How experienced buyers can mitigate economic bubbles

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(Phys.org)—Over the last decade, many people got a tough primer on the effects of economic bubbles, as the bursting of the 2007-2008 housing bubble sent shockwaves through most of the major world economies. But property isn't the only asset class that experiences economic bubbles; any asset valued at a price or a range that deviates sharply from its intrinsic value is said to be experiencing a bubble.

Other examples include the so-called dot-com bubble of 1995-2000, the stock market bubble of 1922-1929, and there was even a bubble in the uranium market in 2007. Often, speculative bubbles occur in the markets for durable goods, defined as an asset that does not quickly wear out. By contrast, studies have demonstrated that price-quantity equilibrium

prevails in markets for goods that are immediately consumed, like milk shakes and haircuts; this is because the buyer and the seller never trade places, and the consumption value of the good is very high.

A group of economics researchers at Chapman University in California, curious about production and trade in a stock-flow market for durable assets, treated the issue as a pure abstraction in a study recently published in the *Proceedings of the National Academy of Sciences*. They developed a model of a reproducible durable asset with several conceptual elements: First, the asset provides use value to its owner (dividends) through use.The asset depreciates over time. And suppliers can profitably sell newly manufactured units if the price is below the market price.

They tested this model in two conditions: In the baseline treatment (BL), they suppressed the asset units' option risk by requiring units to be held until they depreciated. The second condition was the resale treatment (RS), in which consumers were allowed to freely sell their units to each other, thereby competing with the manufacturer. The researchers found that the RS condition hindered prices from converging to equilibrium and degraded market efficiency. Additional sessions under the RS condition used participants who had prior experience in the BL. These sessions with experienced participants were referred to as RSX.

The researchers found that there was much less resale in RSX than RS, and that resale in the RSX increased market efficiency more frequently. Consumers in the RS condition failed to optimally specialize as buyers, competing with the manufacturers by reselling their units. Resale was much more efficient when the consumers were experienced. The reason? Experienced buyers understood the consumption value of the asset. "Our statistical analysis gives us strong confidence that consumers were more focused on the consumption value of their units in the RSX than in the RS and consequently captured more gains from exchange," the authors

write. "This affected price and production convergence, as well as efficiency..."

Other results: Prices converged to the short-run equilibrium in the BL and RSX, but diverged from it in RS. Production converged to the steady state in BL and RSX, but diverged in the RS. And the efficiency was the lowest in the RS, according to a measure of global efficiency for each period. The researchers conclude, "Resale alone—although destabilizing—does not generate price bubbles. Over the past quarter century, numerous real estate bubbles have occurred around the world, with serious economic consequences. Our design with reproducible assets suggests that these markets should be stable unless other factors such as credit, cash infusions, and limitations on production disrupt market equilibrium."

More information: Retrading, production, and asset market performance. *PNAS* 2015 ; published ahead of print November 9, 2015, DOI: 10.1073/pnas.1517038112

Abstract
Prior studies have shown that traders quickly converge to the price–quantity equilibrium in markets for goods that are immediately consumed, but they produce speculative price bubbles in resalable asset markets. We present a stock-flow model of durable assets in which the existing stock of assets is subject to depreciation and producers may produce additional units of the asset. In our laboratory experiments inexperienced consumers who can resell their units disregard the consumption value of the assets and compete vigorously with producers, depressing prices and production. Consumers who have first participated in experiments without resale learn to heed their consumption values and, when they are given the option to resell, trade at equilibrium prices. Reproducibility is therefore the most natural and most effective treatment for suppression of bubbles in asset market experiments.