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POPULAR ECONOMIC NARRATIVES ADVANCING THE LONGEST U.S. ECONOMIC EXPANSION 2009-2019

By

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POPULAR ECONOMIC NARRATIVES

ADVANCING THE LONGEST U.S. EXPANSION 2009-2019

Robert J. Shiller

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Robert J. Shiller
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Abstract

The U.S. economic expansion since 2009 is the longest on record since 1854, according to the National Bureau of Economic Research Business Cycle Dating Committee. This paper seeks to understand this phenomenon better by looking at the time paths of popular narratives over this interval, of stories that people have been telling that offer clues into their economic behavior. Six constellations of narratives are studied, identified by keywords "Great Depression," "secular stagnation," "sustainability," "housing bubble," "strong economy," and "save more."

Keywords: economic fluctuations, narratives, stories, Great Depression, secular stagnation, sustainability, housing bubble, strong economy, save more.

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According to the National Bureau of Economic Research's Business Cycle Dating Committee[1], the current U.S. economic expansion began June 2009, at the bottom of the financial crisis, and passed the previous length record, 120 months, in June 2019. It is still, as of this writing, March 2020, not known how much further into record territory this expansion might continue.

This expansion provides a useful case study that may help us improve our understanding of the origins of economic fluctuations. It is an extreme event, for which ultimate causes are likely to be more easily spotted. It is a current event, for which we all have fresh memories of the kind of talk that goes on during an expansion, and so for which we can judge the human elements better.

This article builds on an argument about the origins of economic fluctuations that I presented in my 2019 book *Narrative Economics: How Stories Go Viral and Drive Major Economic Events*, which was an expansion of my 2017 American Economic Association presidential address, "Narrative Economics." The argument is that economic narratives, stories that offer interpretations of economic events, or morals, of hints of theories about the economy, go viral just as diseases do, because of changes in the environment and of simple mutations of the narratives that put the contagion rate above the recovery rate, as in the Kermack-McKendrick (1927) SIR model of disease epidemics.[2] The economy is continually beset by multiple narratives, some going viral, some peaking, some fading away, and some positive in their effects on the economy, some negative, whose summed effects alter economic behavior to produce economic fluctuations. Like diseases, many of these economic narratives are perennial, and fade into a low

[1] https://www.nber.org/cycles.html

[2] The Kermack-McKendrick model is a bare-bones epidemic model which assumes no deaths or population growth, thorough mixing of populations, and perfect eternal immunity by people after they recover. The population is divided into three compartments: susceptible, infected, and recovered. S is the fraction of the population susceptible, I the fraction infected, and R the fraction recovered. There are two parameters that differ across diseases but are constant through time for any one disease: a contagion parameter c and a recovery rate r. The three equations are $dS/dt=-cSI$, $dI/dt=cSI-rI$, and $dR/dt=rI$. Solutions to these equations will show a hump-shaped pattern for I through time if $c > r$. We will be comparing the infected curve through time with time paths of key words for the narrative as used in new articles. This model allows both large and small epidemics and fast and slow epidemics, depending on choice of c and r.

background level until some mutation or change in conditions causes them to mysteriously explode into a renewed epidemic.

Every normal human being is aware of thousands of narratives about the times we live in. But economists usually pay no formal attention to the history of such stories through time. Attention to these popular narratives has been stronger in other social sciences, psychology, anthropology, sociology, political science, and history. Presumably, most economists think that these narratives are of little relevance to economics. The big stickler is direction of causality, which is hard to prove. Clearly, the narratives respond to the economic situation. The big question is the other direction. Do narratives themselves also drive economic conditions? I have argued that causality is bi-directional. Creative people experiment all the time with variations on narratives, and from time to time these will become epidemics and change the nature of the economy. Other social sciences have done controlled experiments to demonstrate the causal influence of narratives, so it is to be expected that economic narratives as well have a causal impact. Seemingly trivial mutations of narratives, as when a celebrity name becomes attached to it, or when an event gives the narrative a connection with current reality, the contagion rate can rise above the forgetting rate and a weak narrative may explode into mass public attention, altering economic behavior.

Today, with digitized databases of news media and other sources, we can actually study the time path of narratives. We ought to be able to test new hypotheses about their effects on the economy. But first it helps to give some preliminary impressions of the impact of narratives on the economy.

The Longest Expansion in Historical Context

The longest expansion is easily visible from a glance at the data. Figure 1 shows U.S. real per capita gross domestic product (GDP) from 1929 to the present, along with per capita real personal consumption expenditures, both from the U.S. Bureau of Economic Analysis, in a semi log plot, which makes it easy to observe the percentage changes in the series. The expansion follows the "Great Recession" of 2007-2009, and is seen, indicated by the words "longest expansion," at the far right. The growth of log real GDP per capita is almost a linear uptrend for over ten years, though the consumption component appears more like

a broken straight line, the first segment showing a very slow recovery 2009-2014, the second segment, 2015-2020, showing a faster recovery.

Also visible in the figure is the previous record-holder, the 120-month expansion of March 1991 to March 2001. It might seem that the biggest expansion was at the far left, from March 1933 (Great Depression) to February 1945 (World War II) but there was a little interruption, a recession, from May 1937 to June 1938, so this was really two shorter expansions. That 1933 to 1945 phenomenon was also anomalous, having been driven at the end by a total war of historic dimensions.

The standard deviation of ln GDP and ln consumption around their quadratic trends is only about 3% in the time since 1947 when U.S. GDP became quarterly, rather than just annual. The percentage fluctuations around the trend, reflecting occasional recessions, may seem pretty small when compared with the extent of talk and trepidation that recessions bring. Most people, if asked, "did you spend something like 3% more or less around lifetime trend last year?" would likely have no idea how to answer. They might be able to think of some major expenditures that they made, or decided not to make last year, like buying a new car, or taking a long anticipated major vacation trip. Beyond that, plus or minus a few percent is just too small to even remember. Any of the blips down were within a few years offset by increases that set per capita values to new record levels. It is important to remember this when judging the likely impact of the narratives discussed below. The impact of these narratives on spending does not need to be very large to explain a good deal of the economic fluctuations we observe.

For most people, talking about the next recession is like talking about the weather, just a subject of conversation that manages to be about something that affects us all, even if it is unimportant. Of course, we don't all share the vicissitudes equally, and some are hit hard by a recession. This suggests that the problem of recessions might be thought of as calling more for better social insurance than for better stabilization policy.

Longer expansions also have tended to be the slower expansion, as can be seen from Figure 2, which is a scatter diagram with one point for every expansion since 1947, with the expansions labeled by

their final year. The x axis shows the length of the expansion in quarters, the y axis the growth rate of the expansion per annum. The longest expansion, which is labeled with 2019 though it may extend to further years, can be seen at the bottom and far right. The news media have generally described the longest expansion in glowing terms, as a singular success, when they might as well have described it as the slowest.

We shall look, then, for economic narratives that might slow spending and economic growth over the ten-year period, though a strengthening of consumer spending near the end of this expansion may have helped extend it further.

Some Economic Narratives Associated with the Longest Expansion

To help understand the longest expansion, we seek to find key words that are markers for constellations of economic narratives that might be regarded as at least partly exogenous forces to help explain it, and to search Proquest News & Newspapers for them. Proquest makes it possible to search 97 million articles since 1989, including the years leading up to the financial crisis, the crisis years 2008-2009, and the years of the longest expansion since 2009. We seek to find changes in narratives that might have been part of the cause of the expansion, or that hindered it. Six of our hypothesized constellations of narratives impacting spending are shown, with key words "Great Depression," "Secular Stagnation," "Sustainability," (shown in Figure 3) and with key words "Housing Bubble," "Strong Economy" and "Save More" (shown in Figure 4).

"**Great Depression.**" Stories about the Great Depression since the 1930s shot up to the highest level ever since the Great Depression itself. The peak percent of articles with "Great Depression" in them may seem small, only 0.35%, or about one article in three hundred, but one must reflect on the huge number of articles or news clips people are exposed to, and actually remember. These depression narratives were often stories about the hardships people faced then, along with comparisons that suggest it may be happening again now. People have never forgotten the legend of the Great Depression, and that it led to immense social antagonisms that led to World War II. Note by comparison that there was no

unusual activity in the Great Depression narrative during the second-longest economic expansion 1991-2001, or in the contraction 2001-2003. The perennial Great Depression narrative mutated when there was a run on the Northern Rock Bank in the U.K. in 2007 and in the U.S. on Washington Mutual (WAMU) in 2008, when the narrative took on a superficial resemblance to current events. During the 2008-9 financial crisis politicians around the world warned of the risk of an imminent depression in a bid to win acceptance of aggressive stimulus policies, which also generated higher contagion of the Great Depression narrative. The fears engendered by this new Great Depression narrative epidemic were precisely the kind of fear that Franklin Delano Roosevelt referred to in his 1933 statement "the only thing we have to fear is fear itself." This latest episode of intense attention to the Great Depression follows a nice hump-shaped epidemic curve, as for example in the Kermack McKendrick model with a high contagion parameter at first and low recovery (forgetting) parameter. The slow-at-first upward path of consumption expenditures corresponds roughly to the downward path in the narrative as people gradually forget it.

"Secular Stagnation." This term was reintroduced into the public consciousness by Lawrence Summers, a celebrity figure, former president of Harvard, former U.S. Treasury Secretary and research powerhouse, in a speech at a 2013 research conference of the International Monetary Fund, which went viral. The term goes back to the Great Depression itself, when it was coined by Alvin Hansen in his 1938 presidential address before the American Economic Association, but was largely forgotten until Summers resurrected it. Lending his prestige to the narrative created more contagion to the narrative, for a while. The curve is hump-shaped, like an epidemic curve again. It comes a little later than the Great Depression narrative because it took a while for Summers to bless it. It is smaller than the Great Depression curve, possibly because a great many people do not know the intended meaning (long-term) of "secular." But the message of the narratives attached to this phrase are surely inhibitory of spending, since they suggest that bad times will be here indefinitely. Secular stagnation appears forgotten again by the time of Trump's presidency, which might work in the direction of giving the expansion more time at the end.

"**Sustainability.**" This word, as applied to conservation and climate change, went viral slowly over decades, from very small beginnings in the 1980s. It represents the idealism of the new generation, and logically leads to less intense spending. It was only recently given impetus by Greta Thunberg, then 16 years old, a child prodigy of immense viral potential. She gets 114 million Google total hits, beating Queen Elizabeth and Angela Merkel. The epidemic also worked to slow the recovery. The curve shown in Figure 3 for sustainability is not hump-shaped, for it has not yet shown signs of declining or being forgotten The Thunberg mutation is a factor contributing to such ongoing contagion.

"**Housing Bubble**." This displays another nice epidemic curve, starting to rise well before the 2008-9 financial crisis but really going viral in 2008. The term "housing bubble" was the product of the interbreeding of two narratives, the housing boom narrative and the stock market bubble narrative, which had never created a contagious pathogen until now. It first showed signs of going viral *before* the longest expansion, and its gradual unwinding. There had been real estate bubbles, but they tended to be land bubbles, not housing bubbles. Housing bubbles are more congenial, as most of us are homeowners, while only few of us invest in vacant land.

"Strong Economy." The phrase "strong economy" shows two epidemics, one in the late 1990s, the other in 2018-19. This might be nothing more than a reflection of the high stock market of both of those occasions, but I think there is also feedback at work from the narrative to the economy. Referring to the economy as "strong," suggests a medical analogy, like a "strong constitution." There was a mutation of the "strong economy" metaphor when President Donald Trump attached himself to it. He projects as a giant strongman who incorporates strength into his campaign, as with his slogan "Make America Great Again" which he borrowed from the 1980 Ronald Reagan presidential campaign. Sixty-two percent of Proquest News & Newspaper hits for "strong economy" 2017-19 also mention President Trump, and often mention his slogan "Make America Great Again." In contrast, only 27% of hits for "strong economy" near the end of the second-longest expansion, 1997-1999, mention then-president Clinton. Clinton's slogan was "Putting People First," the title of a 1992 book he wrote with Al Gore.

"**Save More.**" These words key for the opposite message from that of the strong economy message, that most people do not save enough, that risks are high, for their plans to buy a house someday, to put their children through college, to start a business or to retire well. Sometimes the "Save More" phrase attaches to narratives that are only tangentially related to such long-term plans, like how to save more on your heating bills, or on grocery shopping, but more often it appears to be about accumulating saving. The "Save More" message more than doubled in strength with the financial crisis year 2008, undoubtedly helped along by the crisis. In the few years after the financial crisis there were many articles about the debt trap, and about the student loan trap, about the dangers of indebtedness, that were related, if themselves less viral. But gradually, in accordance with epidemic theory, they were eventually less well-remembered, and went back to their former levels. President Donald Trump, elected in 2016 and one of the most viral celebrities of all time, launched a counter-narrative of "save more," with his call to lavish living: "If you are going to think, think big. If you are going to live, live large."[3] This pattern corresponds to the broken-straight-line pattern of per capita consumption revealed in the figure: consumption growth was weak when "Save More" hits were high but eventually did recover.

We do not know the exact effects of these narratives on spending behavior but recognize that there is enough latitude with all these different viral messages to suggest a plausible partial explanation of the longest expansion. The expansion was drawn out to a long slow recovery by the approximately decade-long downtrend in three of the six narratives, the "Great Depression," "housing bubble" and "save more" narratives. It got an additional boost at the end by the Trump version of the "strong economy" narrative.

The above narratives aren't the only viral economic narratives during this period. For example, there are blooming narratives like "artificial intelligence will change your lives" or the "coronavirus is a major threat" that could in the future, if they begin to seem more imminent or scarier, become major factors affecting spending. There are also still more narratives connected to the longest expansion, referring

[3] Trump and McIver, 2004, Kindle edition, location 333.

to fake news, trade war, digital age, etc., that may yet be important for public perceptions related to spending.

Further Research

We need more research that would help establish narratives more securely. As I have discussed in my recent book, we need to develop better data sources about narratives, such as provided by focus interviews and focus groups, not relying so much on news media reporting, and more representative of the population at large. We need to use quantifications of narratives to establish direction of causality between narratives and economic events better. There are already econometric techniques that help us understand direction of causality that can be applied once quantification of data on narratives is more developed. Narrative epidemic models may eventually be combined with extant econometric models of the economy.

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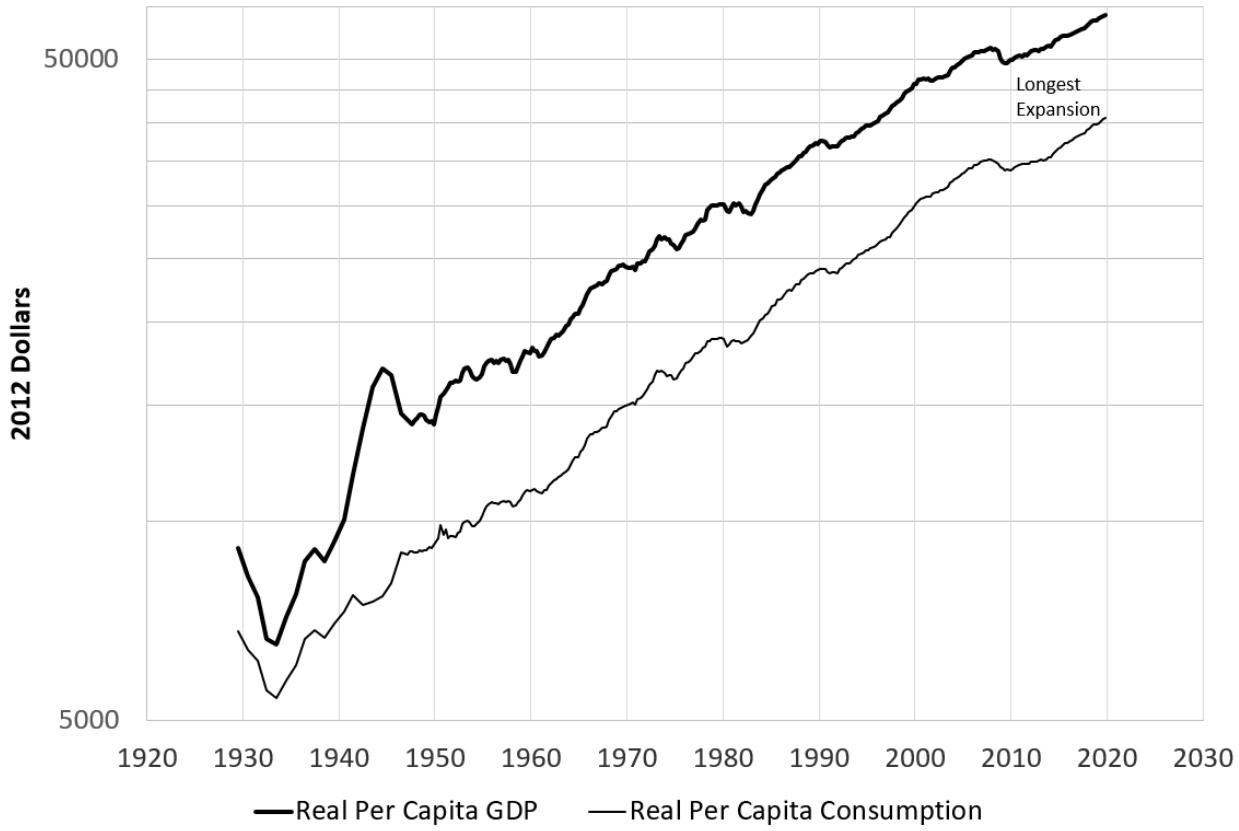


Figure 1 U.S. Real Per Capita GDP and Real Per Capita Personal Consumption Expenditures, 1929-1946 annual, 1947-2019 quarterly, vertical axis with log scale. Source: U.S. Bureau of Economic Analysis

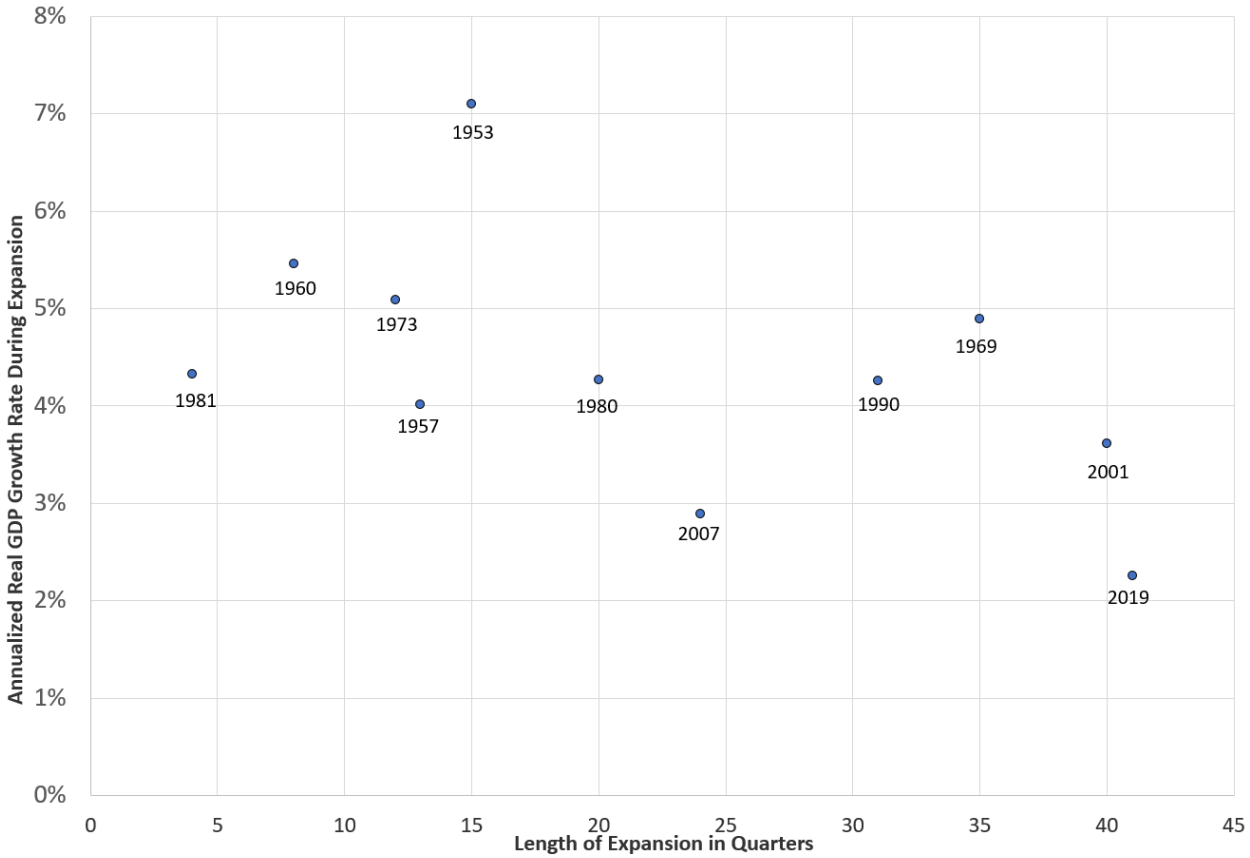


Figure 2 Showing each NBER expansion since 1947, annual real GDP growth rate vs length of expansion. The current expansion at the lower right is denoted as 2019, though as of this writing it appears it may end after 2019.

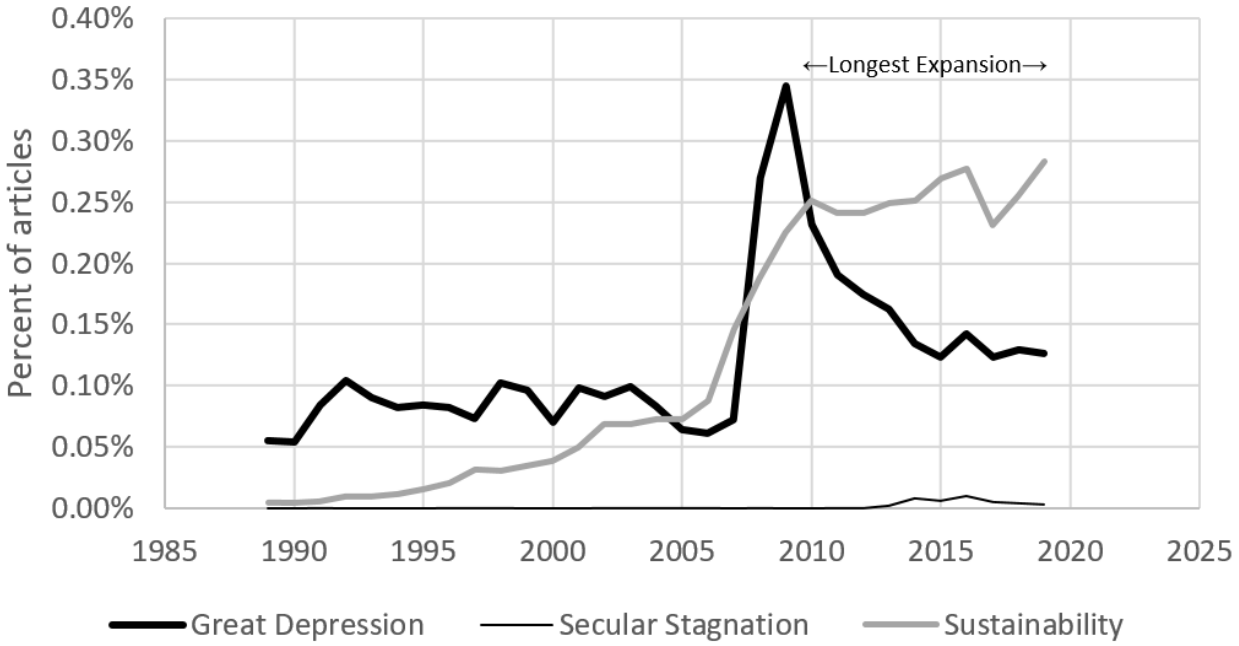


Figure 3. Time paths of three phrases that stand for narratives: "Great Depression," "secular stagnation" and "sustainability," 1989-2019. For each phrase or word, the curve shows for each year the count of articles containing it at least once as a percent of all articles in the database published that year. Source: author's calculations using Proquest News & Newspapers.

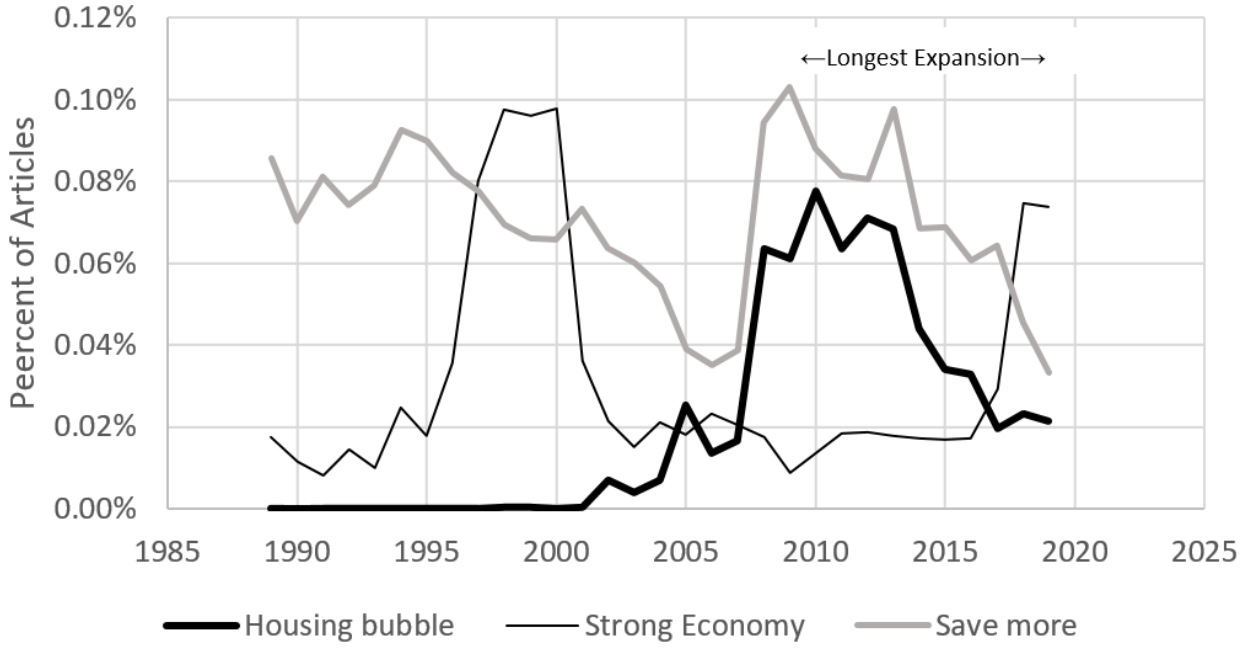


Figure 4. Time paths of three phrases that stand for narratives: "housing bubble," "strong economy" and "save more," 1989-2019. For each phrase or word, the curve shows for each year the count of articles containing it at least once as a percent of all articles in the database published that year. Source: author's calculations using Proquest News & Newspapers.