Abstract: Dramatic changes in the U.S. macroeconomy accompanied the Covid-19 pandemic, with large swings in economic growth, unemployment, and inflation. The American public’s perception of macroeconomic conditions varied as well, in seemingly-perplexing ways. In order to document this phenomenon and better understand it, this paper extends Grant’s (2014) analysis of these perceptions to the present, analyzing almost fifty years of public surveys on the state of the U.S. economy. In contrast to claims found in the media, there is little evidence that the impact of inflation on these perceptions has changed over time. On the other hand, the effect of unemployment fell significantly during the pandemic, perhaps because of the temporary provision of income stabilizers, which were timed to mitigate these effects. An unexplained, downward secular trend in sentiment is present for much of 2020 and 2021, stabilizing towards the end of the period.

Keywords: economic sentiment; consumer perceptions; economic surveys; macroeconomic conditions

JEL Codes: E32, E27, E01

*** This paper will be updated with the most recent data available in late Summer, 2022. ***

** This paper has several figures that are best viewed in color. **
Traditional macroeconomics downplays the role of public perceptions. The health of the macroeconomy is evaluated through objective fundamentals like GDP growth, unemployment, and inflation. Theoretical models and policy prescriptions, also expressed in these terms, are largely unshaped by public opinion on the state of the economy. To the extent that macroeconomists have concerned themselves with these perceptions, it has usually involved their ability to predict future values of macroeconomic fundamentals. Otherwise, public opinion is largely ignored.

Until recently, the cost of doing so has been modest, because these perceptions have evolved in line with macroeconomic fundamentals. In recessions, slowdowns in output and increases in unemployment raise consumers’ pessimism about economic conditions; high inflation does the same thing. The reverse happens when these variables move in the opposite direction.

The last two years have stood this pattern on its head. During the Covid-19 pandemic in 2020 and 2021, tremendous swings in GDP, unemployment, and inflation have been associated with more modest and somewhat surprising changes in the public’s assessment of macroeconomic conditions. The impasse between objective and subjective measures reached a crescendo in the winter of 2021-2022, with public pessimism increasing at a time that unemployment was declining:

There’s something very peculiar going on with how Americans perceive the economy...there’s a huge disconnect between economic reality, which is mixed–inflation is a big concern, but job growth has been terrific–and public perceptions, which are weirdly dismal. (Paul Krugman, *New York Times*, Mar. 3, 2022)

Unsupported by macroeconomic fundamentals, these overly pessimistic perceptions were viewed as being, essentially, irrational:

People are not responding rationally to objective data right now. We are living in polarized, partisan times. Questions about consumer confidence or the country being on the right or wrong track are meant to get at people’s views of the world outside of politics. But nothing lies outside of politics anymore. (Fareed Zakaria, *Washington Post*, Feb. 10, 2022)
This premise accepted, the search for alternate explanations began:

> The Times’s Nate Cohn makes a persuasive case [for] two causes—the delta variant and the withdrawal from Afghanistan... Life was getting messy, and the president who had promised normalcy...was not delivering. (Fareed Zakaria, *Washington Post*, Feb. 10, 2022)

Poor assessments of the economy, I’d now argue, mainly reflect two things... People react more negatively to inflation than textbook economics would have predicted. [And the] media have accentuated the negative. One liberal think tank analysis found that CNN and MSNBC devoted 50 percent more screen time in November to inflation than to all other economic developments combined....Fox News has devoted three times as much screen time to inflation as CNN. (Paul Krugman, *New York Times*, Feb. 3, 2022)

I would be surprised if a media narrative were the full story. What else might explain the dissatisfaction? Even if you forget about inflation, the experience of living and working in the U.S. economy is often unpleasant right now... Public buses and subways are unreliable...after-school activities are unreliable, creating child-care gaps. Grocery stores are routinely out of items. Retail lines are long. Doctor’s appointments can be hard to get... By many measures—mental health, suicide attempts, blood pressure, violent crime, vehicle crashes, student learning—society is not functioning very well. (David Leonhardt, *New York Times*, Feb. 1, 2022)

This grab-bag of potential explanations testifies to a vacuum in the literature. Most academic work, focused on public perceptions’ forecasting ability, employs surveys from the University of Michigan and the Conference Board, which both produce indices of current and future conditions. Neither survey, however, explicitly asks about the overall macroeconomy, instead querying about “business conditions,” personal finances, and “available jobs,” and then applying prescribed weights to the responses to create the index. Given its emphasis and data, this work can’t say much about the “rationality” of consumers’ perceptions of current conditions or their macroeconomic correlates. As a result, when these perceptions behave in puzzling ways, it is easy to claim irrationality and speculate on a host of alternate causes.

However, this vacuum is not complete. For decades, several reputable American news
organizations have asked respondents to assess the national economy. Grant (2014) analyzed these surveys and concluded that they are statistically distinct from the Michigan and Conference Board indices, informative about current values of macroeconomic variables (which are reported with a lag and, often, subsequently revised), and related to these variables and to each other in consistent and sensible ways. This work is the natural starting point for better understanding what happened to consumer perceptions during the Covid-19 pandemic.

Accordingly, this paper updates Grant’s (2014) analysis, incorporating recent data on consumers’ assessments of the economy and re-examining how macroeconomic fundamentals influence these assessments before and during the Covid-19 pandemic. This analysis indicates that the relation between consumer perceptions and macroeconomic fundamentals has changed—in surprising ways. These changes did not begin in the winter of 2021/2022, nor were they initially pessimistic. Furthermore, they do not involve inflation, but rather unemployment and, to some degree, output growth. Succinctly put, consumer perceptions have become decoupled from these macroeconomic fundamentals, for reasons that cannot be wholly discerned. One likely contributor is the unprecedented fiscal stabilization during the pandemic, which was well timed to mute the impact of Covid-era changes in employment and output on the public’s view of the economy.

Section I. Polling on the State of the Economy.

To understand these assessments, it is vital to analyze surveys that ask about economic conditions directly, providing necessary face validity and letting respondents determine for themselves how to (implicitly) weight unemployment, inflation, etc. Such surveys have existed for
nearly half a century. Two classes of questions have been asked: “good economy” questions that ask about the current state of the macroeconomy, and “better/worse” questions that inquire about the change in economic conditions.

Grant (2014) identified three phases over which these surveys developed. The early phase, in the 1970s and early 1980s, featured sporadic, “better/worse” questions by CBS News and ABC News (generally in conjunction with the New York Times and Washington Post, respectively). In the middle phase, “good economy” questions were added and survey regularity increased, while Gallup (with USA Today) began asking both types of questions as well. This phase, which marked the end of the data analyzed by Grant, ended around the time of the Great Recession in 2008. This paper incorporates data from the third, late phase, which runs from then to the present (March 2022 at this writing). This phase saw the discontinuation of the CBS News survey and the ABC News “better/worse” question, while ABC News’ “good economy” question and Gallup’s polling became more sporadic. To compensate, we incorporate “good economy” polling by Quinnipiac University (which began in 2001 and became increasingly regular during this period) and a new “better/worse” tracking poll by YouGov (in conjunction with The Economist), appending some earlier CBS News polling from the mid-1990s as well. Each survey typically contains at least one thousand respondents in each month that it is conducted, so very little variation comes from sampling error.

Tables 1 and 2 list the questions and time frames for each survey. While each survey’s “good economy” and “better/worse” questions are phrased similarly, the response options are often distinct. As a result, the fraction of respondents choosing the most positive option (“excellent,” “very good,” etc.) varies across surveys, though all surveys move similarly over time. While any given “good economy” survey has significant temporal gaps, these are almost always filled in by other surveys,
leaving the “uncovered” months widely scattered. Of the 433 months in the Dec. 1985 - Dec. 2021 period, only 26, or 5%, are uncovered by any of these four surveys. Larger gaps occur for the “better/worse” surveys. Of the 547 months in the June 1976 - Dec. 2021 period, 146, or about one-quarter, are uncovered by any survey. However, these gaps are concentrated in the earlier years of the sample period—after 2000, only two months are left uncovered—and the Covid-19 era is excellent, with both Gallup and YouGov providing monthly results from late-2017 forward. Even in the early years of the sample period, each year has at least three months of data, which is adequate to detect changes in sentiment over the business cycle.

Extensive analysis in Grant (2014) affirmed these questions’ construct validity and unique behavior, compared to the Michigan and Conference Board indexes. In addition, that paper found that the “better/worse” questions were backward looking, with a time frame of six to eight months. Responses to these questions were closely correlated with differences in the responses to the “good economy” questions, though not so highly that the two measures can be considered synonymous.

Section II. Creating Indices of Macroeconomic Perceptions.

We wish to amalgamate the information in each class of survey questions (good economy, better/worse), accounting for these differences in response options (and associated differences in response frequencies), and allowing for the temporal gaps in each survey. Since each survey within a class is measuring the same construct, their responses should have a strong underlying commonality, which Grant (2014) confirms empirically. We express this commonality as a latent variable and estimate it nonparametrically.
Thus, following Grant (2014), we allow each survey’s response frequencies to be governed by three terms: a time-varying latent variable, \( L \), common to all respondents of all surveys (within a class); a random variate, \( \alpha \), that generates cross-section variation in individual responses at any given point in time; and a time-invariant, survey-specific set of thresholds, \( \mu \), that distinguish an “excellent” response from a “good” response, and so on. One can treat \( L \) as a scalar index of perceived macroeconomic conditions.

The latent variable and associated thresholds are estimated by relating all surveys’ response frequencies nonparametrically to time. This is done by expressing time as a series of splines, which are used as independent variables in an ordered probit model that uses the response frequencies as the dependent variable.\(^1\) Applying the estimated coefficients to the splines yields a smoothed, amalgamated, unrestricted estimate of the latent variable that extends for the full time span of that class of surveys, filling in any survey-less months.

The formal statement of this model is as follows. Let \( j \) index individuals, \( t \) time in months, \( s \) splines, and \( z \) surveys (within a class). For each survey \( z \), the individual-level latent variable, \( I \), underlying any discrete choice model equals the sum of \( L \) and \( \alpha \), as follows:

\[
I_{jt} = L_t + \alpha_{jt} = \sum_s \beta_s S_{jt} \alpha_{jt}, \quad \text{with} \quad \sum_s S_{jt} = 1 \quad \forall t \quad \text{and} \quad \alpha_j \sim N(0,1) \quad \forall t
\]

**Least Favorable Response iff** \( I_{jt} < \mu_0 \)

**Next More Favorable Response iff** \( \mu_1 > I_{jt} \geq \mu_0 \)

**…..**

**Most Favorable Response iff** \( I_{jt} \geq \mu_{MAX} \)

\( \mu_0 = 0 \)

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\(^1\) Following the original study, about 2.5 splines per year are employed, in order to preserve all but the highest frequency variation.
where $S$ is a set of “B-splines,” determined according to the method of deBoor (1978), which sum to one at each point in time, and the $\mu$’s are the thresholds that $I_{j,t}$ must exceed in order for that respondent to report that economic conditions are “excellent” instead of “good,” and so on. The predicted value of $L$ at any time $T$ is $\sum_{S} \beta S_{S,T}$. For simplicity, we assume there are 1,000 respondents to any given survey in any given month (to which the percentages responding “excellent,” etc., are applied). This is often close to the truth and is an understatement otherwise.

This ordered probit model is applied separately to each class of surveys, with an associated latent variable estimated for each. Each latent variable amalgamates the information contained in that class of surveys into a single time series. This series serves as the single, summary measure of perceptions for that class of surveys and as the dependent variable in regressions that relate these perceptions to basic macroeconomic variables.

Figures 1 and 2 present both latent variables, along with the eight month difference of the “good economy” latent variable, over the full sample period, June 1976 - March 2022. While neither latent variable has natural units, for both the thresholds separating one response option from the next worse alternative are about one unit apart, providing a basis for interpretation. The differenced “good economy” measure is quite similar to the “better/worse” measure, with some indication that the latter better anticipates significant changes in the economy. Across the full, forty-six year sample period, the least favorable macroeconomic perceptions are all associated with acknowledged recessions. The Covid-era trough is the fourth or fifth smallest of the lot, with the recessions in 1980, 2000, and 2008 all outpacing it in misery.

\[\text{\textsuperscript{2}}\text{This holds for the “better/worse” question only when all three response options are explicit.}\]
Section III. Macroeconomic Factors Influencing Assessments of the National Economy.

To determine the macroeconomic underpinnings of these survey responses, we regress the associated latent variables on a set of economic fundamentals. For consistency, we maintain the set used in Grant (2014): inflation, the unemployment rate, output growth, a medium-term interest rate (the seven-year Treasury bill), an index of the strength of the dollar, and (in the levels specification) a time trend. These are graphed in Figure 3.

The first three variables in this list are not instantaneously reported with perfect accuracy. Preliminary values for unemployment and output growth are reported by the appropriate federal agency with a lag of one month, then subsequently revised. Also, the consumer price index, used in calculating inflation, is reported with a one month delay. Grant (2014) shows that the revised values better explain these survey responses, implying that economic assessments are based on the public’s genuine perceptions of macroeconomic conditions, not reported statistics. We scale the dollar strength index by a factor of ten, so that its standard deviation is comparable to those of the other variables (see Table 3).

These five variables are often characterized by different integration orders. Accordingly, following Grant (2014), we estimate both level and difference specifications for the “good economy” question; the “better/worse” latent variable is regressed on differences of the independent variables.

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3 Inflation is calculated using the all-urban Consumer Price Index, and the unemployment rate is seasonally adjusted. Each quarterly observation of the real, chain-weighted, seasonally-adjusted Gross Domestic Product is assumed to pertain to the middle month of each quarter; the other months are calculated by linear interpolation. The trade-weighted index of exchange rates of the U.S.’s most important trading partners, from the Federal Reserve Bank of St. Louis, has been divided by ten here so that its variation is comparable to that of the other variables. See Grant (2014) for more on the selection of these variables and the alternatives that were considered.
The levels specification can be viewed as estimating an a priori known cointegration relationship, with autocorrelation in the residuals representing slow adjustment of survey responses to their long-run fundamental level. The remaining specifications estimate short run relationships, which is our primary focus.

These specifications require a total of three differences: 1) in output and price levels, to determine output growth and inflation, 2) of all dependent and independent variables in the differenced “good economy” specifications, and 3) of the independent variables in the “better/worse” regressions. Following Grant (2014), the last difference is taken over eight months (which maximized explanatory power) and the other two are taken over twelve months (which nearly maximized explanatory power and controls for seasonality without sacrificing degrees of freedom). All differences are backward.

Estimation is conducted using ordinary least squares (OLS), which yields consistent coefficient estimates in all specifications. As OLS standard errors are biased in cointegrating regressions and when (as here) the error term is serially correlated, these are adjusted using the Newey-West correction. The full sample period begins in 1976 for the “better/worse” question and a decade later for the “good economy” question. As of this writing, both end in December 2021, to allow some revision to the unemployment and GDP growth numbers used as regressors.

We acknowledge that factors other than macroeconomic fundamentals could affect assessments of the economy. The most obvious suspect is media coverage. Disentangling causation from correlation here is tricky, and even recent, methodologically sophisticated studies disagree (Hopkins et al., 2017; Boydston et al., 2018). However, even when media coverage is found to matter, “the lion’s share of consumer sentiment is explained by economic fundamentals...economic
performance accounts for...much of the variance in economic media tone” (Boydston et al., 2018, p. 997). Our operative assumption, in line with these findings, is that it is possible to form meaningful inferences about Covid-era changes in consumer perceptions without accounting for secondary factors such as media coverage.

Estimates are presented in Table 3. As each independent variable’s standard deviation is broadly comparable, relative coefficient magnitudes are meaningful. We begin with the pre-Great Recession time frame estimated in Grant (2014), found in the leftmost column of each panel of the table. Here, as before, economic assessments are most strongly influenced by unemployment. Increasing this by three percentage points would cause most respondents to choose the next worse response option. Significant but smaller effects, in the expected direction, are also observed with inflation and GDP growth, with positive effects for the exchange rate and mixed, often small effects for the interest rate. Except for the latter variable, these estimates are all reasonably consistent across specifications, in part because assessments of the macroeconomy adjust rapidly (see Grant, 2014).

Overall, that paper concluded that one percentage point of unemployment was “worth” two to five percentage points of inflation, in terms of perceptions. This ratio is duplicated in happiness studies that relate measures of happiness or life satisfaction to unemployment and inflation (DiTella, MacCulloch, and Oswald, 2001, 2003; Wolfers, 2003; Malasevic-Perovic, 2008; Blanchflower et al., 2013); with other such studies duplicating our generally small effects of long-term interest rates and economic growth (Oswald, 1997; Welsch, 2007, 2011).

These findings, widespread across space, time, and survey type, undercut recent claims that the public intrinsically values low inflation more than low unemployment:

One theory...goes like this: When voters secure a raise or new job, they tend to
interpret that as a product of their own efforts and abilities; when they go to the store and see that prices are up, they blame “the economy” and the politicians who manage it (Eric Levitz, “Five Reasons Voters Underrate the Biden Economy, *New York Magazine*, Feb. 2022).

People are bothered by inflation, even when their own incomes are more than keeping up. Maybe that’s because inflation conveys a sense that things are out of control...inflation aversion is simply a fact of life (Paul Krugman, *New York Times*, Feb. 3, 2022).

So does a first-order assessment of the costs of each. The cost of inflation is straightforward: a loss of purchasing power. An unanticipated, general price increase of one percent lowers purchasing power by one percent in the short run (less in the long run, as the labor market adjusts). In contrast, the costs of unemployment are multifaceted. The unemployed lose earnings and the opportunity to gain valuable work experience and suffer from reduced mental health. Workers are less able to switch jobs and have smaller hourly wages and weekly earnings. Evidence on U.S. wage cyclicality, though now somewhat dated, indicates that a one percentage point change in unemployment changes wages by somewhat more than 1% in the opposite direction (Solon, Barsky, and Parker, 1994; Grant, 2001; Shin and Solon, 2007; Bellou and Kaymak, 2021). This alone dominates the effect of a one percent increase in inflation. By this logic, the 2:1-5:1 ratio observed in the literature is sound.

We now extend the sample period through the end of 2021, placing the results in the rightmost columns of each panel of Table 3. There is a dramatic reduction in the unemployment coefficient estimate, in all specifications, with smaller changes in the other estimates. Consumer perceptions have indeed changed. We probe this finding further in the next section.

**Section IV. The Great Decoupling.**
A. Changes in the Macroeconomic Underpinning of Economic Assessments

Modifying the sample period used in estimation illuminates the timing and nature of these changes. Accordingly, we re-estimate the differenced “good economy” and “better/worse” specifications over a successive sequence of shorter time periods, ending in Dec. 2020, Dec. 2019, and so on, back to 2000 for the first regression and 1990 for the second. The sequence of coefficient estimates for the three most fundamental macroeconomic variables—unemployment, output growth, and inflation—are reported in graphical form in Figures 4 and 5.4

One variable’s estimates are stable over time; a second’s are not, while the third’s are mixed. In both specifications, the unemployment coefficients moderate as the sample period lengthens, once during 2008-2009, with the inclusion of the Great Recession, and again in 2020-2021, with the inclusion of the Covid-19 pandemic. For GDP growth, the results are mixed. In the former specification, in Figure 4, coefficient estimates remain largely stable until the Covid era arrives, when they fall precipitously. In the latter specification, in Figure 5, they grow over time but remain stable when Covid-era data are included. In contrast, the coefficient estimates on inflation remain fairly stable throughout. The macroeconomic underpinnings of consumer perceptions have indeed changed. But they involve unemployment and GDP growth, not inflation.

To explore how these changed relationships impacted consumer perceptions themselves, we take pre-Covid estimates on all independent variables in all three specifications, from the beginning of the sample period through Dec. 2019, and use them to predict the values of the dependent

4 The remaining variables, the exchange rate and interest rate, exhibit modest variation during the Covid era; thus, including these years changes their coefficient estimates only a little.
variables for the full sample period, including the two Covid-infused years. The residuals from this exercise are presented in Figure 6.

Prior to the Covid era, sizeable, unexplained swings in consumer perceptions occurred on occasion, always associated with the onset of and emergence from recession, and having a magnitude of about 1.0 units. (In fact, as Figure 6 suggests, these swings often served as harbingers of change—see Grant, 2014.) Covid-era swings, far larger and more rapid, put these to shame. These large residuals offset equally large variation in predicted perceptions, yielding modest changes in the latent variables in Figure 1. Beneath Figure 1’s placid surface lies great turbulence.

This fact may account for the dissonance between these residuals and the narrative unfolding in the popular press. No matter which specification is considered, the Covid-era residuals in Figure 6 take the same shape: a huge positive swing followed by an enormous negative swing some months later. “Puzzling” economic perceptions begin in 2020, not 2021—and (initially) are far “too high,” not “too low.” None of the theories offered by the commentariat explain these findings.

B. The Great Decoupling.

A better understanding of Covid-era changes in consumer perceptions can be generated using a decomposition that attributes these changes to changes in the independent variables and in the residual. Using this decomposition, we can “walk through” the two years from early 2020 to early 2022, three months at a time, tracing out how perceptions change and why.

As with Figure 6 above, this decomposition is based on regression estimates through Dec. 2019. All three specifications’ estimates are similar (as shown at the bottom of Table 4), so we use
those from the simplest of the three, the levels “good economy” specification. Each component of
the decomposition is calculated using the following identity:

\[
\hat{L}_t - \hat{L}_{t-3} = \hat{\beta}_1 (X_{1t} - X_{1t-3}) + \ldots + (e_t - e_{t-3})
\]  

(2)

where \( t \) is time in months, \( L \) is the good economy latent variable from equation (1), the \( \beta \)’s are
regression coefficients, the \( X \)’s are the independent variables, and \( e \) represents the residual.

The decomposition is presented in Table 4, beginning in Feb. 2020, just before Covid
lockdowns take effect, and ending two years later. In it, we see that perceptions became increasingly
decoupled from macroeconomic fundamentals. Large increases in unemployment and declines in
GDP during Q2 2020 imply large declines in the latent variable, but the actual decline is far more
modest. The reverse happens in Q3, as unemployment and GDP start to recover while perceptions
hardly budge. A year later, in the second and third quarter of 2021, a similar story happens in
reverse, following that spring’s boom in economic growth. Furthermore, after Q2 2020, the residuals
are generally (though not exclusively) negative, suggesting a secular increase in pessimism
throughout this period. The predicted values of the latent variable in Feb. 2020 and Feb. 2022 are
almost identical, but the actual value declines almost one unit over this period. This increase in
pessimism had largely played out by the time consumer sentiment became a topic of popular
discussion in the winter of 2021/2022. In fact, the change in the residual for Feb. 2022 is slightly
positive.

Table 4 may overstate what happened in mid-2021, when a temporary surge in economic
growth is paired with slight declines in the latent variable. The period used to calculate GDP
growth is especially favorable, coming twelve months after Q2 2020’s deep contraction in output.
So is this variable’s coefficient estimate, which is twice as high in the levels good economy specification as in its confederates. Qualitatively, however, our point still stands. Using more conservative quarter-on-quarter (annualized) growth numbers and the more conservative coefficient estimates of the other specifications, the latent variable is predicted to increase modestly in the first and second quarters of 2021, while its actual change is negative.

What can explain this decoupling of perceptions from macroeconomic fundamentals? One explanation is suggested in Table 4’s final column, which documents major policy actions during this period that affected households directly, through monetary transfers, rather than indirectly, through changes in growth, unemployment, etc. Two major sets of actions were initiated with the CARES Act, passed on March 27, 2020. It temporarily enhanced unemployment insurance (UI), increasing the amount and duration of payments while granting eligibility to self-employed workers. It also generated the first round of Economic Impact Payments (EIP), or stimulus payments, which were distributed shortly thereafter. These each could be worth thousands of dollars to a household. In Q2 2020, UI payments increased by $600 per week, while a family of four could receive nearly $4,000 in stimulus payments.

As 2020 proceeded, enhanced UI benefits continued, albeit at a lower rate; the year concluded with a second, smaller round of EIP. A third round of payments followed in early 2021; this was the largest of all, netting a family of four more than $5,500. The American Rescue Plan, which granted the third EIP, also established an enhanced Child Tax Credit that was paid out on an accelerated schedule in the second half of 2021. During that period, a family with two children would receive $6,000 or more. Altogether, these actions transferred roughly $2 trillion to households, far outweighing the aggregate loss of labor and capital income. Household finances were in great shape,
but the economy had little to do with it.

On a monthly basis, the timing of these actions broadly corresponds to changes in the residual in Table 4. The UI expansions and EIP associated with the CARES Act could account for Q2 2020's large positive residual, and perhaps its decline in the following quarter as well. Not having plummeted in Q2 2020, the latent variable had little room to rise in the following quarter, as the economy began to recover. A similar pattern obtains for the initiation of the expanded Child Tax Credits, in the third and fourth quarters of 2021. On the other hand, the second and third EIPs are associated with falls in the residual, which then rose in early 2022, just after the expanded Child Tax Credit program came to a halt.

This loose timing does not support a tight link between these policies and economic sentiment. Nonetheless, given the magnitude of these actions and the rough correspondence observed, it seems equally unwise to ignore them wholly, merely because the timing is not exact. As household balance sheets came to depend more on transfers, and less on the state of the economy, one should expect that economic sentiment would become somewhat decoupled from macroeconomic conditions. The greater surprise, in our view, is the ferocity of the decoupling, which is very large in historical terms and, as of this writing, still ongoing.

This decoupling is also observed in the Federal Reserve’s more recent Survey of Household Economics and Decisionmaking. This survey invites respondents to assess not only the overall economy, but also their own financial condition. In this data, assessments of the latter have improved slightly during the pandemic, consistent with observed increases in household wealth, while assessments of the former have plummeted (Thompson, 2022). Financially, people are doing well, but they do not credit the economy for it.
Section V. Conclusion.

What does the future hold for assessments of the macroeconomy? Having become decoupled from economic fundamentals, will they eventually “re-couple” at some future date? If not, what will these assessments be based on in the future? At this relatively early juncture, it is too early to tell. We may be observing a temporary, pandemic-induced perturbation in economic sentiment, or a fundamental realignment of economic perceptions, in which they become permanently untethered from output growth, unemployment, and inflation. The pandemic and its policy response are both unprecedented in modern times. This paper has shown that this decoupling is equally unprecedented. Macroeconomic assessments, which have been “well-behaved” for decades, quickly became detached from economic fundamentals at the onset of the pandemic. Generous income support during this period probably explains some, but only some, of this change.
<table>
<thead>
<tr>
<th>Survey Organization / Sponsor</th>
<th>Question Asked of Respondents</th>
<th>Temporal Span</th>
<th>Observations / Months in Survey Period</th>
</tr>
</thead>
<tbody>
<tr>
<td>ABC News / Washington Post</td>
<td>“Would you describe the state of the nation’s economy these days as excellent, good, not so good, or poor?”</td>
<td>Monthly, Dec. 1985 - Feb. 2010, and irregularly thereafter up to the present. (See Grant, 2014, for further details.)</td>
<td>318 obs. in the 433 months from Dec. 1985 - Dec. 2021</td>
</tr>
<tr>
<td>Gallup / USA Today</td>
<td>“How would you rate economic conditions in this country today—as excellent, good, only fair, or poor?”</td>
<td>Feb. 1997 - present, at irregular intervals.</td>
<td>197 obs. in the 360 months from Jan. 1997 to Dec. 2021</td>
</tr>
<tr>
<td>Quinnipiac University</td>
<td>“Would you describe the state of the nation’s economy these days as excellent, good, not so good, or poor?”</td>
<td>Dec. 2001 - present, at irregular intervals.</td>
<td>80 obs. in the 241 months from Dec. 2001 to Dec. 2021</td>
</tr>
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Table 2. Survey Details, Better/Worse Questions.

<table>
<thead>
<tr>
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<th>Observations / Months in Survey Period</th>
</tr>
</thead>
<tbody>
<tr>
<td>USA Today / Gallup Poll: Changes</td>
<td>“Right now, do you think that economic conditions in the country as a whole are getting better or getting worse?” (the percent volunteering the response “same” also reported)</td>
<td>July 1991 - present, at irregular intervals.</td>
<td>178 obs. in the 366 months from July 1991 to Dec. 2021</td>
</tr>
<tr>
<td>YouGov / The Economist</td>
<td>“Overall, do you think the economy is getting better or worse?” (“same” also offered as a response option)</td>
<td>Monthly from Dec. 2009 to the present.</td>
<td>145 obs. in the 145 months from Dec. 2009 to Dec. 2021</td>
</tr>
</tbody>
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Table 3. Regression Results (coefficient estimates, with robust standard errors in parentheses).

<table>
<thead>
<tr>
<th>Independent Variable</th>
<th>“GOOD ECONOMY” LATENT VARIABLE</th>
<th>“BETTER/WORSE” LATENT VARIABLE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unemployment (percentage points)</td>
<td>6.31 (1.71)</td>
<td>-0.39* (0.03) -0.14* (0.04)</td>
</tr>
<tr>
<td>One Year Output Growth (percent)</td>
<td>2.68 (2.22)</td>
<td>0.06* (0.02) 0.04 (0.02)</td>
</tr>
<tr>
<td>Twelve Month Inflation (percent)</td>
<td>3.56 (2.63)</td>
<td>-0.08* (0.02) -0.08* (0.03)</td>
</tr>
<tr>
<td>Exchange Rate (Fed series, scaled by 0.1)</td>
<td>9.37 (1.38)</td>
<td>0.12* (0.02) 0.19* (0.05)</td>
</tr>
<tr>
<td>Seven Year T-Bill Rate (percentage pts)</td>
<td>5.87 (3.42)</td>
<td>-0.00 (0.02) 0.14* (0.04)</td>
</tr>
<tr>
<td>Time in Years / Constant Term</td>
<td>----</td>
<td>-0.02* (0.01) 0.03* (0.01)</td>
</tr>
<tr>
<td>R²</td>
<td>----</td>
<td>0.91 0.74</td>
</tr>
<tr>
<td>Standard deviation of dependent variable</td>
<td>----</td>
<td>0.42 0.49</td>
</tr>
</tbody>
</table>

Note: Final revised values of each independent variable are used in the regressions reported in the table. The R² values for regressions using real-time data, instead, are reported in the last row. Each regression also includes a constant. As discussed in the text, differences are taken over twelve months for the “good economy” regressions and over eight months for the “better/worse” regressions. * = p < .05.
<table>
<thead>
<tr>
<th>Month</th>
<th>YouGov Percent Positive</th>
<th>Latent Variable</th>
<th>3 Month Change in Latent Variable</th>
<th>Three Month Change in Latent Variable Attributable to Three Month Change In:</th>
<th>Major Covid Policy Responses during that Quarter</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Unemployment</td>
<td>Inflation</td>
</tr>
<tr>
<td>Feb. 2020</td>
<td>63</td>
<td>1.19</td>
<td>---</td>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>May 2020</td>
<td>22</td>
<td>0.72</td>
<td>-0.47</td>
<td>-1.69</td>
<td>0.12</td>
</tr>
<tr>
<td>Aug. 2020</td>
<td>28</td>
<td>0.62</td>
<td>-0.10</td>
<td>0.84</td>
<td>-0.07</td>
</tr>
<tr>
<td>Nov. 2020</td>
<td>36</td>
<td>0.70</td>
<td>0.07</td>
<td>0.30</td>
<td>0.01</td>
</tr>
<tr>
<td>Feb. 2021†</td>
<td>20</td>
<td>0.66</td>
<td>-0.04</td>
<td>0.09</td>
<td>-0.03</td>
</tr>
<tr>
<td>May 2021</td>
<td>27</td>
<td>0.60</td>
<td>-0.06</td>
<td>0.07</td>
<td>-0.18</td>
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<tr>
<td>Aug. 2021</td>
<td>25</td>
<td>0.56</td>
<td>-0.04</td>
<td>0.10</td>
<td>-0.01</td>
</tr>
<tr>
<td>Nov. 2021</td>
<td>22</td>
<td>0.38</td>
<td>-0.18</td>
<td>0.17</td>
<td>-0.08</td>
</tr>
<tr>
<td>Feb. 2022</td>
<td>21</td>
<td>0.36</td>
<td>-0.02</td>
<td>0.07</td>
<td>-0.06</td>
</tr>
<tr>
<td>Feb. 2020 - Feb. 2022</td>
<td>-42</td>
<td>-0.83</td>
<td>----</td>
<td>-0.05</td>
<td>-0.30</td>
</tr>
<tr>
<td>Good Economy Coefficient Estimates</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>-0.17*</td>
<td>-0.06*</td>
</tr>
<tr>
<td>in differences</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>(0.02)</td>
<td>(0.03)</td>
</tr>
<tr>
<td>Better/Worse Estimates</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>-0.16*</td>
<td>-0.06*</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(0.05)</td>
<td>(0.02)</td>
<td>(0.02)</td>
<td>----</td>
</tr>
<tr>
<td></td>
<td></td>
<td>-0.25*</td>
<td>-0.07*</td>
<td>0.05*</td>
<td>----</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(0.07)</td>
<td>(0.04)</td>
<td>(0.02)</td>
<td>----</td>
</tr>
</tbody>
</table>

Note: the decomposition is executed using the Levels Good Economy Specification Estimated through Dec. 2019, whose estimates are listed first in the table. Standard errors are in parentheses and * implies p < .05.

† YouGov’s percent positive for this month is about six percentage points below the adjoining months; this is smoothed out in the latent variable.
REFERENCES


Figure 1. Latent Variables (and associated thresholds), Good Economy and Better/Worse Questions.

Note: ABC Thresholds are in Blue, CBS in Red, Gallup in Green, QU and YouGov in Purple.
Figure 2. Better/Worse Latent Variable (in black) and Differenced Good Economy (dashed, in red) Latent Variables.

Note: for the Good Economy variable, eight-month backward differences are used.
Figure 3. Graphs of All Macro Variables.
Figure 4. Differenced “Good Economy” Estimates, Rolling Estimation Windows.
Figure 5. “Better/Worse” Estimates, Rolling Estimation Windows.
Figure 6. Regression Residuals, Levels (top), Better/Worse (bottom, in black) and Differenced Good Economy (bottom, in dashed red) Specifications.

Note: Each regression is estimated on data through Dec. 2019 using the specifications employed for Table 3; the units are those of the latent variables depicted in Figures 1 and 2.