Reflections on Bretton Woods

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On the White Mountains, Cog Railroad, and Mount Washington Hotel

Jackie and I (along with Marjorie and Doug Irwin) took the cog railroad to the top of Mt. Washington several months ago. 2019 is the 150th anniversary of the first trip to the top of the mountain by the cog railroad, which was the first mountain climbing train in the world; the Swiss developed one about twenty years later. A cog railroad had been developed in Yorkshire, Great Britain, in 1812. Construction of the railroad began in 1866, the idea of a cog railroad to climb to the mountain top was developed by Sylvester March, from Campton, NH, about eighty miles southeast of Mt. Washington. The gradient of Mt. Washington was much too steep for a traditional railroad; the driving wheels would spin on the tracks, like an auto in deep snow. The concept of a cog railroad is that an engine drives a spoked wheel, one with teeth, a metaphor is the sprocket on a bicycle. The rotation of the sprocket moves the toothed wheel—and the engine that is attached to the wheel - along a slotted track, the metaphor is an oversized bicycle chain that lies flat and is firmly attached to the wooden ties that lay under the tracks between the two traditional railroad tracks.

Each train has an engine car and one passenger car that carries seventy people.

The distance from Marshfield the base station to the top of Mt. Washington is three miles, the elevation gain is nearly 1,200 feet per mile from the base station is 2,700 feet to the top of the mountain at 6,288 feet. The gradient averages nearly 25 degrees, the gradient on Jacob's Ladder is 38.41 degrees—an elevation gain of 42 feet for every 100 feet of forward motion. The White Mountains like the Green Mountains and the rest of the Appalachians are "old mountains" with rounded tops, unlike the young mountains with jagged peaks like the Alps and the Tetons; the ladder is about a mile from the top.

Steam engines provided the power for the first 130 years; initially wood was burned to heat the water for the steam. Coal soon displaced wood because the embedded energy per cubic food is much greater. Now most of the trains are powered by 600 horsepower John Deere marine engines that use diesel or bio diesel fuel. A round trip on the steam engine took a ton of coal, a round trip on the bio-diesel takes 18 gallons, or about 126 pounds. A quart of biodiesel per passenger for each round trip.

Gravity provides the energy for the trip down the mountain, the sprocket drives an air compressor that powers the brakes.

The view from the top of Mt. Washington is exceptional—the nearby mountains on the Presidential range, and the adjacent states—Maine, Vermont, New York, and Quebec in Canada to the North. There are four roughly parallel north to south mountain ranges; Franconia Notch is between the two most western ranges, Pinkham Notch between the two most eastern ranges, with Crawford Notch in the middle.

The White Mountains was an exotic destination for brief summer vacations when I was growing up in Southern New Hampshire in the 1930s, I remember trips in the family's 1936 Plymouth with parents and grandparents to the Flume Gorge and to the Old Man of the Mountains, the craggy stone outcropping that is on New Hampshire's auto license plates. In the 1940s there were ski trips to Cannon Mountain with its aerial tramway and Wildcat (in its pre-lift years, Jigger Johnston and I hiked to the top) and to Cranmore with its skimobile—a hundred or more single passenger cars that were pulled to the top of the mountain by a cable, much like one of the cable cars in San Francisco.

My first trip on the cog railroad was in the late summer of 1991. Chuck Cooper (a good friend from the early 1960s in Washington, at one stage, the U.S. Executive Director of the World Bank), my son, and I had climbed the Jewel Trail which begins at the parking lot for the base station to the top… miserable weather, foggy and chilly. We took the cog railroad from the top to the base station, and drove to the Mt. Washington Hotel for hot chocolate. An auction then was underway that had been arranged by the hotel's owner, the Resolution Trust Corporation, a U.S. government firm that was set up to dispose of assets acquired from failed banks and thrifts. The hotel had become bankrupt, and the owner of the mortgage, the Eliot Savings Bank in Boston, had failed in the New England banking bust of the early 1990s. My guess is that it had become a zombie thrift after the Volcker shock of October 1979 had led to a surge in short term interest rates.

Bretton Woods Conferences

More than 700 delegates from 44 countries met at the Mt. Washington hotel for three weeks in July 1944. One reason the Mt. Washington Hotel was chosen as the site for the meeting was that New Hampshire would be cooler than Washington. A second was that the hotel accepted Jews as guests, Morgenthau was Jewish and the then-owner of the hotel also was Jewish.

I have attended three monetary conferences at the Mt. Washington Hotel—one was sponsored by the Federal Reserve Bank of Boston in May 1984 (*The International Monetary System; Forty Years After Bretton Woods*, Federal Reserve Bank of Boston, Conference series #28, 1984); The National Bureau of Economic Research held a conference in October 1991, *A Retrospective on the Bretton Woods System, Lessons for International Monetary Reform* edited by Michael Bordo and Barry Eichengreen, National Bureau of Economic Research, Cambridge,) and the Center for Financial Stability in 2014 (Kurt Schuler and Andrew Rosenberg, *The Bretton Woods Transcripts*, Center for Financial Stability, 2014 and *Bretton Woods: The Founders and the Future* edited by Lawrence Goodman and Kurt Schuler, 2019).

Citibank hosted a conference for more than 100 of its customers on the fiftieth anniversary of the signing of the signing of the treaty in July 1994, President George Bush was the keynote speaker. (The hotel had been closed for months before this conference; Citibank spent $3 million to paint the hotel, change all the light bulbs, and improve the phone system. The bank brought in caterers and a temporary air conditioning system.) The Bretton Woods Committee had a conference in late July of this year.

The Fund now has 189 member countries and a staff of 2,700 from 150 countries. This week's visit provided a chance to reflect on the meeting in July 1944 and the success of the International Monetary Fund.

- What would John Maynard Keynes, Henry Morganthau, and Dennis Robertson have thought about the international payments imbalances and the role of the Fund?
- The structure of the Fund follows the White Plan. Would the monetary history of the last 75 years have been significantly different if the model for the Fund was the Keynes plan for a new international unit of account and medium of payment?

How the Founders of Bretton Woods might view the last 75 years

Q. From an Olympian viewpoint like at the top of Jacob's Ladder (forgive the mixed metaphor), has the International Monetary Fund (IMF) been a success or a failure?

A. Thanks. First, let's distinguish the developments in the global economy from the contribution of the IMF to these developments. Keynes and Morgenthau (hereafter K & M) would have been thrilled by growth in the global economy since 1944, the major rise in living standards for ninety percent of the world's population, the increase in longevity, the decline in infant mortality. They would be elated that the last seventy-five years has been peaceful in Europe, with the major exception of the war in Bosnia. They would marvel at the integration of Germany and Japan into the world economy, and the economic success of both countries. They would be pleased that the Soviet Union collapsed. They would feel immensely satisfied that their initiatives and hard work had been followed by seventy-five years of global peace and prosperity, in sharp contrast with the thirty years after the First World War.

Q. What else would have surprised K & M?

A. They believed there would be a perpetual "dollar shortage." They would not have conceived a world of a "dollar glut", and that the United States would evolve from the world's largest creditor country to the world's largest debtor.

Q. Great, anything else?

Yes, K& M would have been dismayed at the sharp contrast between their model for orderly changes in the prices of currencies that would more or less conform with changes in competitiveness of individual countries with the extensive overshooting and undershooting in the prices of currencies that have occurred since the early 1970s. The Fund agreement stipulates that any proposed change in the parity of a country by more than ten percent must be approved by the Fund—essentially the country's trading partners. The agreement was designed to ensure that no country would manage the price of its currency to secure an unfair competitive advantage, instead each could reduce the price of its currency to offset a competitive disadvantage that might have developed because its inflation rate had been higher than those of its trading partners. Thus, a primary objective was to minimize the use of tariff and other barriers to enhance domestic employment at the expense of manufacturing jobs. K & M also would be fearful of the immense current account imbalances of 2019.

Q. Please expand.

A. Sure, K & M lived through the 1920s, they observed the turmoil in the currency markets. One of Keynes' great books was *A Tract on Monetary Reform*. Keynes wrote a stinging criticism ("The Economic Consequences of Mr. Churchill") of the decision to peg the British pound to gold at its prewar parity in April 1925, he believed the pound was then overvalued by fifteen to twenty percent. The French franc was given a new parity at the end of 1926, and it was probably undervalued by fifteen to twenty percent. Argentina and Chile left the gold standard in the late 1920s (remindful of the developing country debt crisis of 1982). The Austrian Schilling was devalued in May 1931, the "contagion effect" developed and the speculative pressure shifted to German Mark. Then the pressure switched to the British Pound; its tie to gold was severed in September 1931. The speculative pressure then was directed at the U.S. dollar. The term "beggar thy neighbor" was applied to this sequence of devaluations and is associated by Joan Robinson, although it was used earlier and is implicit in mercantilist doctrine.

Q. Is there an analogy between recent developments in the global economy and an earlier episode of globalization?

A. You bet. Globalization involves the integration of national economies because of the declines in the cost of economic distance and reduction of barriers at national borders to purchases of foreign goods and services, de-globalization involves the increases in these barriers. The nineteenth century featured relatively open borders; there was massive expansion in world trade. The steam engine replaced the sail as power, the telegraph and the underwater cable sharply reduced economic distance. Three great canals--Suez, Panama, and Kiel -shortened distances. The golden spike linked the railroad systems in the East with those in the West in the summer of 1869—several weeks before the first train reached the top of Mt. Washington.

The onset of the First World War in 1914 marks a reversal of the trend, the costs of economic distance continue to decline, but the uncertainty about the prices of currencies and the increase in trade barriers segment national markets. At the beginning of the war, the belligerent countries adopted currency controls to protect their gold holdings. There were massive changes in the prices of currencies in the first half of the 1920s. The Smoot Hawley Tariff of 1930 raised rates by forty percent. World trade declined by eighty percent. The second period of globalization began in 1934 when the United States took the initiative to reduce tariffs on a reciprocal basis. The beginning of the end of the second period of globalization was the Camp David agreement of August 1971 with the formal closing of the U.S. Treasury's gold window, the ten percent surcharge on the dutiable imports, and the price and wage controls. Arthur Burns then began to pump up the U.S. money supply in anticipation of the 1972 election, his shortsighted management of the money supply was a massive contributor to the 1970s inflation. The sharp variability in inflation rates led to the sharp variability in prices of currencies.

Q. Are you suggesting that the second period of de-globalization has been underway for nearly fifty years?

A. You got it. A sharp contrast with the first period of de-globalization, which began in 1914 and ended 20 years later. The current period has been more than twice as long.

Q. How and when will this period of de-globalization end?

A. Who knows? The U.S. fiscal deficit is much too large to be sustainable; since it is impossible to reduce expenditures, taxes will have to be raised. The current account surpluses of the North European countries and of a few of the Asian countries are too large relative to their GDPs, these countries are in for a massive shock.

Trade and Tariffs

Q. Why has President Trump begun to apply tariffs to U.S. imports?

A. President Trump believes that the United States has lost several million high paying manufacturing jobs because of the unfair currency and other tariff practices of the U.S. trading partners, a view he lifted from Senator Bernie Sanders and Senator Rick Santorum. U.S. manufacturing employment peaked at 20 million in 1979, total U.S. employment was then 90 million. U.S. employment now is 150 million, but employment in manufacturing has declined to 13 million. American consumption of manufactured goods has surged, but a much larger number of these goods is produced in foreign countries.

Q. Why has there been such a sharp decline in U.S. manufacturing jobs?

A. There are two principal factors—one is robotics/automation, the displacement of workers by machines or smarter machines or bigger machines, the other is the increase in the U.S. trade deficit.

Q. Has the United States lost manufacturing jobs because of the "unfair trading practices" of China?

A. Yes if unfair trading practices includes the purchases of U.S. dollars by the Peoples Bank of China to limit the increase in the price of the Chinese yuan; these practices include Chinese tariffs on auto imports, subsidized credits to favored industries, cheap electricity to producers of aluminum, and other industry specific and firm specific benefits designed to enhance competitiveness by reducing costs. There are a thousand of these measures, some at the national level, many at the provincial level. The purchases of U.S. dollars by the PBOC more or less determine the size of China's trade surplus and its trade surplus with the United States, these industry-specific and firm-specific measures affect the composition of China's exports and imports.

Q. How many U.S. manufacturing jobs have been lost because of the increase in the U.S. trade deficit since 1980?

A. Let me review the methodology that led to the estimate that the United States has lost 3 million jobs because of the increase in the U.S. trade deficit. U.S. manufacturing GDP is $4,000 billion. Value added per worker in U.S. manufacturing is $307,700 ($4,000 billion divided by 13 million workers). Now divide the U.S. trade deficit in 2018 of $888 billion by $307,700, the answer is 2,886,000 workers. If U.S. trade balance had hovered around zero since 1980, Americans would have been spending $888 billion more each year on U.S. goods; the increase in the spending on U.S. goods would have led to more than three million more U.S. manufacturing jobs.

Q. Are you comfortable with the estimate that the job losses in U.S. manufacturing because of the increase in the U.S. trade deficit since 1980 total three million?

A. Sure, great question. The United States is one of the world's largest exporters; its exports are produced by workers with much higher than average value added per worker. Many of the job losses had been by workers in industries with much lower than average value added per worker. If the value added per worker in these industries with below average value added was $200,000, then the U.S. job losses because of the increase in the U.S. trade deficit would have been more than four million.

Q. But the U.S. trade deficit has developed because the U.S. manufacturing is no longer competitive.

A. Consider the following counterfactual scenario. Assume various foreigners—sovereign wealth funds, central banks, firms, households, the whole shebang—had not bought U.S. dollar securities, then how large would the U.S. trade deficit have been? You've got it, the answer is zero, in this counter factual world, U.S. exports would have been larger and U.S. imports would have been smaller.

Q. But the United States is no longer competitive?

A. Is that a question or a comment? Let's rank countries from the least competitive to the most competitive. Haiti, North Korea, Venezuela are toward the top of this list, money flees these countries. If the United States were not competitive, the foreigners who buy U.S. dollar securities would be either fools or knaves, or both fools and knaves. Some of these investors buy U.S. dollar securities because they can't find more attractive alternative investments, some to prevent the prices of their currencies from increasing. If foreign central banks and foreign investors did not buy U.S. dollar securities and U.S. real assets, the United States would not have—sorry, could not have—developed a trade deficit. Investors do not move their money to Haiti because Haiti is not competitive, only an economic illiterate could suggest that foreigners would buy $1,000 billion of U.S. assets each year if the United States were not competitive.

Q. What about the statements that President Trump's tariffs will do more harm than good to the United States, and that the harm to the United States will be larger than the harm to China?

A. Another great question. Two points, the first is that the United States now has a trade deficit that is too large to be sustained. Market forces might lead to a decline in the deficit, but that's unlikely because none of the countries with the trade surpluses is likely to accept a decline in its trade surplus. The effective comparison is between the cost to the United States of the tariffs, and the costs of some of these other measures. Now consider U.S.—Chinese trade. Assume the United States imports $500 billion a year of Chinese goods; most of these goods are highly differentiated products with brand names. In contrast China imports $100 billion of U.S. goods, and most of these imports are unbranded. Assume that the United States puts a total embargo on imports from China and China puts a total embargo on imports from the United States. The decline in Chinese exports will be much larger than the decline in U.S. exports. If China seeks to exports these goods to other countries, then Chinese producers will need to reduce prices. China will import its soybeans from some other countries, and the United States will export its soybeans to the countries that formerly were supplied by the countries that are now selling their soybeans to China.

Q. Okay, what about the explanation that the U.S. fiscal deficit is the cause of the U.S. trade deficit?

A. At the conceptual level, any factor that leads to an increase in U.S. interest rates or to an increase in U.S. wage rates would contribute to a larger U.S. trade deficit, the decline of employment in U.S. manufacturing would lead to erosion in the U.S. tax base and hence to a larger U.S. fiscal deficit. But assume that U.S. interest rates increase or U.S. wage rates increase while foreign purchases of U.S. dollar securities remain unchanged; in this case the U.S. trade deficit would not change. If the U.S. fiscal deficit increases and foreign investors do not buy any more U.S. dollar securities, the U.S. trade deficit would remain unchanged. If the U.S. fiscal deficit remains unchanged and foreign investors buy more U.S. dollar securities, the U.S. trade deficit would increase. The conceptual model that an increase in the U.S. fiscal deficit leads to an increase in the U.S. trde deficit is correct, but it is irrelevant in explaining why the U.S, trade deficit increased in the early 1980s, interest rates on U.S. dollar securities were declining even as the U.S. fiscal deficit was increasing.

Q. We seem to have wandered from the main topic about the threats to globalization.

A. You're right. Can you identify more than one or two countries that have complained because their trade surpluses are too large—the sort of complaint that several countries made under the adjustable parity arrangement? The Germans haven't complained, the Dutch haven't complained, the Singaporeans haven't complained.

Q. Okay, where does this leave us?

A. Consider the interest rates in Eurozone—why are they negative? If they were positive, there would be a massive flow of short-term funds to Frankfurt, the price of the Euro would increase by twenty to thirty percent, the European trade surpluses would decline, and unemployment in Europe would increase. The policies of European countries today are remindful of those in France in 1927, after it pegged the price of the franc by twenty percent below its equilibrium level.

The basic problem is that there is no mechanism to ensure that the demand for trade deficits by the countries that want deficits is large enough to satisfy the needs of the demand for trade surpluses by the countries that want trade surpluses. If the demand for trade deficits is larger, tough luck for some of the countries that want larger deficits; they may not be able to finance this demand, and may have to reduce the demand by allowing the prices of their currencies to decline. If the demand for surpluses is larger than the supply of deficits, tough luck for the countries with the deficits, they will have larger deficits than they desire because the countries that want the surpluses will underprice their currencies.

The IMF

Q. Would the consistency in the demand for external balances be different if the design of the International Monetary Fund had followed the Keynes proposal for a new international money?

A. That's a complicated question for this catechism; the short answer is no. The global consistency problem is centered on balance of payments adjustment, the Keynes plan like the White Plan centered on the financing of payments deficits.

Q. Can you take us back to the beginning, the scorecard on the IMF?

A. I'm glad you asked. Let's return to the first question, "Has the Fund been a success or a failure?" The short answer is that if the Fund had been a success, President Trump would not have raised tariffs in his misbegotten effort to reduce the U.S. trade deficit. The Fund has failed to accomplish the primary motivation for its establishment; the need to ensure that changes in the prices of currencies would not lead to significant changes in the competitive position of various foreign countries relative to the United States. The Fund still doesn't understand why the changes in the market prices of currencies have been so large relative to the long run average prices of currencies. The Fund still doesn't understand the impacts of the variability of cross border investment inflows on asset prices—that is, the balance of payments adjustment process. The Fund still doesn't understand why there have been 80 national banking crises since the departure from the adjustable parity arrangement. The Fund management should be shouting from the top of Mont Blanc that Germany, the Netherlands, Norway, Sweden, Denmark are following beggar thy neighbor policies, and that their failure to adjust will lead to a sharp reduction in the number of countries that use the Euro.

Q. Why has the Fund failed in its primary mission?

A. Wait for the next book. In the meantime, the answer is that its leadership has spent too much time on the financing issues and too little time on adjustment issues. Its leadership has followed a French technocratic tradition and has been shy on policy coordination.