Econ 102 Discussion – Week 3

February 6-7, 2014

Aggregating Demand

From ECON 101, you should have studied the idea of a demand function, which gives the quantities of a good that a person will want to consume depending on the price.

In ECON 102, we focus on things at the *market level*. This involves looking at the behavior of all people in a market for a good(s).

To calculate the *market demand*, you must first look at all the individual demand functions of all people and then combine them. To do this, for every possible price you must add the quantity demanded by each individual. For each price, the total sum is the market quantity demanded. To calculate *market supply*, follow the same process for all producers.

> **Exercise 1:** Al (A), Barbara (B), and Charlie (C) are the three members of a market. Each of them values quail eggs (Q) but they have different demand functions. Al's demand function is $P=10-Q^A$, Barbara's demand function is $P=12-3Q^B$, and Charlie's demand function is $P=8- Q^C$. On **one** graph, draw the three individuals' demand functions. Then, on a **separate** graph, plot the market demand curve.
>
> **Exercise 2:** In the same market as Al, Barbara and Charlie, there are two sellers: Danielle (D) and Eric (E). Danielle's supply curve is $P=5+.5Q^D$ and Eric's supply curve is $P=2Q^E$. On your graph from Exercise 1, plot the market supply. What is the market equilibrium? Would you have found the same equilibrium by pairing each consumer with each producer?

Normative vs. Positive Statements

From an economist's perspective, there are two types of statements. *Positive* statements are factual, objective statements that are typically derived from sources that cannot be argued. *Normative* statements are opinion-based statements about the way the world should/might be.

> **Exercise 3:** Classify the following statements as positive or normative.
> 1. The stock market has increased over 9% during the past year.
> 2. The unemployment rate is too high.

3. The trade deficit will cause the U.S. economy to falter at some point in the future.
4. The Federal Reserve Bank’s policy of quantitative easing increased the money supply.
5. Current levels of the U.S. growth rate are lower than they could be with alternative policies.

Normative & Positive Statements in Current Events

Exercise 4: Read the attached Op-Ed article by Paul Krugman from the New York Times. Identify the normative and positive statements he makes, whether his or someone else’s.

FEBRUARY 3, 2014, 4:13 PM Comment

Demography and Employment (Wonkish)

A blog post reporting research by Samuel Kapon and Joseph Tracy of the New York Fed is creating a splash in wonkworld today, and it is making an important point. However, the way that point is presented is, I think, likely to mislead, because it mixes two propositions together. One, which is clearly true, is that the aging of the adult population would have meant a considerable decline in the employment-population ratio over the past 7 years even if the economy had remained near full employment.

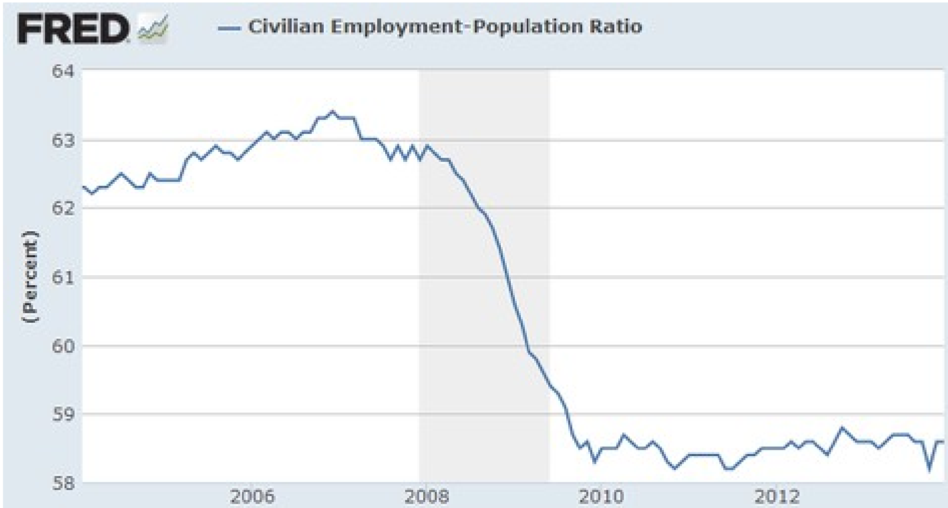
The other, which is far from obvious, is that the economy was highly overheated in late 2007, with employment far above sustainable levels. You can make that argument — although I would disagree. But the way they present the data, that argument is sort of smuggled in through the back door.

So, on the demography: a number of people have made this point, although without as much detailed modeling. I made a stab at it myself a while back. Here's another version. Take BLS data on the composition of the noninstitutional population. Here's a breakdown for December 2007 and December 2013:

	share07	share13	ep07
16 to 64	0.160914	0.157207	53.1
25 to 54	0.540452	0.504318	79.9
55 to 64	0.141644	0.159525	61.8
65 plus	0.15699	0.17895	15.5

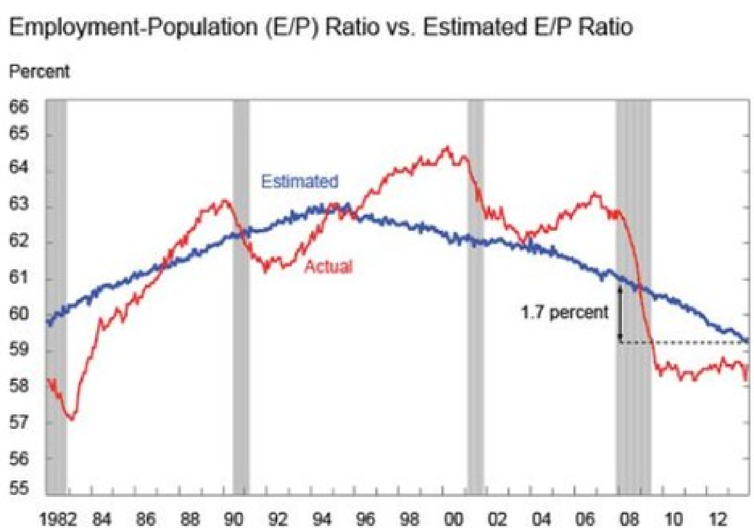
Here share07 is the share of the over-16 population in 12/07, share13 the share in 12/13, and ep07 is the employment-population ratio in 12/07. You can see the decline in the share of prime-age adults, and this should, other things being the same, have reduced the overall employment-population ratio. How much? Doing shift-share on the 07 employment rates, you get a decline from 62.9 to 61.3, or 1.6 points. This is almost the same as the Kapon and Tracy estimate of 1.7 points; what I take from this is that the crude calculation wasn't missing too much.

Now, how much does this change our view of the Lesser Depression? The decline in the actual employment-population ratio looks like this:



The actual decline was from 62.9 to 58.6, or 4.3 points. This would seem to suggest that around 40 percent of the decline is demographics, but the rest is cyclical, and that we're still far below full employment.

But Kapon and Tracy suggest that we're actually only 0.7 points below full employment. How do they get this result? By normalizing the data so that the baseline is the average adjusted employment-population ratio over their whole sample, reaching back to 1982. What this does is in effect build the Lesser Depression into your definition of normal, so that they get this picture:



Federal Reserve of New York

What's going on here? The small employment gap isn't mainly because of the demographic adjustment — a bigger factor is the de facto reinterpretation of history, which now has a hugely overheated economy in December 2007. Oh, and this also says that the depressed economy of the early Bush years wasn't actually depressed — in fact,

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it was overheated almost the whole time.

The authors seem to be aware that this is a problem, so they offer an alternative normalization that drops the post-2007 slump, and raises the employment gap to 1.7. Even that is, however, problematic. After all, inflation was considerably lower at the end of the pre-crisis era than the beginning, so that any kind of Phillips curve analysis would suggest that on average the economy was operating below capacity.

Anyway, the dramatic-sounding result that we don't have much labor market slack isn't what it may seem on casual reading. Just doing the demographic correction reduces the employment gap — but it's still big unless you accept the idea that the U.S. economy was above full employment even during the early-Bush slump years, and that by late 2007 it was a highly overheated economy on the edge of major inflation.