ifreeNews
International Foundation for Research in Experimental Economics
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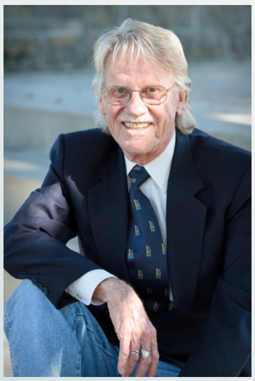
President's Corner By Vernon L. Smith

Experimental Economics: Understanding the Financial Crisis



It is five years since the Great Recession began in the fourth quarter of 2007. Measured in Depression Clock Time, it is 1934, when the U.S. economy expanded 7.7 percent. Today no such expansion is on the horizon. Rather, the economy is still mired in a low-growth rut, only the second such severe downturn since 1929. We are in a *balance sheet crisis*, the consequence of a collapse of asset (read "housing") values against fixed debt obligations plunging many households—now 22%—into negative equity. These households owe more on their mortgages than their houses are worth, with even more households near the edge of that black hole. More serious for the economy is that the banks holding these mortgages are simultaneously plunged into negative equity. Total U.S. home equity, which rose from $6 trillion in 1997 to a peak of $13.5 trillion in 2006, returned to $6 trillion by 2009, where it remains stuck.

Why were economic policy makers and economists blindsided by these events? It's simple: *micro-equilibrium and macroeconomic models do not consider balance sheet effects; more importantly, these effects are not included in policy thinking*. When balance sheets are widely damaged, the normal flows of earned income, spending and lending are disrupted, as households gradually pay down debt to recover their net wealth position and banks severely limit new lending and allow payments on old loans to flow into strengthening their equity positions.

There is strong evidence from the experience of economies as diverse as Thailand, Sweden, Japan, Finland, the U.S. and the European Union (EU) that the least painful solution to balance sheet crises is to allow defaults and bankruptcies to run their course, so that bloated debt obligations are realigned with current realistic market asset values. Japan, EU and the U.S did not do this and have suffered immeasurably. Thailand, Sweden and Finland did do this and recovered more quickly. The political process favors a policy of too-big-to-fail for the banks. Politics protects incumbent investors because they are highly visible, contribute to election campaigns and naturally do not want to lose their investments however much based on an unsustainable price bubble.

Fundamental economic insights have come from experimental economics as to why some markets are capable of producing episodes of instability and economic suffering yet economic history has made it evident that market economies have vastly enabled human economic betterment.

My first experiments were published 50 years ago, the results having surprised me as much as the economics profession. They demonstrated that markets governed by ordinary repetitive supply and demand converged quickly to prices and outcomes that maximized the gains from specialization and trade—all participants in these markets benefitted relative to their initial circumstances. But these markets had features distinct from housing-mortgage markets so prominent in the Great Recession and Depression: the items were immediately paid for and consumed. Participants were always either buyers or sellers, and all sales were final as items could not be re-traded. So think about that: the items were like hamburgers, airplane passenger trips, hotel rooms, haircuts and things you buy at 7/11 or Trader Joe's. The experiments involved items exactly like the national accounts category of "consumer non-durable goods and services." This is by far the largest category in total private product: consumer non-durables average a steady 75% of all final private products. These markets are very large, very dependable and not a source of instability for the economy. All our economic woes, when they occur, arise from the other 25%, especially houses that are very durable, often bought with lots of what Adam Smith called "other people's money," and depending upon the price, you might decide to be either a buyer or a seller.

Experiments in the 1980s focused on markets for assets that were durable; you might decide to buy more, or to sell some of your holdings, depending on the price; in some experiments you could borrow to buy. All these markets diverged immensely from intrinsic asset value, even though all participants were fully informed and reminded each period as to the fundamental worth of the assets traded! People in these experiments would get caught up in self-sustaining expectations of price changes.

Until the Great Recession I did not fully appreciate the important differences in these two kinds of experimental markets.

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IFREE Spotlight

IFREE Announces Fall 2012 Small Grants Awards:

"An Experimental Investigation into the Success or Failure of Joint Ventures" - *Kyle Hyndman (School of Business and Economics, Maastricht University, Netherlands):*

- Goal is to evaluate whether and when long-term contracts are preferable to short-term and vice-versa.
- What is the impact on output and profitability of contract duration in joint ventures under varying information conditions?

"Creativity and Incentives" - *Gary Charness (Dept. of Economics, Univ. of CA Santa Barbara):*

- Aim is to investigate two types of creativity: "inbox" (creativity for a clearly specified goal) vs. "blue-sky" (no ex-ante goal, just pure creativity of thinking outside the box).
- How may the two types of creativity be affected by financial incentives?
- How might corporate culture (cooperative vs. competitive) affect the two types of creativity?

"Cognitive Bubbles" - *Ciril Bosch-Rosa (5th year PhD student, Univ. of CA Santa Cruz):*

- Provides system for measurement of the ability to backwards induct and engage in level-k reasoning (how deeply do people take account of what others think) using online programs.
- Uses the new system to study the effect of such measures of backwards induction and level-k thinking as elements in bubble formation in asset markets.

"Cost- sharing Allocation in Networks: An Experimental Study on the Choice of Mode of Transportation" - *Caiyun Liu, Vincent Mak, Amnon Rapoport (The Graduate School of Management, Univ. of CA Riverside and Cambridge Judge Business School):*

- Study of individual choice among transportation networks as it is affected by cost sharing arrangements; and
- The information conditions people have after the fact about whether they should have taken the action they did.

"Correlation Neglect in Belief Formation" - *Benjamin Enke, Florian Zimmermann (Dept. of Economics, Institute for Applied Macroeconomics, Bonn, Germany):*

- In markets where individual choice is aggregated based on information, how are the results affected by correlated information?
- Are beliefs distorted by individuals who fail to take into account correlation, and who infer too much from highly correlated information, thus leading to excessive optimism or pessimism?

Commemorative Conference Congratulations

The ***Antigua Experimental Economics Workshop & Conference*** was held October 23-27 in Antigua Guatemala, hosted by the *Centro Vernon Smith de Economía Experimental* at *Universidad Francisco Marroquín,* and made possible by IFREE.

The event marked an important step in encouraging and facilitating the emergence of an active Latin American experimental research community. The first part of the event was a 2 and a half-day workshop in which participants from, or working in, Latin America participated in several experiments, heard lectures on "Nonparametric Statistics for Experiments" and on experimental design, and designed and presented experimental projects. The second part of the event was the Antigua Experimental Economics Conference, where researchers from Latin America and all over the world presented their research to an audience of their peers, participants and other observers. The Conference attracted participants from Latin America, Spain, the UK and the USA.

Letter to Supporters

Dear IFREE Reader/Supporter:

Would you consider making a tax-deductible year-end contribution to continue the success of the only foundation that annually supports funding for:

-- improvement in the teaching of economics through experimental economics workshops and intern programs
-- basic research in markets using experimental methodology through the Small Grants Program
-- graduate and post-doctoral education
-- seminars and speakers' series in applications of experimental economics
-- seminars in application of experimental methodology to important public policy questions.

You can help continue IFREE's important work by **donating online** (http://www.ifreeweb.org/support/index.php), or by mailing your tax-deductible donation to our address listed on page 4.

Thank you!
Vernon Smith, on behalf of IFREE

I now realize that although markets work miracles in the one case, they can be unstable in the other: in the economy 25% of private output can account for 100% of the pain!

In 1934 my parents lost their Kansas farm to the bank, and the bank could not resell it for mortgage value. Though these losses were hard-felt at the time, it was far better to start over with a clean balance sheet than drag that negative equity into the future. Today millions of Americans are in homes with modified loans and lower payments, facing years of paying off a mortgage for houses purchased at unsustainably puffed-up prices. The too-big-to-fail banks were rescued by the taxpayer, but were not required to mark mortgages to current market value. Consequently, investors are skeptical of these banks: the stock of bail-out champions like Bank of America and Citibank sell for half of book value, while Wells Fargo—needing no bailout—sells for 122% of book. Investors do not trust these overstated book values.

Economic policies that avoid default do not avoid loss for the economy. They simply stretch the loss into an uncertain future. When the Federal Reserve and Treasury buy overvalued mortgages from the banks, this action just kicks the negative equity can from the private to the public sector—the drag against future output continues. When we "protect" banks that carry mortgages at historical book value by stretching the terms of their loans, it just kicks the negative equity can down the road, preventing new lending and limiting recovery.

Experiments have facilitated a fundamental understanding of the two kinds of markets, and have led to clues on where policy goes wrong.

2012: A GREAT YEAR FOR OUTREACH EDUCATION IN EXPERIMENTAL ECONOMICS!

The **2nd Annual UAA/IFREE Incoming Undergraduate Student Workshop in Experimental Economics** was held August 23-24 in Anchorage with 31 eager entering freshmen, four of whom were from remote communities in Alaska, one from the Lower 48 and two international students. The evaluations clearly indicated that the students enjoyed the workshop and by far the majority of students indicated that they intend to take at least an economics course at UAA, which met one of the primary goals of the workshop. Of most interest? "…the experimental part of economics, and energetic teachers!"

The IFREE/ Foraker Group/UAA Experimental Economics Lab Workshop on Experimental Economics and Charitable Giving mid-August in Anchorage drew over 30 Alaska nonprofit organizations who learned about the latest research in charitable giving from 5 nationally known scholars, each of whom is widely-recognized as a leading experimental economist with a research program focusing on charitable giving. See PowerPoint presentations and podcast of the talks: **http://econlab.uaa.alaska.edu/charitablegiving/Charitable_Giving/Home.html**

The Economic Science Institute at Chapman University hosted two week-long IFREE-funded high school workshops in July and August through a generous grant from the Thomas W. Smith Foundation, and also hosted a 6-week Summer Scholars Program. Workshop participants came from California, Washington DC, Czech Republic, Arizona, Rhode Island, Missouri, Massachusetts, British Columbia, Maryland, Washington, Wisconsin, Minnesota, and Texas. The objective of the workshops is exposure to the foundations of economic analysis using experimental economics. Many students report being uniquely prepared when they eventually take economics courses in high school and college – not with an exhaustive knowledge of the material, but with a mindset that helps them grasp "the economic way of thinking." The Summer Scholars program is characterized as interdisciplinary scholarship and learning at it's best and drew from students majoring in disciplines across the curriculum, from business and economics to English and music.

The second IFREE-sponsored summer program on Virtual World experiments was hosted at the Center for the Study of Neuroscience at George Mason University in Virginia. Hosted were three graduate fellows and four undergraduate interns for the months of July and August, and fifteen local area high school students for the second annual Summer Workshop on Virtual World Experiments during the last week of July. The philosophy of these summer programs is that economics can best be studied by understanding the emergent computations that are made by people working in groups with defined interests and who are voluntarily constrained and coordinated by institutional rules. By running experiments we can study these computations in controlled and replicable settings. Virtual world experiments allow us to see how these computations emerge within a natural environment of social discourse. All of the virtual world programming is now done in OpenSim, an open source virtual world platform. This year two of the interns built an 'avatar' training facility where newcomers to the virtual world can learn virtual world skills. Another of the interns built and documented a demonstration trust experiment which serves to acquaint others with all the skills they need to know to program their own virtual world experiment. Professor Kevin McCabe hopes to create an open source software library to be freely available to anyone who wants to run virtual world experiments.

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Build IFREE

IFREE's Mission Statement:

To advance the understanding of exchange systems and the testing and application of market-based institutions by:

- *funding* basic research in economics through experimental methods,
- *supporting* the scholarly development of students and pre- and post-doctoral visitors,
- *sponsoring* innovative hands-on participatory learning in experimental economics in a variety of settings, and
- *promoting* extended discussion of experimental economics research applications to policy.

At the heart of IFREE are the contributors who bring life to the IFREE mission through their financial support of projects funded by IFREE.

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