Puerto Rico's Fiscal Crisis:

Anomalies in Puerto Rico's Repayment Capacity

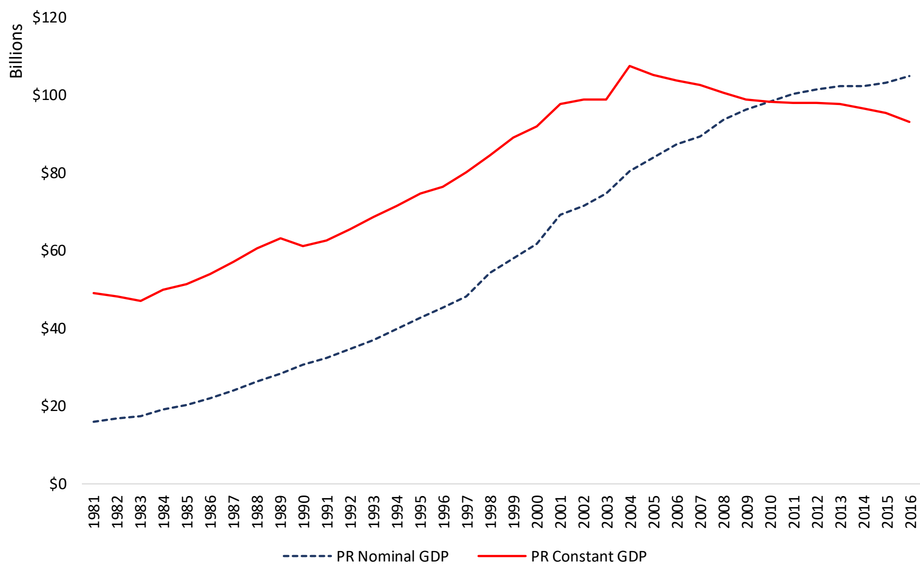
April 17, 2018

Puerto Rico lacks the capacity to fully repay its long-term liabilities, which include $50 billion in unfunded pension obligations and $74 billion owed to bondholders. While many complications naturally arise when determining how much Puerto Rico can repay its bondholders and pensioners, inconsistent economic data should not be one of them.

Unfortunately, Puerto Rico's economic data exhibits inconsistencies that lead to significantly different outcomes regarding the Commonwealth's repayment capacity. In this note, we examine one example of this inconsistency: the trends in nominal GDP growth compared to the trends in GDP growth adjusted for inflation (referred to as constant GDP growth).

Figure 1 compares the growth patterns in Puerto Rico's nominal GDP and constant GDP.[i] By definition, the difference in the growth rates between nominal GDP and constant GDP is the country's rate of inflation. Figure 1 clearly shows that 2004 was a pivotal year. While the measured growth in nominal GDP clearly slowed down beginning in 2004, the measured growth in constant GDP began to steadily decline.

Figure 1: Nominal GDP Versus Constant GDP
1981 - 2016



Source: St. Louis Federal Reserve, FRED

This divergence in growth paths would not be anomalous if inflation were rising sufficiently during this period. Based on the difference between Puerto Rico's annual nominal GDP growth and inflation-adjusted GDP growth, average annual inflation in Puerto Rico would have to be 3.1 percent per year.

However, this is an over-estimate of inflation according to the change in Puerto Rico's Consumer Price Index (CPI) data – a common measure of inflation. Based on data from the International Monetary Fund,[ii] while inflation surged to around 5 percent annually between 2005 and 2008, it did not persist. In fact, over the entire 2004 – 2016 timeframe, CPI inflation averaged 2.3 percent per year – 25 percent lower than the inflation rate implicit in the inflation-adjusted GDP measure.

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Importantly, the over-estimation of inflation in the constant GDP measure has implications regarding how much real economic growth Puerto Rico has experienced, see Figure 2. Figure 2 illustrates that in most years since 1981 constant GDP is under-estimating growth relative to the amount of economic growth that would be measured by subtracting measured CPI inflation from Puerto Rico's nominal GDP growth. As Figure 3 illustrates, these large gaps should not be occurring.

Figure 2: Percent Change in Constant GDP and
Percent Change in Nominal GDP Minus Percent Change in CPI
Puerto Rico

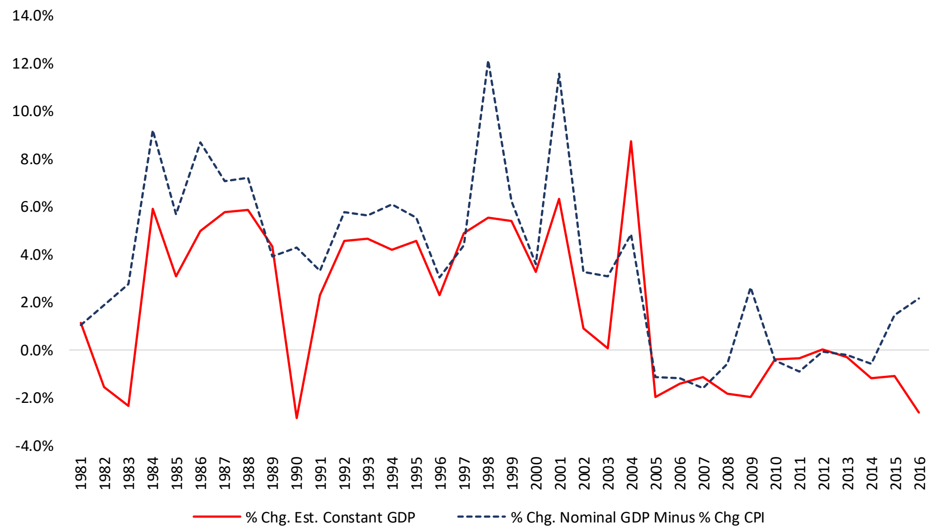
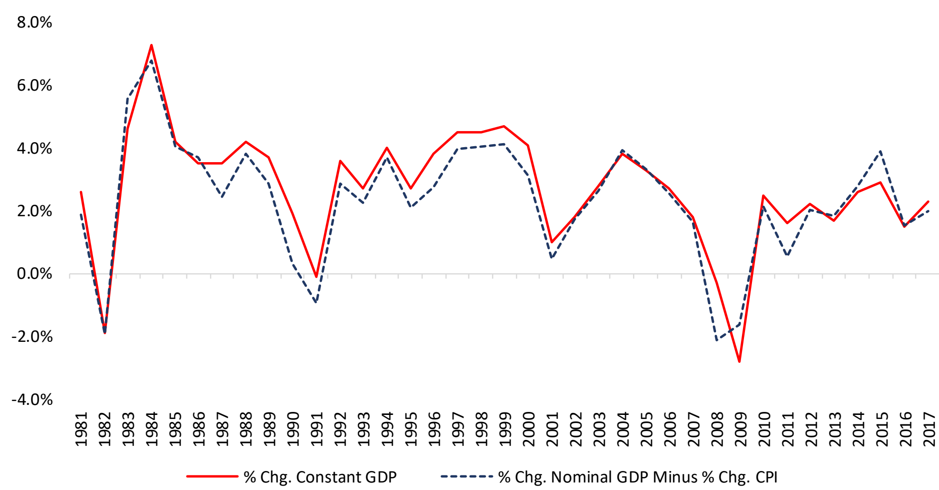


Figure 3 presents the same data as Figure 2, but for the U.S. economy. As Figure 3 illustrates, the divergent patterns exhibited in Figure 2 are, in fact, anomalous. Therefore, there are two radically different views on the amount of real economic growth that Puerto Rico has been experiencing.

Figure 3: Percent Change in Constant GDP and
Percent Change in Nominal GDP Minus Percent Change in CPI
U.S.



Given the extreme divergence between the measures of constant GDP growth and nominal GDP growth either one of two outcomes are occurring. Either the CPI is understating Puerto Rico's actual inflation rate, therefore the constant GDP estimate provides an accurate assessment of the inflation-adjusted amount of economic growth in Puerto Rico. Alternatively, the CPI is accurately portraying the inflationary environment, therefore the current measure of constant GDP is under-stating Puerto Rico's inflation-adjusted amount of economic growth. The implication for Puerto Rico's repayment capacity between these two alternatives is meaningful.

To get a sense of the significance of this difference, based on Puerto Rico's constant GDP growth measure, the economy in 2016 was 13.4 percent smaller than the economy just prior to the current economic stagnation began in 2004. If the CPI measure of inflation is more accurate, however, then Puerto Rico's economy was only 0.4 percent smaller in 2016 compared to 2004. While still a disappointing economic performance by any measure, this adjustment indicates that Puerto Rico's economy has a substantially larger repayment capacity than current estimates indicate.

These data vagaries surrounding inflation-adjusted GDP create unacceptable uncertainties regarding Puerto Rico's repayment capacity – especially because the consequences are too large if the repayment capacity is mis-measured. Until such vagaries are resolved, nominal GDP is likely to be a less distorting basis from which Puerto Rico's repayment capacity can be based.

References

[i] Nominal and inflation-adjusted GDP are both estimated based on the relevant GDP estimate per capita, multiplied by Puerto Rico's estimated population. All data are from the St. Louis Federal Reserve FRED database: https://fred.stlouisfed.org/tags/series?t=puerto+rico.

[ii] See: International Monetary Fund DataMapper: http://www.imf.org/external/datamapper/PCPIPCH@WEO/OEMDC/ADVEC/WEOWORLD/PRI.