sensationalism sells commercials by generating economic angst, we must move beyond the hyperbole. After all, a little understanding of the workings of the economy will help us navigate a path through our current challenges.

Let's begin by noting that a technical depression does not imply another Great Depression. The Great Depression was long and pronounced precisely because they did not then know what we have since learned. And government was much smaller, with little ability to make a big difference.

There are various definitions of a depression. Some define it as a 10-percent drop in gross domestic product and a 10-percent unemployment rate. Many economists predict we will reach double-digit unemployment, and one measure of unemployment, the U6, is already nearing 14 percent. Meanwhile, GDP dropped at an annualized rate of 6.2 percent last quarter. The next two quarters will be key.

Others define a depression as a severe recession combined with deflation. Given the significant fall in asset, housing and energy prices as a consequence of reduced demand, our deflationary recession may meet this definition of a depression.

Some other economists define a depression as an economy that begins to eat its seed. When economic displacement forces households to sell their assets at fire-sale prices just to survive, we can find ourselves in a depressionary spiral.

I instead define a depression as a persistent and nasty equilibrium. Such a definition defies the commonly held assumption that our institutions self correct. If we know the nature of this equilibrium, we can do something about it.

Normally, a downturn will be short-lived as investors sweep in to profit from market weaknesses. We have come to trust such forces will ensure recessions last months rather than years.

Now, even free-market zealots like Alan Greenspan have lost their faith in the self regulation of free markets. He recently testified to a congressional committee that our markets have failed. Why now?

Remember Russell Crowe's portrayal of John Nash in "A Beautiful Mind?" Nash was a brilliant Princeton University mathematics Ph.D. candidate who published one of the shortest Ph.D. theses in history.

His partly hand-written and partly typed thesis of just 27 pages explained what economists dating back to John Maynard Keynes had surmised. We can get stuck in an equilibrium that stinks! In other words, the

economy may converge on a bad equilibrium.

To see this, Nash devised a new strategy for what he labeled a non-cooperative game. For instance, self-interested poker players take the available information and the presumed strategies of others and develop a strategy to win. We have since learned that the economy is also a non-cooperative game.

As an example of how self interest can drive an economy or organization to ruin, let's describe what economists label "The Prisoner's Dilemma." Two people are arrested while running down the street with stolen laptops under each arm. A block away, a computer shop has a broken window and blaring alarm. The police can convict the detainees of possession of stolen goods but have no proof they broke the window. Possession alone will net them each a year in jail.

They are brought in separate cars to the police station and interrogated in separate rooms. Detectives offer each detainee that if she confesses and the other does not, she will get a reduced sentence of six months in jail as an accomplice, while the other will get three years in prison for possession, formulating a conspiracy and breaking and entering.

If they were to coordinate a mutually beneficial, cooperative strategy, the detainees would quickly realize they ought to keep quiet. By not confessing, each will face only a year in jail, or two years collectively, for possession of stolen goods.

Of course, the police keep them apart precisely to avoid such coordination and to maximize the punishment to the detainees. If they can induce one detainee to confess, the police can get sentences totaling three and a half years, rather than the two-year sentence that results when the detainees coordinate.

The dilemma is even more pronounced than that, though. If both confess, all deals are off, and the detainees can be tried separately, with each confession used against the other. The police end up with a total of four years of sentencing, each prisoner convicted of breaking and entering and possession of stolen goods. Let's see why the non-cooperative equilibrium quickly degenerates toward the worst outcome.

Imagine if one detainee was sure the other would not confess. She'd then surely confess to get a light sentence. On the other hand, if one is sure the other will confess, she'd also confess so she is not framed as the ringleader. This is a prisoner's dilemma because both will end up confessing, against their individual and collective interest.

In formulating a bad non-cooperative equilibrium, Nash proved that preservation of our individual interest, combined with a failure to coordinate, can frustrate our collective interest.

How can we protect ourselves from our own uncoordinated and non-cooperative nature? Of course, a totalitarian state can force us to produce and consume. We cannot be compelled to cooperate in a free market economy, though.

For instance, today we find ourselves naturally cutting back on spending. Many have capitulated by pulling their savings out of markets they deem too risky. These natural and human responses have only served to tighten the downward spiral. Our belief we are in a recession has plunged us into a recession. It is a self fulfilling prophecy, just as Nash predicted.

We now find ourselves in that uncomfortable position of hoping government can spend on our behalf to fill the spending gap our paradoxical frugality created. In this free market, we rely on institutions that restrict our decision making, or we follow a leader that protects us from ourselves.

At first, John Nash did not realize that his theory of non-cooperative games could explain the most exasperating nature of the free market. The famous depression era economist John Maynard Keynes realized this sometimes-fatal flaw in economics a generation earlier, but without the mathematical rigor to prove it. Neither though had the solution to prevent a prisoner's dilemma from occurring. That is up to us all.

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