

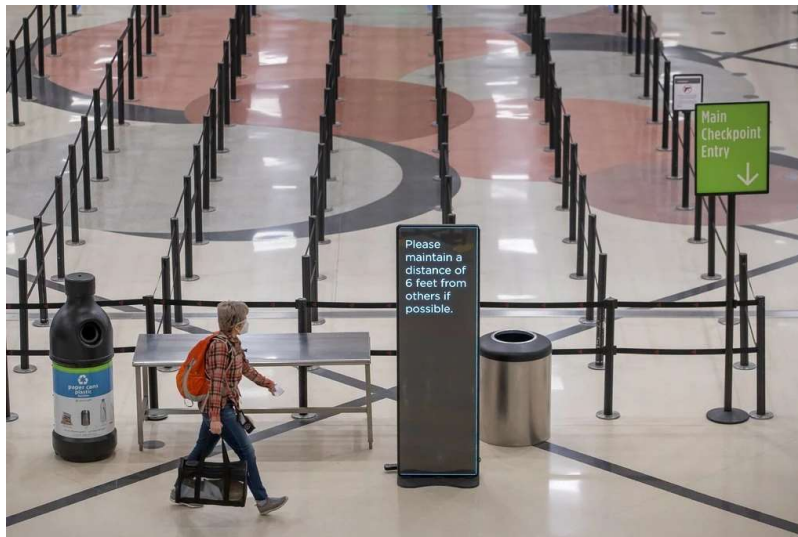
Air Travel Surges by 123%! (Beware of Misleading Data Like That)

In normal times, percentage change is a helpful guide to what's happening in the economy. But these are not normal times.



By Neil Irwin

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The main domestic T.S.A. checkpoint at Atlanta's Hartsfield-Jackson Airport in April. More people are flying now compared with a month ago, but it's still nothing like normal. Erik S Lesser/EPA, via Shutterstock

Did you hear about the booming air travel industry? It's up 123 percent in just the last month!

Technically, that's an accurate number. Over the seven days ended Sunday, an average of 212,580 people went through U.S. airport security checkpoints, up from 95,161 in the week ended April 17.

But of course, that is all wrong if you know anything about the underlying reality of the air travel industry. This time a year ago, 2.4 million people a day went through those same checkpoints. By any reasonable measure, these remain disastrous times for air traffic. It's just that the shutdown in March and early April made even the slight recovery that has taken place seem like an enormous surge in percentage terms.

Get ready for the same effect to apply to all sorts of numbers — most notably with economic data. These swings are artifacts of the arithmetic of percentage change. But if you aren't attuned to the yo-yo effect that we are likely to see in crucial data in the coming months, you could get a misleading impression of where the United States stands.

In particular, as some of the business activity shut down by the pandemic begins to come back, economic data could create the impression of a soaring economy in the summer and fall — even though it is the equivalent of those air travel numbers.

That, in turn, raises the possibility that policymakers will declare “Mission Accomplished” and underreact to a deeply depressed economy because of the apparent boom times.

It also sets up an election-year argument over the economy in which President Trump and his allies boast of the strongest growth on record, while Democrats argue that the economy is in disastrous shape. Both would be accurate.

When something falls by 10 percent and then rises by 10 percent, it might seem as if it ends up back where it started. But that's not how the math works.

A 10 percent drop from 100 to 90, followed by a 10 percent gain, would return it only to 99. With bigger swings, those effects become more striking. A 40 percent drop followed by a 40 percent gain would result in a quantity 16 percent below the starting point.

At even greater extremes, you end up with bonkers numbers like those in the air traffic example, in which a 96 percent drop followed by a 123 percent gain leaves you with a number that is still 91 percent below normal.

When it comes to gross domestic product, which is the broadest measure of how the economy is doing, things get still weirder because of conventions on reporting that measurement in the United States. Economists generally look at annualized G.D.P. data, meaning how much the change in economic output over a three-month period would translate if sustained for a year.

In normal times, that works well enough. If the economy's output is 0.5 percent higher in the second quarter than it was in the first, that translates to annualized growth of about 2 percent.

But in 2020, this convention will exaggerate the yo-yo effect of percentage changes even more. With mass shutdowns because of the pandemic, the United States will produce far less goods and services in the April-May-June quarter now underway than it did in the first quarter.

Suppose that the drop in G.D.P. is a bit over 13 percent. Because of the convention of annualizing numbers, that would generate headlines saying that second-quarter G.D.P. fell 42.8 percent — which, as it happens, is the level currently estimated by the Federal Reserve Bank of Atlanta's real-time G.D.P. estimate.

Then suppose that in the third quarter the actual level of activity rises by 5 percent as some businesses reopen. Because of the conventions of annualizing, that would be reported as a 21.6 percent spike in G.D.P.

That would be the best quarter for growth on record, by a wide margin. You can bet that the Trump administration would promote it as evidence of the economy's returning to greatness. And note that the first estimate of the number is scheduled to be released on Oct. 29, just five days before the presidential election.

Yet economic output would still be 9 percent below where it started. It would still be in a hole about twice as deep as the trough of the 2008-9 recession.

There would probably be an especially head-spinning twist in the political dynamics that would accompany a third-quarter growth number along those lines. For the first three-plus years of the Trump administration, the White House talked up data like the low unemployment rate and the strong level of economic activity.

Democrats emphasized that growth rates had merely continued the steady level of President Obama's second term. The pattern is likely to reverse this summer and fall, with President Trump and his allies emphasizing growth rates and Democrats emphasizing levels.

So it will be more important than usual in the coming months to understand clearly what a given piece of data is really telling us. Month-to-month or quarter-to-quarter data becomes less meaningful when the usual patterns in that data have been completely upended.

The sensible strategy is to compare incoming information with whatever the same data showed before the crisis — such as looking at G.D.P. levels relative to the fourth quarter of 2019 rather than at quarter-to-quarter swings. It means avoiding annualized numbers for now.

And, more than anything, it means thinking carefully about what a given number really means, and not just taking a seemingly breathtaking percentage change at face value.