The Great Financial Crisis and the End of Normal

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In recent work I have tried to distinguish between the "new normal" – a common reflex of the opinion pages and headline writers – and what I have called the "End of Normal" (Galbraith 2014). This short paper reviews and recapitulates the major points of the distinction.

The concept of a "new normal" is essentially statistical. It is rooted in an underlying conception of the economy as an equilibrium system, as something that can be most usefully approximated by the solution of a system of equations, embedded in a forecasting model. In this conception, the "Great Moderation" was a phase of stable non-inflationary economic growth, interrupted in 2007 by the "Great Recession," and this has been followed by an as-yet-unnamed period, which might be termed the "Long Recovery" or the "Secular Stagnation" or something of that type. Each phase is described by surface statistical characteristics – rate and direction of growth or contraction, rate of inflation, volatility of these series, and so forth. Recent performance is assimilated to (unobserved) expectations; thus the lack of inflation in the "Great Moderation" may be attributed to confidence in the commitment of the central bank to monetary control. The economist then projects the recent past into the future, on the assumption that present characteristics are more likely to continue than to change. This is the safe proposition – always correct, except when it isn't.

A deeper presumption of the "new normal" is that the underlying structural characteristics of the economy either have not changed or that changes do not matter. There is no compelling reason to explore those characteristics in order to understand the essentials. Thus, for those advancing the hypothesis of "secular stagnation," the driving mechanism is the recent history of low economic growth rates *per se*. These have lowered the ceiling of potential output, creating a condition under which the economy cannot reach its previous path of potential growth, and thus an inflation risk associated with any effort to reach a higher growth rate. No independent evidence of a lower ceiling is required; the ceiling is an artifact of the projection of potential from the trend of actual output. Failures of demand management are, on this account, *ex ante* to be avoided but irreversible *ex post*.

In *The End of Normal,* I offered four hypotheses respecting the underlying structural characteristics of the economy, and suggested that material changes since 2000 bear significantly on the future of economic growth. This is an argument that dispenses with the statistical figment of "potential output." Instead, my claim is that the conditions under which actual growth of output might be achieved have become more difficult, in ways unlikely to be reversed except by further structural change. I am therefore skeptical of the potential benefits of a pure "stimulus" policy in the crisis. The distinction I am trying to draw is best thought of by a mechanical or biological analogy: once a system is impaired, as in failing valves on an engine or in the heart, adding fuel is not a sufficient solution. Demand growth can work eventually, but structure must be repaired, or given time to heal, or to adapt.

Having said that, I have to acknowledge an instance where the present structural picture looks very different than it did a decade ago. The instance concerns energy and the larger market for natural resources. In the summer of 2008, the price of oil, driven in part or whole by speculative pressures, rose to \$148/bbl before collapsing with the fall of the world economy. Arguably, the resource transfer from consumers to producers incident on that spot price played a role in the general decline of effective demand. In the wake of the slump, and larger geological arguments about "peak oil," it seemed reasonable to describe a mechanism whereby energy constraints would come habitually to affect economic growth. In The End of Normal I referred to this as a "choke-chain effect."

What actually happened – the rise of fracking – was quite different, producing a structural slump in domestic energy prices, very much to the advantage, in the short and medium term, of economic recovery in the United States. Following a period of speculative investment, there is now substantial excess capacity in the shale fields, and the resulting low prices shift real resources to consumers and support the general strength of effective demand and job creation throughout the economy.

The issue now is, how long will it last? And, how will a period of relatively cheap energy affect the future energy base, and the competitiveness of the country, once the resource is depleted? These matters are for the immediate future unknown. They are perhaps unknowable, since the geological properties of the shale fields, and the environmental constraints involved in mining them, are not fully known at the present time. The one seeming certainty in the situation is that the shift in the energy mix to natural gas – while better than remaining with coal – is not as favorable to the mitigation of climate change as one with a higher proportion of renewable fuels, which would have been forthcoming at a more rapid rate if the supply price had remained high.

The second structural area to which I called attention is the changed nature of technical change, with consequences for the measured rate of output growth, for employment, and consequently for measured rates of productivity growth. For some decades – the belief dates at least to the "automation" debates of the 1960s – economists largely believed that new technologies do not *per se* reduce jobs; rather that technical improvements characteristically create as many new job openings as they destroy, so long as total effective demand is maintained by macroeconomic policy. This debate has been recapitulated recently in a discussion about robots, and the fact that productivity growth has not (until very recently) picked up in the post-crisis expansion has been taken (quite widely) as evidence that technical change has not been very rapid in the period since 2008. This seems hard to square with the evidence of the eyes, which suggest a relentless march of digitization; but well-trained economists tend to ignore anecdotal evidence in favor of what they read in the statistics.

I argued that this line of reasoning misreads the difference between the electro-mechanical revolution of the early 20th century and the present digital/information age. In the earlier period, the thrust of industrialization was to move activity toward the market. Land transportation, for example, changed from horses to internal combustion engines, the latter requiring fuel, roads, repair shops and more, largely either not necessary or provided within the household in the earlier technical dispensation. Similarly the new economy of household appliances displaced human labor (servants, wives, children) not previously paid-for on a wage basis. These transformations added to the demand for wage labor, and so added an extra increment to the measured growth of GDP, above and beyond the simple increase in laundry or cooking or transportation services actually provided.

In the information age, the thrust of new technology runs in the opposite direction. Information flows previously commodified on a per-unit basis, such as books, newspapers, video and audio recordings, letters and telephone conversations and business meetings, also typing and accounting and document-

preparation and tax services, have been diverted to fixed-cost providers so that an increase in the volume does not necessarily yield any change in transactions and therefore in measured GDP. This is not a bad thing, obviously. But it isn't good for the flow of spending that we call GDP. Further, the equipment required for these services is largely produced off-shore, so that the spending directed at acquiring them (investment) is deducted (as imports) directly from GDP, netting to zero. The result is (other things equal) a lower rate of measured growth, a lower share of business investment in GDP, a smaller multiplier effect – and the absence of measured productivity growth, since for productivity to grow, measured output must increase more rapidly than the input of labor.

My argument is drawn from the literature on vintage capital, and so links the timing of new technological waves to the business cycle. While new technologies may be developed in the later upphases of a business expansion – as the digital technologies were in the 1990s – their diffusion may be most rapid following major slumps, which have the effect of clearing out older production units and labor. It is in the early recovery phase that employers tend to remodel their enterprises, looking for new methods to avoid incurring the high costs (and uncertain reliability) of human labor. For this reason, "jobless recoveries" have become routine; the period after the Great Financial Crisis was no exception.

As with the previous technical phase, the effect is transitional. There will come a time when the accounting effect on growth and productivity of the diffusion of the new information technologies will stop. But it could take some time. While the transition is underway, there is no reason to expect that job creation will keep up with growth in the (potentially-available) supply of labor; rather the active labor force will adjust through earlier retirements, decreased participation and diminished immigration. These forces evidently account for a substantial share of the fall in unemployment since 2010, while the employment-to-population ratio has not increased much.

How then do we account for the rise in measured productivity and real wages in the final years of the Obama administration, 2015-2016? One possibility is that employers tended to foresee a coming end of the expansion, which by that time had already gone on longer than any other postwar growth period. This would cause them to slow down on new hires relative to the growth of orders, placing more demands on their existing workforce rather than incurring the fixed cost of adding to staff. Wages and productivity, accordingly, would rise. We do not know for sure exactly that this cause is at work; the point is only that the effect need not rely on some mysterious increase in the productivity of technology, nor on the economists' conventional recourse to a "tight labor market." Labor supply could be perfectly elastic at the present wage rates and these practical consequences might still be observed. Similarly, as we observe rather good job performance in 2017, it may be that the recent wave of technological diffusion has come to a provisional end, and/or that new employment is occurring largely in occupations that rank higher on the Engel Curve of consumption preferences as incomes rise and a sense of security returns.

The third structural hypotheses in *The End of Normal* related to the global strategic position of the United States in the wake of the wars in Afghanistan and Iraq, to which one might now add Libya and Syria as corollaries. The argument was that the Cold War dispensation – bilateral hegemony and competition – imposed a form of order on the Western economies, permitting a climate of stable expectations to develop, which was favorable to large-scale, long-term investments in both the public and private spheres. This climate has now disappeared, and along with it, one should expect investment time horizons to shorten, and to retreat toward the regional or even the national scale. Thus the advantage will flow to development models (such as China) which are rooted in national and regional investment schemes, and there will be relatively less reliance, in the long-term planning of private actors, on a security system that has been exposed as weak and unreliable. There is no way to assess

this claim on the basis of quantitative evidence, so far as I'm aware; yet it is broadly in line with the perception that the major physical investment program in the world today is not in the West, but rather the Chinese Belt-and-Road initiative to unify the Eurasian land mass. Nothing comparable is going on in or around the United States, and nothing is in view.

The final structural change, I argued, concerned the banks. These financed the last business investment boom in the late 1990s, and then turned their attention to the looting of home equity accumulated over seven decades. The resulting shift in their business model left them largely incapable of developing a coherent strategy to fund a new business investment cycle. The collapse, for which they were largely responsible, left them without a borrower base for a sustained recovery of residential construction, and with an investor community with high risk aversion and liquidity preference, or (in the case of those seeking yield) an interest in getting far away from the United States. The result, a low share of business investment in US GDP and a very low share of construction in current spending, should be no surprise. Meanwhile the banks continue to fund student borrowing, automobile loans and credit card debt; the arc of indebtedness in these areas may be long, but it bends toward collapse.

The four hypotheses are all qualitative. I've made no effort to try to frame them in quantitative or "testable" form and I am unsure whether or how that might be done. In this respect, the work is very different from the work of measurement (of economic inequality) with which my research program has been mainly concerned in recent years. Yet it seems to me that economists have an obligation to frame and inspect qualitative hypotheses, and to assess them as time unfolds. This is learning.

After almost ten years, I would offer the following preliminary judgments. With respect to energy, I believe the mechanism is correct: energy prices and those of other non-renewable raw materials tend toward zero in the case of excess supply and, in the case of excess demand, toward the point where the transfer of incomes from consumers to producers breaks the momentum of aggregate effective demand. There is no equilibrium in this marketplace; it is structurally unstable. Yet the specific structural conditions that were visible in 2008 are not those that obtain today, due to fracking. Given the urgent need to deal with climate change, this economic boon is a potential ecological disaster.

With respect to technology, my argument continues to seem correct on review and development. It provides a flexible alternative to the problematic view (on the one side) that "robots" are about to take over all jobs, and to the equally problematic belief (on the other) that the pace of technological diffusion has slowed, simply because the productivity growth numbers look weak.

With respect to international security and large-scale investment, while data are not available so far as I know, qualitative observation broadly supports the view that the global initiative has shifted toward those nations and regions that remain capable of advanced engineering initiatives on the large scale. The United States is no longer in that league, and appears to have gutted the public-sector institutional mechanisms required to return to it. Private enterprise, meanwhile, will be increasingly decentralized, medium to small-scale, and cautious in its investment commitments. This is perhaps not a bad thing, but it is likely to leave the direction of global development in other hands.

Finally, with respect to the banks, the facts of observation, in my judgment, continue to support the view that they have detached themselves from public purpose and the support of economic activity, in favor of perpetual concentration, self-enrichment and self-defense. Of all the issues raised here, structural reform of the financial sector is the most accessible. Failure to address it, is the most likely to generate, in due course, another round of debt deflation and financial disaster.

Concluding Comment.

One may well ask why an economist should, at this late hour in the development of economic science, be concerned with propositions that amount merely to conjectures? The answer I would offer is two-fold. First, that conjectures form a major part even of conventional economic thinking and policy arguments even now, so that the exercise is not eccentric. Second, that the development of an improved economic theory has to start somewhere, and that an appropriate procedure is to think of the conjectures first and of their formalization, or incorporation into a systematic framework, later on.

A current example of conjectural policy argument is the claim that a large reduction in the tax rate on corporate profits will stimulate business investment and therefore economic growth. The primitive character of this conjecture is immediately evident: the presupposition, for which no evidence exists, is that corporations are constrained in their investment plans by their cash flow. Interrogating this assumption with alternative conjectures – that corporations make investment plans based on expected profitability and are constrained not by cash flow but by access to finance – immediately points the way toward a more plausible understanding of the role of the corporate tax. Making sense of the empirical evidence is much easier once one has examined the conjectures, much more difficult before.

In the case of the four conjectures in *The End of Normal*, I would argue (and have argued, with Jing Chen 2011, 2012a, 2012b) that they fit together in a general biophysical framework for examining economic systems. Resource availability, quality and cost are important – though neglected by neoclassical growth theory – because all living systems extract resources and emit waste; the issue is how efficiently they manage this process, with what distribution of means, and on what scale, which are decisions that depend on technological opportunities at any given time. Hence it is important to interrogate the precise character of technical developments, and not to be content with abstract characterization or obscure mathematical symbols. The investment climate is important because large organizations must plan ahead, and the quality and character of their plans are affected by the time horizon over which they feel comfortable in planning. And the financial arteries of the economy are important because, if they become clogged, they have the capacity to bring the system down.

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