

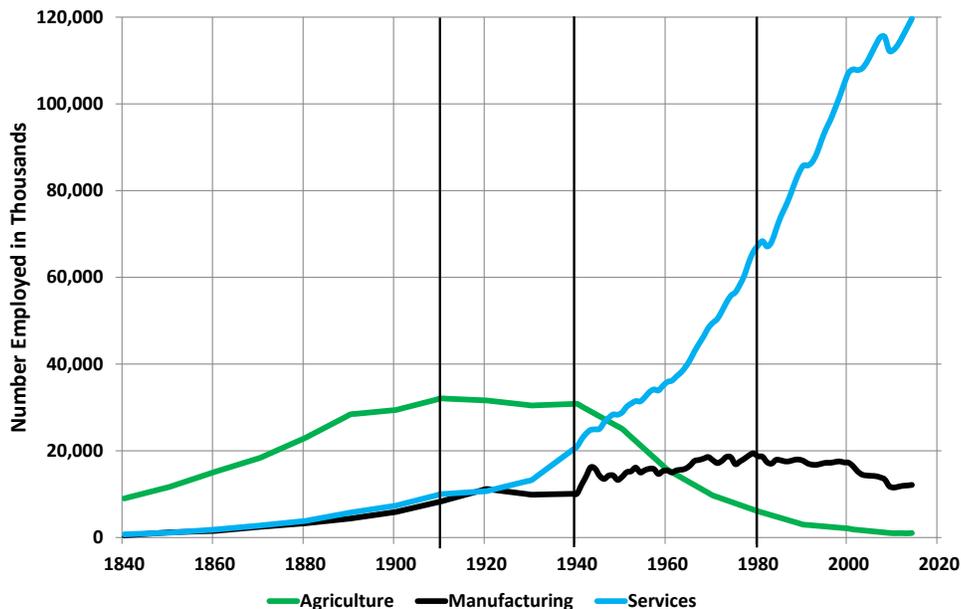
January 14, 2015

A 170 Year Perspective on Steadily Shifting Employment

As promised, following on last week's article posting, "Rumors of U.S. Manufacturing's Decline Are Wildly Premature", this article posting takes a 170 year perspective on the shifting of employment from 'Agriculture' to 'Manufacturing & Services'. And then from 'Manufacturing' to 'Services'¹.

The U.S. Long Run - Employment Sector Evolution

Number Employed by Sector



From about 1840 to 1910 Agricultural Employment increased by three-and-a-half times. Concurrently, BOTH Manufacturing and Services Employment increased in lockstep by about thirteen times. The 'concurrent and equivalent increase in Services' comes as a surprise until one considers that Blacksmiths, Silver Smiths, Saddle Makers, Shoemakers, Tailors, Dry Goods Distribution and Retailing, Country Doctors, and on and on, are all Services.

For the next three decades of 1910 to 1940, Employment in the Agricultural and Manufacturing sectors held constant on a relatively flat plateau. Keep in mind that the Great Depression occupied a considerable portion of that period. But, Service Employment took off, doubling over that period.

Over the four decades of 1940 to 1980, Agricultural Employment lost over 24 Million jobs, a decline of 79%. BUT, contrary to the myth that 'those who left the farms all went to work in the factories', even if every new manufacturing job that was created in that time period was filled by a former agricultural worker, only a little over one-third of those who lost jobs in Agriculture

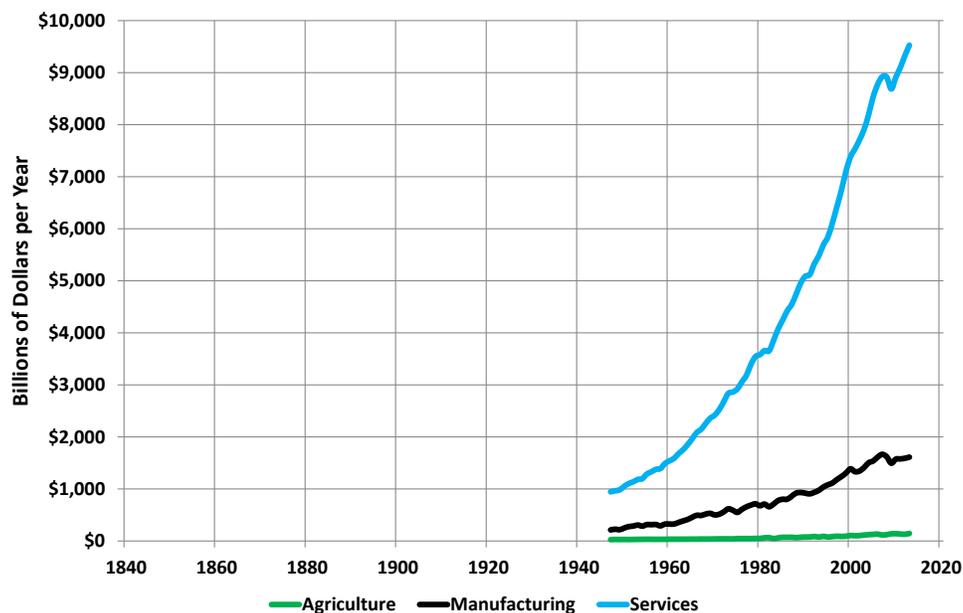
¹ J.T. Gabrielsen Consulting, LLC analysis of data from the Bureau of Labor Statistics [1947-2013] and "Labor Force and Employment, 1800-1940", Stanley Lebergott. Wesleyan University, Publication Date 1966

could have been hired into Manufacturing. The other two-thirds of former agricultural workers would have had to go into Services or leave the workforce. Indeed 85% of all new job creation during that four decade period was in Services.

Manufacturing Employment peaked in about 1980, and has lost one third of its jobs since then [-6.6 million through 2013]. Agricultural Employment lost an additional 83% of what little employment it had left by 1980. And Services picked up all of the losses from manufacturing and agriculture plus all of the very significant increase² in the labor force.

[Below] Despite the declines in Agricultural and Manufacturing Employment, Real Value Added³ increased by 5.6 times for Agriculture, 7.1 times for Manufacturing. And of course, 10 times for Services.

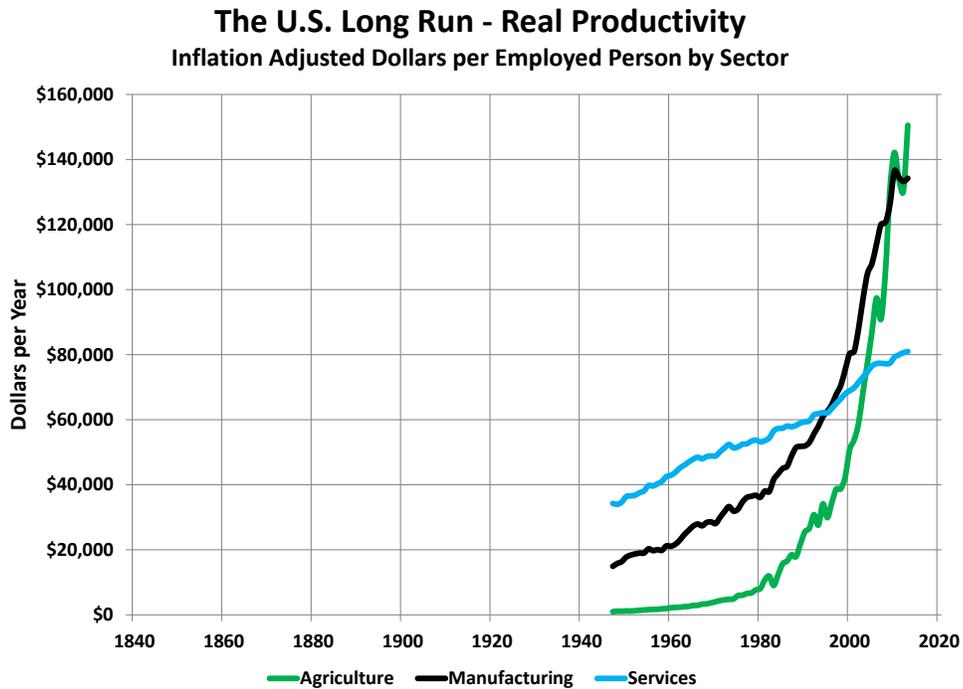
The U.S. Long Run - Real Value Added
Billions of Inflation Adjusted Dollars by Sector



² Two very powerful and significant forces rapidly increased the size of the labor force at unprecedented rates. The Baby Boomers reaching prime labor force entry age and the very significant increase in the percentage of women in the labor force.

³ J.T. Gabrielsen Consulting, LLC analysis of data from the Bureau of Labor Statistics [1947-2013] and "Labor Force and Employment, 1800-1940", Stanley Lebergott. Wesleyan University, Publication Date 1966 and The U.S. Bureau of Economic Analysis.

[Below] With their increases in value-added output, and decreases in employment, Agriculture and Manufacturing, achieved dramatic increases in productivity^{4,5}. Agricultural productivity increased by over a hundred-fold while manufacturing productivity increased by 9 times. That has created significant competitive benefits as a result. However, Services only managed a little more than a doubling of its productivity [2.4x], despite all those reengineering and IT projects. Imagine if there had not been a huge focus on reengineering and IT systems in services?



⁴ This is not the normally reported productivity metric which are based on labor hours and output but it is directionally very consistent. It is Real Value Added divided by Number Employed.

⁵ J.T. Gabrielsen Consulting, LLC analysis of data from the Bureau of Labor Statistics [1947-2013] and “Labor Force and Employment, 1800-1940”, Stanley Lebergott. Wesleyan University, Publication Date 1966 and The U.S. Bureau of Economic Analysis.

Discussion and Conclusions

Joseph Schumpeter⁶ called this process creative destruction. As early as the 1970s, Daniel Bell extensively chronicled the results of creative destruction in his books, including his 1973 book, "The Coming of Post-Industrial Society."⁷ He divided this time span into Preindustrial [Agricultural predominates, Industrial [Manufacturing predominates], and Post Industrial [Services predominate]. I first read it in 2010, 37 years after the published it. And he had clearly nailed his predictions for all the time since he wrote it.

Agricultural employment first rose and then fell. But the value-added output has consistently increased due to the phenomenal advances in productivity that far exceeds those that have ever been possible in manufacturing. The full employment lifecycle covered close to two centuries.

Manufacturing employment also rose and then fell, while value-added output just kept increasing due to substantial increases in productivity. The full employment lifecycle for Manufacturing also appears likely to turn out to be about two centuries.

Services are still climbing the upside of employment of the overall lifecycle. It is almost a century since Services broke out of the pack and took off. How long will its lifecycle be? Will it peak and then decline? If so, when is the peak? What will replace it that creatively destructs it?

Not to mention that the length of these lifecycles in developing countries like China appear to be dramatically shorter. Will the most successful developing countries ram rod through the full manufacturing lifecycle and race up the services slope in a quarter of the time or less than it took the United States?

I simply don't know - What do you think?

Next Week – U.S. Manufacturing's' Major Energy Cost Advantage – And its NOT Oil.

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⁶ Wikipedia: "Creative destruction describes the "process of industrial mutation that incessantly revolutionizes the economic structure from within, incessantly destroying the old one, incessantly creating a new one.""

⁷ "The Coming of Post-Industrial Society – A Venture in Social Forecasting". Daniel Bell, 1973, Basic Books, A member of the Perseus Books Group. This is one of the most intriguing and unique books that I have ever read, It is 500 pages of the smallest font I've ever seen in a book with many pages covered up to two-thirds in footnotes and only one-third with the main text. It was a very long slow slog. The one consolation is that I read it on the beach in idyllic French St. Martin which gave us plenty of time to take breaks to go in the water, etc. For me it was absolutely worth the long slow slog. But it is not for the faint at heart.

⁸ Please note as my economist friends are also quick to remind me, that Daniel Bell apparently did not come up with the model from Pre-Industrial to Industrial to Post-Industrial, but he certainly appears to have picked it up from there and written far more extensively on it than anyone else that I have uncovered.