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Wealth of Nations - Part 2

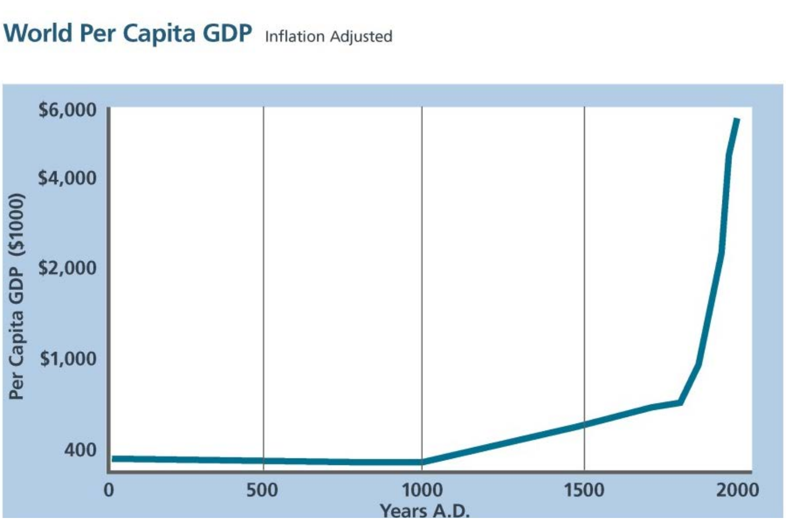
"Productivity and the growth of productivity must be the first economic consideration at all times, not the last. That is the source of technological innovation, jobs and wealth."

William E. Simon

In our earlier piece, we wrote about why it is important for a nation's workforce to not only be large and fully employed but also productive. By "productive," I mean a workforce that is producing a high and growing level of output – creating more value by work than what is consumed. High levels of productivity lead to high levels of savings, which leads to high levels of investment, which leads to high levels of growth, which leads to more jobs… you get the picture. Without high levels of productivity, workers live hand-to-mouth, meaning that savings and economic growth do not occur.

The Dark Days – No Real Prosperity for the Masses

In his book *Birth of Plenty,* William Bernstein claims that from the time of A.D. 01 to 1850, global productivity grew at an extremely low level. Bernstein cites the British economist Angus Maddison's work as essential in attempting to understand the historical growth of real per-capita productivity. According to Maddison, per capita GDP (productivity) didn't change much during the first millennium following the birth of Christ. The next 500 years saw some minimal improvement. In the mid-1800s, the world changed dramatically and nothing has been the same since. From the mid-1800s to today, the world's per capital productivity level has grown at parabolic rates, as illustrated in the chart.



Source: Maddison, The World Economy: A Millennial Perspective, © OECD, 2001, 264.

Now, many economists ask the legitimate question, "How can one say what productivity growth was in the time prior to the 1700s, since such records were spotty and, in many cases, weren't kept at all?" Maddison makes the following argument, which is difficult to refute: the more people in a society who are involved in the manufacture of agriculture, the lower the overall sustainable increases in productivity for that society. This makes sense because the majority of foodstuffs is perishable and needs to be consumed rather quickly, particularly prior to refrigeration.

Consequently, *the higher the percentage of a population dedicated to simply keeping the population alive, the lower the overall growth rate of productivity. This is because productivity needs excess savings and investment to occur over the long run.* Basically, the more people who are involved in pursuits whose output is consumed yearly, the fewer the number of people who can produce *excess wealth or savings*.

While the Romans didn't keep detailed macroeconomic records, they did keep rather detailed demographic surveys regarding how many people lived in cities and how many people lived outside of cities, primarily with farming and fishing pursuits. Studying the "urbanization" ratio of societies in the past gives us a strong clue as to how many people it took to simply keep all of the citizens of the society eating and alive.

Records show that at the height of the Greek and Roman empires, only a miniscule portion of the population lived in cities with more than 10,000 people. By the year 1500, the largest city in Europe was Naples, Italy. Naples had a population of 150,000. Records indicate that fewer than 900,000 Europeans or about 1% of Europe's population lived in cities of more than 50,000 people. The rest lived in rural areas where agricultural output was the main driver of economic activity.

Again, in those days, what was produced annually by the vast majority of the population (almost 99% of the population in the example above) was also consumed annually. Excess savings and excess productivity did not occur. By Bernstein's estimates, per-capita real productivity grew at an annual rate of only 0.1% per year from the time of Christ to the mid-1800s.

Bringing this a little closer to home, 70% of the U.S. population was employed on the farm until the mid-1800s. By 1998, that figure had fallen to 2%. So, until the mid-1800s, only 30% of our population was involved in activities not centered on simply keeping people alive. Now, more than 98% of our population is involved in activities that are not driven by our need to eat.

The Birth of Plenty

The low level of productivity growth was consistent from the time of Christ until the 19th century. As stated earlier, the work of Bernstein and Maddison shows productivity gains were consistently less than 0.1% annually until the 19th century. *Since that time, global per-capita real productivity has increased by more than 2.0% annually, an increase of 20x the rate of change from the previous 1,800 years.*

What happened in the 19th century to usher in this massive change in productivity, output and wealth creation? The change that occurred was seismic. It was so massive that we are still enjoying the fruits of this social/economic change today.

In a future post, I will reveal the fundamental change that occurred on a global scale in the 19th century that has led to sustainable increases in global productivity, savings, investment and wealth.

We will be back next week.

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