A Comparative Scale of the National Debt
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We are all aware of the enormous national debt that has been accrued by Congress over the past 35 years or so. For those too young to recall, the national debt began to accelerate in the mid-1970's, and has continued to increase steadily since then except for a few years in the late 1990's. In this paper, I will relate the total debt to median household income, and calculate the total indebtedness in terms of number of years of median income owed per household, if every household were held to account equally. This calculation will be done for 2010 and for 1784. The year 1784 is instructive because that was the year Congress (then under the Articles of Confederation) defaulted on the national debt as it then existed.

The mark of an educated mind is to be content with an approximation as Aristotle informs us. We do not have the data necessary to make a computation to nine decimal places, but we can, with a few assumptions, get a reasonable sense of the relative magnitude of the indebtedness in 1784 compared to the current total national debt. To start, we shall use round numbers as shown next.

In round numbers, according to the 2010 census, the median household income is about $50,000, the total national debt is about $14,000,000,000,000, the total population is about 310,000,000, and the total number of households in the U. S. is about 110,000,000. If we divide the total debt by the number of households, we obtain an average indebtedness per household of about $125,000 in round numbers. If we divide this by the median income per household, we obtain 2.5 -- this is the number of years of total income the median household would have to pay if each were held equally responsible for paying the national debt. How does this compare to 1784?

The census closest to 1784 is the one in 1790, which showed that the total population was 3,893,635, of which 694,280 were slaves. There was an influx of people in the few years just prior to 1790, so, as an approximation, we will assume the population in 1784 was about 3,500,000. The census collected data on households, but they were mixed in with the number of males and females above age 16. To avoid this problem, we will assume that the ratio of households to population was the same then as now, that is, about 1:2.8. This gives, in round numbers, about 1,250,000 households in 1784.

The median income data is a little more difficult. McMaster [1] reports that the median wage in Boston for a typical workman was 12 shillings per week, which is 60% of a Massachusetts pound. The Massachusetts pound was set at 1289 grains of silver. For convenience, we will convert the Massachusetts pound to Spanish Milled Dollars (SM$), which was the de facto currency of that time; the milled dollar was reckoned at 386.7 grains of silver. Hence, the weekly wage of a workman was SM$ 2 Spanish milled dollars (surprisingly, an exact number). Therefore, at 52 weeks per year, the median annual income was approximately SM$ 104.

It may be objected here that most people in 1784 did not work for money wages. That is true; but it is also true that a money-wage is nothing more than a convenient conversion factor that represents the amount of labor necessary to procure the necessities of life. So, the typical household had to expend a certain amount of labor whether it was paid in money or not, and if held responsible for a fraction of the debt, that payment would have to be made either in-kind, in-labor, by taxation on land, or by converting a portion of labor to money. In the end, the debt is paid by the proceeds of labor and land, whether represented directly in money or not. We may therefore convert all households, whether agrarian or wage-earners, to the equivalent of money.

The total debt in 1784, converted from colony pounds, French livres, depreciated Continentals, and hard money was SM$ 68,000,000 at the above-mentioned conversion rate [2]. Performing the same calcula-

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tions as before, we obtain a per-household share of the national debt as SM$ 55, which is 0.5 years of median income per household necessary to pay its share of the debt.

Now compare our two results. In 1784, the total debt translated into about a half-year of median income per household; now, it translates into two-and-a-half-years of median household income -- a factor of five larger.

It may be objected that the dollar is worth a lot less today than in 1784, and this comparison is not valid. But note that I have compared debt in 1784 with income in 1784 in consistent units, and likewise for modern times. I have not tried to compare dollars now with dollars then; had I done so, the objection would be perfectly justified.

The Congress in 1784 could not pay that debt because of a defect in the Articles of Confederation: the Articles did not give Congress authority to raise a direct tax or to levy import duties. It could only ask the states for money, and often did not receive the amount requisitioned. Now, Congress has arbitrary power to tax, yet we will have great difficulty paying this debt because of a defect in the members of Congress: they believe they have a power to spend borrowed money on anything they want, whether authorized in the Constitution or not.

[1]   John B. McMaster, *A History of the People of the United States from the Revolution to the Civil War*, New York: D. Appleton & Co., 1900, p. 96.
[2]   Gaillard Hunt, ed., *Journals of the Continental Congress*, Washington, DC: U. S. Government Printing Office, 1928, Vol. 24, pp. 206-210 and 276-287; Vol. 25, pp. 954, 955

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