
Part-2 Continued of: Might the Impact of the Age Demographics of the Baby Boomers be impacting the Economy Sooner and more significantly than most expected?

Peeling back the Onion on the Declining Civilian Non-Institutional Work Force Participation Rate

Introduction

About 2-3 weeks ago I sent out a thought provoker on how demographics may be driving the reduction in Labor Force Participation and the Homeownership Rate. I followed up with definitive proof of which age groups were driving the declining homeownership rate a few days ago. I have now applied the same analytical and graphical approach to the declining labor force participation rate.

This write-up should to be enlightening on the question of whether the decline in the homeownership rate is temporary, or a long-run trend with a lot of inertia, that will continue for decades to come.

Note: A decline in the civilian labor force participation rate has a significant detrimental impact on the overall economy. The broad impacts of the civilian labor force participation rate are discussed in much more depth in the next few pages. Whereas, a decline in the homeownership, rate changes who owns [holds the title to] residential properties, but not the total demand for residential structures, or total construction of new residential structures. That remains largely the same. What does change is who commissions the construction of the properties, and who holds the title to the properties when they have been completed. It is merely a slow shift in the proportion of individual persons who purchase homes for the purposes of residing in the dwellings themselves, to a higher portion who will be landlords. If you are a home builder or residential property investor and/or investor, this is a critical trend to track and respond to. But for the overall economy it is relatively neutral.

For the remainder of this document the focus will be entirely on the declining civilian labor force participation rate. And again, **the answer unfortunately is that the decline in labor force participation is pervasive at both ends of the age spectrum, and in the middle of it too, not just with the youngest age groups.** And since it has been building for decades, it will play out in continued decline for at least a couple of decades to come.

Note: My objective here is to prove that it is happening. And that there isn't anything we can do to change it any sooner than 2-3 decades from now. It is not to analyze and discuss what the underlying root causes of why it is declining.

I frankly don't even care what caused it since we can't change it in our lifetimes. I will leave the study of that to the scholars and 'think tanks'. And if you are interested you can be buried in studies by Googling terms like 'causes of the trend in civilian non-institutional labor force participation', etc. There should be half on the plight of the downtrodden and persecuted, and the other half on the lazy blood sucking: young folks, minorities, and illegal immigrants. Which is why I don't bother searching for and reading such studies? If I were inclined to understand root causes, I'd want to read research from sources with no objective other than to find the true causes no matter what they are. And no one funds such research, or the 'Think Tanks' that do such research, unless they have a strong personal beliefs on one extreme of the political spectrum or the other and want those views to be 'proven' and promoted.

Fortunately, as much as I as a scientist believe that nothing can be solved without determining the root causes. Even without knowing the true root causes in this case, the only positive thing about trends like this is that all we need to know in order to know how to invest and act in the balance of most of our lifetimes, is what direction the trend is going to go over that timeframe. And these demographically driven trends build for decades and then run for decades – so as a result of analysis like this, we now know that already.

Now we will walk you through the proof step by step.

First, Context – Only slightly simplistically, on the supply side of the economic equation, the labor force participation rate is a critical portion of what makes up the ability of the total GDP to grow. There are three major contributors to the maximum rate at which an economy can increase [grow] GDP:

- Growth in the in the size of the civilian non-institutional population.
- Growth in the portion of the civilian non-institutional population seeking to be in the labor force.
- Increasing productivity.

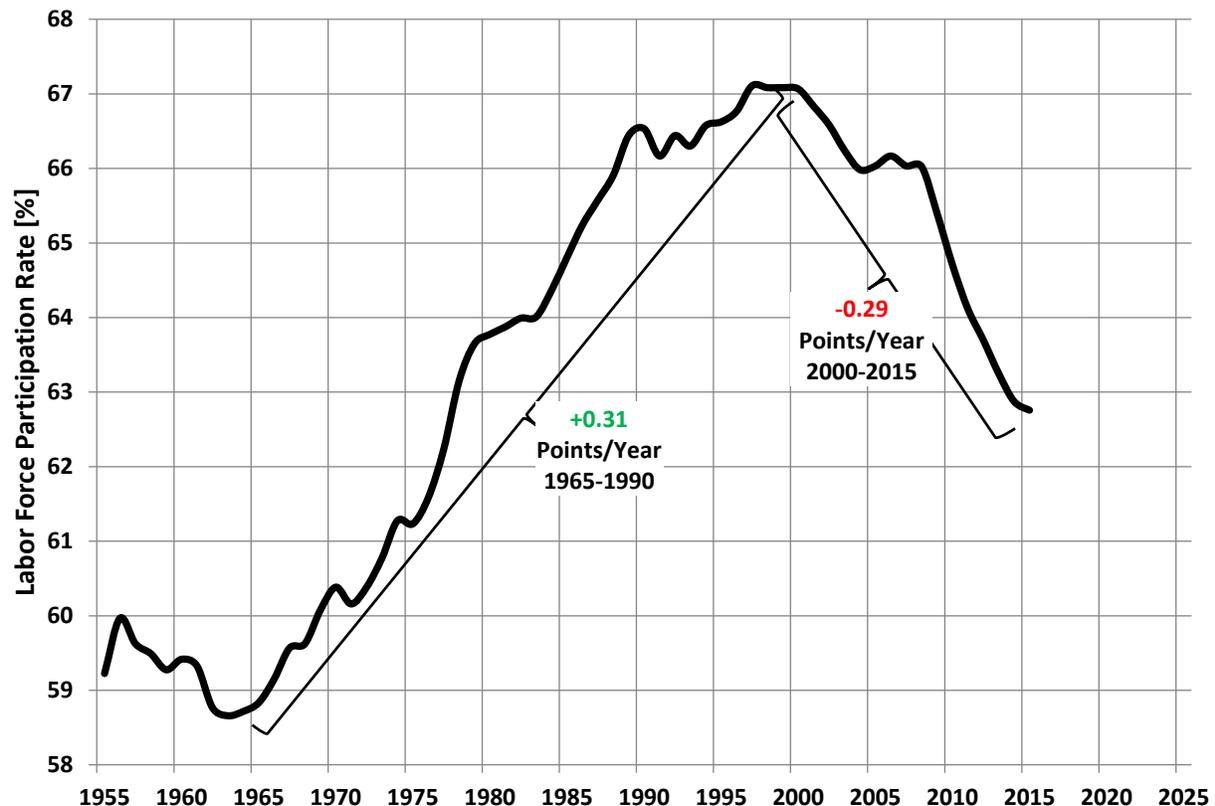
When all of those are positive and significant, the maximum growth rate that we can achieve, without significant inflation, is highest. When any of them are smaller, or negative, it lowers our maximum non-inflationary GDP growth speed limit.

When the growth rate of any of them are increasing, it provides an additional boost to the GDP growth rate, above and beyond what it would have been had that element been growing more slowly.

U.S. GDP is growing much more slowly in the current economic cycle than in economic cycles of the past. I am setting aside all of the debates about how government policy may or may not be causing this. Because, it much more valuable to examine the far more significant long-run drivers that are orders of magnitude more significant in these trends than the impact of policy [Besides, policy changes made today, would not impact these long-run trends until decades from now, even if they worked]. Here is a quick look at how each of the three main drivers has changed over the past 5 decades:

- Productivity – Long-run productivity rates bounce around a lot, and it is a very complex topic. So for the purposes of this write-up, the most critical take-away is that more people working is positive for GDP growth, as long as productivity is at least neutral. Since, if productivity were to go negative, it means the added workers were not resulting in higher output. I am reasonably confident that long-run productivity will be kept positive, even if it is not as positive in the future as has been at some times in the past. So we will assume that it will be at least neutral for this discussion.
- Civilian Non-Institutional Population Growth Rate – This is essentially the U.S. Population over the age of 16 years old – We cannot do anything about that for the next 16 years, so let's just say that it is not changeable for the next 2 decades. Because, everyone who will be 16 years old in 16 years has already been born. And unfortunately, the recent and current growth rate of the U.S. civilian non-institutional labor force population only about half of the rate that it was growing four decades ago - about 0.9% annual rate recently and now versus about 1.8% annual rate back then.
- Civilian Labor Force Participation Rate
 - From 1965-1990 the civilian labor force participation rate grew by an average of +0.31 percentage points per year. That further boosted the potential non-inflationary growth rate for GDP above and beyond the very healthy contribution of the +1.8 percentage point growth rate in the civilian non-institutional population over 16 years of age.
 - 1.8 points/year growth in the size of the civilian non-institutional population over the age of 16 years, PLUS 0.31 points/year growth of the civilian non-intutional labor force = 2.11 percentage points of growth per year in the available civilian non-institutional labor force.
 - But for the last 15 years, from 2000 to 2015, the size of the civilian non-institutional population over the age of 16 years has declined by -0.29 percentage points per year. That is subtracting from the far less robust growth rate of the civilian labor force population of only +0.9 percent per year. So we have gone from adding two very robust drivers of growth, to subtracting an as much decline in civilian non-intutional labor force participation as we used to add to it. And that is being subtracted from a much weaker civilian growth rate than in the past
 - 0.9 points per year growth in the non-institutional population over 16 years of age, MINUS 0.29 points per year decline in the civilian non-intutional labor force participation = 0.61 percentage points per year of growth in available civilian non-institutional labor force, a full 1.5 points less labor force growth [from +2.11 points/year to +0.61 points/year].

Total U.S. Labor Force Participation Rate - History



Thus it is critical to determine if the 15 year decline in civilian labor force participation since the year 2000 is temporary, and will soon reverse. That is what so many experts have said over and over for close to a decade now, and yet every year it has continued to decline unabated. Sounds like one of the definitions of insanity to me, doing the same thing over and over again, but predicting a different outcome.

Or whether the decline is likely to continue for at least the next few decades. If it were just able to become flat, even if it wasn't able to reverse, it would eliminate the current drag upon the maximum non-inflationary GDP growth rate that the decline in civilian labor force participation is causing.

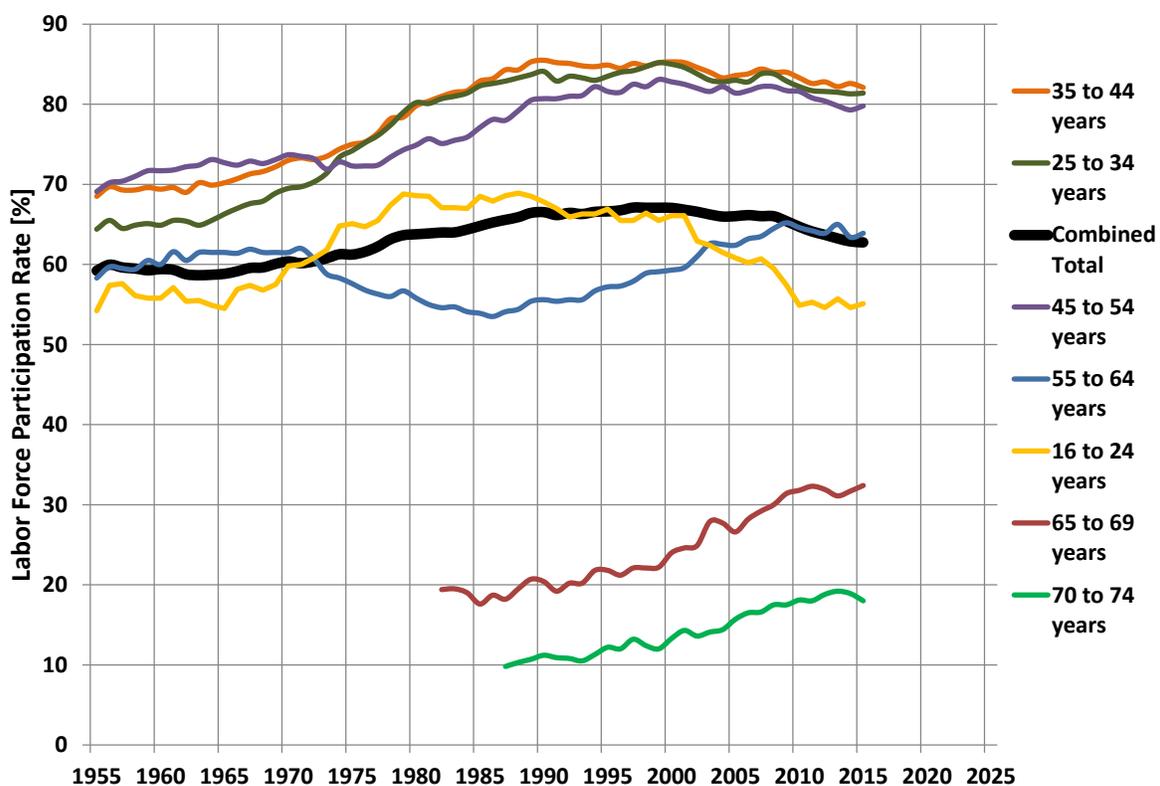
The Federal Reserve needs to know this in order to know whether they need to keep rates low until more of the civilian non-intentional population over 16 years olds re-enters the labor force as participants, versus whether "all are aboard that are coming aboard", so keeping rates low is planting the seeds of future inflation, that will kick into gear with a lag into the future, when it is already hard and ugly to kill it. And whether stimulative fiscal government policy is needed as well, or would instead create future inflation as well. And the certainly have many of the best economic minds in the nation working to determine this. The fact that the Federal Reserve is 'preparing the way' in their

communications to the marketplace for the first tightening to occur sometime in the balance of the year suggests that they too are concluding that the labor market is tighter than those who keep mentioning that so many ‘discouraged workers’ or ‘discouraged unemployed’ have dropped out of the labor force. Those clamoring that Fed policy should remain loose monetarily until they rejoin the labor force. Just as I have believe for over two years now, the Fed appears to have concluded that those who have not rejoined have permanently dropped out and aren’t going to come back no matter how long Fed policy remains loose. But, that the pressure of future inflation will begin to build if they remain loose much longer.

To get a better sense of what is going on one must look into more detail than just the total participation rate on the chart on the prior page.

The graph below is the standard way that labor force participation rates by age are normally shown. This format is very helpful in a number of ways, but does not tell the entire story. It does tell us how people in an age group today do compared to people at the same age did in the past. There is a lot of interesting insights that can be gleaned from this. And they are constantly debated in terms of whether those that are increasing will continue to do so, and whether those that are declining are merely temporary, or permanent. Not to mention all the speculation as to why they are heading in the direction that they are and why they will or won’t reverse any day now.

U.S. Labor Force Participation Rate - History

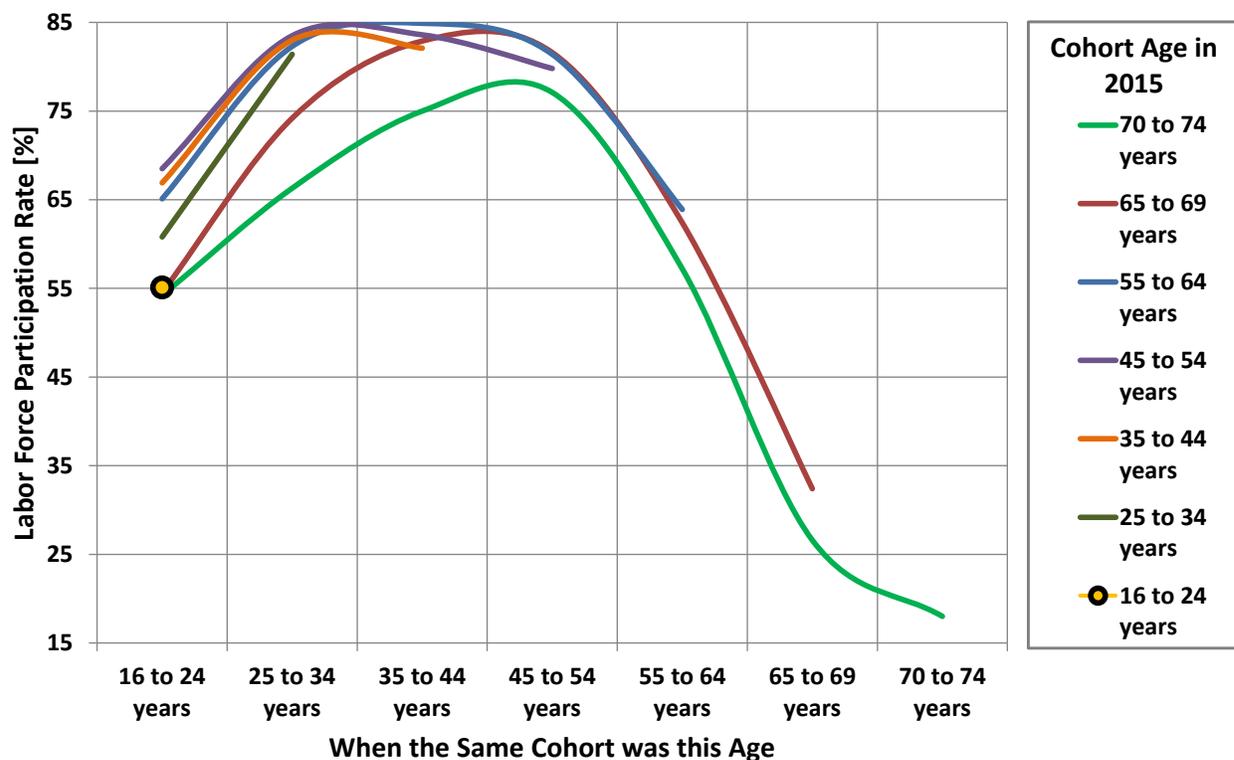


But as we discovered with the powerful inertia behind the trends in the decline in homeownership rates, let's convert this to look at it in terms of the labor force participation rates of each half generation over their working lifetimes, to determine if anything additional is at play. Whether the declines, at any of these age levels, are likely to reverse on their own, and/or be reversible with the right monetary or fiscal policies.

The graph below shows how much each of these groups participated in the labor force over their lifetimes. There is one colored line for each age range, based on how old those people were in the year 2015.

As an example, those who were 70 to 74 years old [the lowest light green line] in 2015 participated in the labor force at a rate of 55% when they were ages 16-24, 66% at 25-34 years old, 75% at 35-44 years of age, 77% peak at 45-54 years old, declined to 57% by ages 55-64, further to 27% when 65-69 years old and to 18% in the 70-75 year old age range..

U.S. Labor Force Participation Rate for Same Chorts History Over Their Lifetimes By Age Range in 2015



Key take-aways:

- The highest labor force participation group from 16-24 years old and to now has been those who are 55-64 years old in 2015 [the medium blue line].
 - “Talkin’ ‘bout my (half) gen-er-ation”

- The lowest labor force participation group, by the most significant margin, has been those who are 70-74 years old in 2015.
- It is definitely the case that those who were 16-24 years old in 2015 have the lowest labor force participation of any of the age-groups, other than the just mentioned 70-74 year old age in 2015 group [light green line detailed in the bullet above] had when they were 16-24 years old, whom they match exactly. And also the 65-69 year old group in 2015 [red line] when they were starting out.
 - So here we have two past quarter generations that had just as low civilian non-intuitional labor force participation when they were 16-24 years old as the current crop do now, yet everyone is freaking out about it now.
- Those who are 25-34 years old in 2015 had labor force participation at age 16-24 that was half-way between the rate of all the other age groups, but had caught up with the majority of the higher participation groups by 2015.
 - This is potentially encouraging in terms of where the current 16-24 year old age group may be in 10 years when they are 25-34 years old.
- But the popular assignment of responsibility of the decline in the labor force participation rate to the youngest cohort alone is very short sighted and not correct. Both the 45-54 and 35-44 year old in 2015 age groups peaked when they were 25-34 years old, at the same labor force participation rate as those who have come before them from the 55-64 and 65-69 year old age groups. But since then they have begun a slow decline below their older cohorts. By 2015 the 45-54 year old in 2015 cohort [the large population second half of the baby boom] was 1.6 percentage points below the two cohorts that came before them and the 35-44 year old in 2015 cohort was 2.8 percentage points below the prior cohorts.
 - The combined impact of these two groups beginning to decline 10-20 years early is probably as significant as the low current to the much maligned 16-24 year old cohort.
- Meanwhile the, large population, first half of the baby boom, those that were 55-64 years old in 2015, are following the identical decline path to the 65-69 years old in 2015 cohort, who have had the highest labor force participation rate at older ages of the two cohorts that have reached those ages of the groups shown.
 - The good news is that there are no signs that the first half of the baby boom is leaving the labor force any sooner than the cohort that immediately preceded them, those who were 65-69 years of age in 2015. And they are staying in longer / at a higher rate for their age, than those who were 70-74 years old in 2015 did at that age, by a very significant +6.7 percentage points. And is actually 1.5 percentage points higher than that group it is following.
 - The bad news is that same large population, first half of the baby boom group, that has had the highest labor force participation rate over its entire working lifecycle, has entered its expected decline period, and is thus 17.5 percentage points lower than a decade ago and 21.0 points lower than its peak two decades ago. So what this group gets in terms of turbo

charging labor force participation during its younger years, it now taketh away.

- And the group that was 65-69 years old in 2015 is 32.0 percentage points below a decade ago and 49.0 percentage points below where they were two decades ago.

To summarize:

- The two age groups that had the highest labor force participation ten and twenty years ago, and still are at higher participation rates than the 65-69 year old group that came before them, are none-the-less 17.5 and 32.0 percentage points lower respectively than they were a decade ago.
- The middle two groups peaked 2 decades sooner than the 2 groups that immediately preceded them and have fallen 1.6 to 2.8 percentage points below those prior two groups as of 2015. And the older of those two groups, the large, second half, of the baby boom is about to begin its steep decline assuming the timing of decline for all 3 groups before them.
- Those 25-34 years old in 2015 started lower but were on target by 2015.
- Current 16-24 year olds are beginning at 5.7 to 13.4 percentage points below the 6 groups that preceded them.

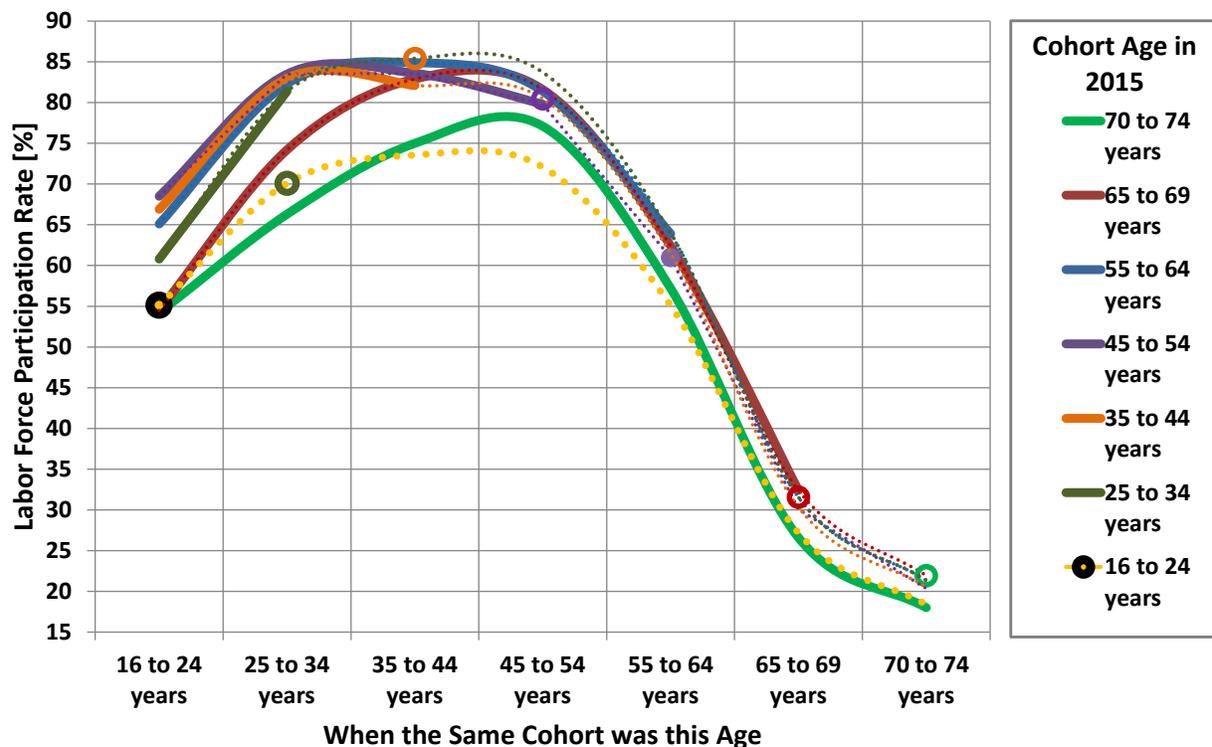
Conclusions so far – Every age group is contributing to the total combined decline in the overall civilian non-intentional labor force participation rate. Thus, simply getting more 16-24 year olds back into participation is only the tip of the iceberg. This implies that this trend has tremendous inertia and would be difficult if not impossible even to slow down, let alone reverse.

Now we'll project these starting points and trends forward to determine what the combined overall labor force participation rate is likely to do over the next 10 years.

So what might each of these groups look like through the rest of each of their lifetimes? For that we will assume that each will follow the average change rate of those that have already come before them for each period [see graph at top of next page].

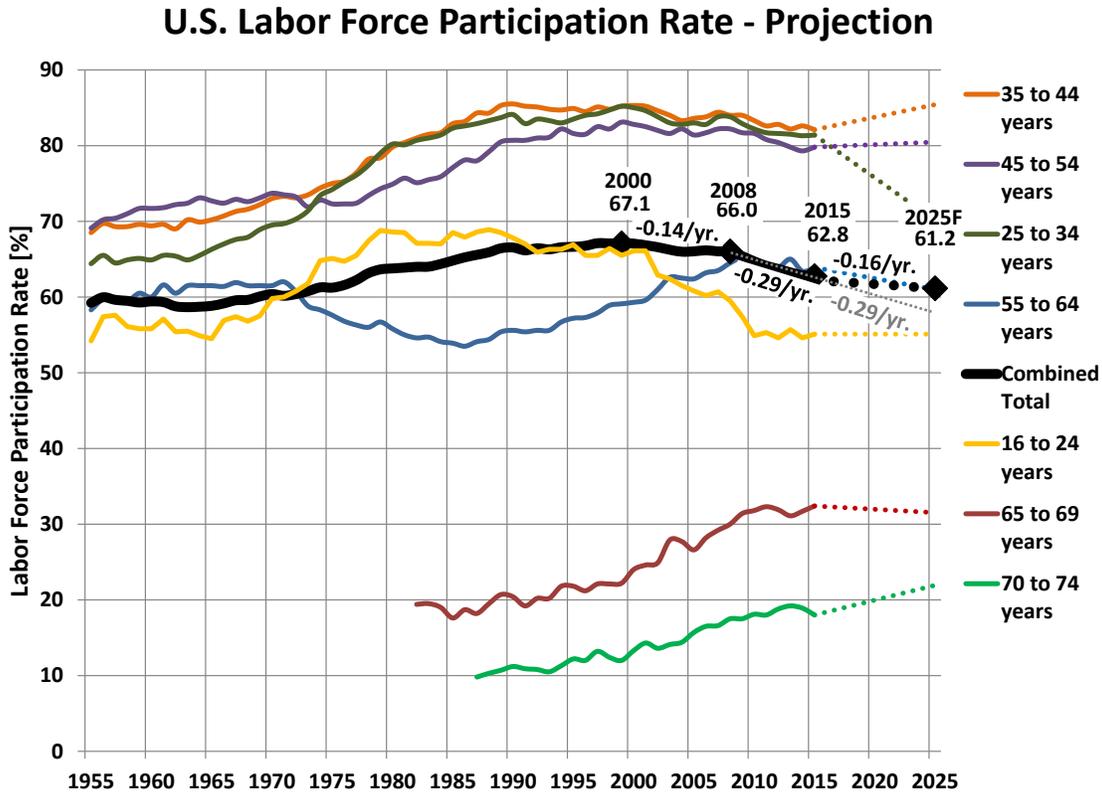
- Note: This is likely to be the best that they would do. The risk of it being better [less decline] than this is very unlikely. The risk that it could be worse [more decline] than this is much higher.

U.S. Labor Force Participation Rate for Same Cohorts Projection Over Their Lifetimes By Age Range in 2015



Key Points:

- By enlarge this is an example of “bleeding (declining) to death through a thousand paper cuts” – no one age group is singularly responsible for the combined total decline. Every age group is either slightly below those that came before them, or are large population groups like the baby boomers [45-54 (purple) and 55-64 (medium blue) in 2015 groups] who are entering their normally declining participation years.
- The positive example, if it actually comes to pass, is the slightly higher path of the 25-34 year olds in the middle years of their career lifecycle, the dark green dotted line slightly above all the others in the 35-44 and 45-54 year old horizontal periods. But even it crosses back under and slightly below the older groups by 55 years old and above.
- The negative example is the ‘much maligned’, currently 16-24 year old group [yellow dots], that is not projected here to be able to recover from its low starting point. If it instead it turns out that it is able to close more of the gap in the next ten years, then its lifetime curve would likely be higher by that amount through the middle years. That would slow the combined total decline rate. But of course it is only one of seven age groups in that total, so the total favorable impact from it would be small in relation to the overall projected decline.



Focusing on the two projections forward from the end of the bold black line for the total combined civilian non-institutional labor force participation rate:

- The bold black dotted line that declines for the next ten years at -0.16 points per year is the best case scenario derived from the graph on the prior page per the criteria outlined prior to the display of that graph.
- The dashed gray line that declines at an annually rate of -0.29 points is the worst case scenario. It is a forward projection of the same exact decline rate for the prior 7 year period of 2008-2015.

While at first blush some of the individual colored forward projections appear odd. But once one works though the logic of how it is derived on the prior page, and then think about the logic of whether it makes sense, every one of them does. If you choose to do so, the trick is that each age group on this graph goes to the participation rate 10 years into the future of the average of all the older groups ten years into the future. And always remember and never forget that, the purpose of projecting each of the individual groups forward is to then recombine them into the total black and gray dotted lines. And anytime you do that, you cancel out a lot of slightly high and slightly low individual estimates creating a higher accuracy combined total. And the proof that there is value to performing this scenario is the the result is not identical to simply the trend line of the total. It doesn't guarantee that it is more correct. Only that it provides the other end of a likely range of possible future participation rates.

Summary:

- The civilian non-intuitional labor force participation rate is of critical importance to the speed at which the U.S. can grow its overall GDP without triggering future inflation. This is critical to be on top of because once inflation has become significant, and thus visible, it is already too late to avoid very economically painful counter-measures to contain and reduce inflation, as we all learned with Volker in the 1980/1982 double dip recession. The worst recession prior to the most recent 'Great Recession'. Exceeded only by 'The Great Depression', albeit that any recession since the depression, fortunately, pales compared to it.
- From 1965-2000 the total civilian non-intuitional labor force participation rate grew at a rate of +0.31 percentage points per year. But since the year 2000 it has been in decline.
- At the earlier end of that period, late 1960s and early 1970s, because the large population baby boom began entering the 16 years old and older population, the civilian non-institutional population was also growing at twice the rate that it is growing today, +1.8 percentage points per year then versus +0.9 percentage points per year today.
- Thus, fifty years ago the U.S. had the double boost of a robustly growing working age population and a robustly growing rate of those participating in the labor force. In contrast, today the U.S. has only half the growth rate in the size of the working age population, and the rate of participation in the labor force have turned as negative as it was once positive. Turning a boost into a drag on the overall GDP growth rate.
- The decline is NOT simply a result of the great recession – it began before it and has continued since it - The overall total decline in the civilian non-intuitional labor force participation rate began 7-8 years before 'The Great Recession' Financial Meltdown, declining at an average rate of -0.14 points per year from 2000-2008. It then accelerated during the 'Great Recession', doubling to -0.29 points per year and has continued on a straight line decline despite the economy having been in recovery for over 5 years now. Given what 'peeling back the layers of the onion' has revealed about behavior by ages of the groups in 2015, over their entire working life-times to date, it is not outside the realm of possibility that it could continue at that rate.
- However, the Best-Case-Scenario results in a projection from 2015 to 2025, 10-years into the future, of a resumption of almost exactly the same rate of decline as the pre-recession rate, a future rate of -0.14 percentage points per year, half the current rate of 2008-2015.

Conclusions and Implications

The most significant finding from this analysis is that there is not any case that can be made that can be credibly justified that the civilian non-institutional labor force participation rate will even stop declining and hold, let alone reverse course, and begin increasing, at least for the next 2-3 decades. The only question is what the rate of decline will be, during which future periods. Thus:

- The U.S. economy is surely already at 'full employment'. So wishing that all the 'discouraged workers' will suddenly reappear and become labor force participants again is delusional and dangerous. Two other key measures, that are measured by other means than the civilian non-institutional labor force participation rate, also suggest the same thing:
 1. The unemployment rate is at a low level historically associated with 'full employment'. And this analysis has just debunked the myth that the unemployment rates is only low because people who will return to the labor force, haven't yet, because they became 'discouraged' by the great recession, but still will return. They aren't coming back. They began leaving 7 years before the great recession, and have continued to leave in the 5-6 years of the economic recovery.
 - Note: Some of the past discouraged workers may return on a name by name, social security number by social security number, basis. So one can always find single persons to talk about that that have done so or say they are going to. But for every one that does return who has been out of work for years, more than one that was working all along, is now leaving, voluntarily. If this were not the case, the participation rate would not be declining.
 2. The level for weekly claims for unemployment has been at levels below the lowest levels in about 4 decades in relation to the size of total number of people unemployed. It is even lower than may recent cycles even though they had a smaller total number employed than now.
- Assuming that, the maximum sustainable non-inflationary speed limit for growth in GDP truly is lower than we all came to expect in economic recovery periods. Probably 1.0-1.5 percentage points lower than it was three or more decades ago. That would mean that the 2.0-2.5% annual growth in GDP that the U.S. has experienced in this recovery is actually our 'new normal', as disappointing as that may be.