GDP- Real and Nominal

GDP or gross domestic product determines the economic value of any country. Actual GDP adjusted to PPP and inflation will determine the real GDP based on adjustments. The PPP or the purchasing power parity comes under the use of daily average household spending of more than just the median spending of any consumer based country which needs to be adjusted to price rise. The numbers gives an indication of the GDP in real terms.

Serial Number	Country	Basic Food Items	Weight (BFI)
1	**USA**	***10.5***	**0.48**
2	**India**	***6.5***	
3	**China**	***7.8***	

Household Spending (Average)	Weight (HS)	Spending (Daily Commodities)	Weight (DC)	PPP Factor
22.5	**0.22**	**20.8**	**0.3**	**16.23**
19.8		**10.8**		**10.716**
21.5		**14.2**		**12.734**

Every item in equivalent dollar terms

PPP Factor = Aggregate (Weight * Spending)

The case of three countries has been taken. The basic food items, average daily household spending and the spending of the daily commodities is taken. The spendings are taken into equivalent dollar terms, with the purchasing power factor being weighted average.

The next table shows how the adjustments are made.

Serial Number	Country	Normal GDP (T $)	Inflation
1	**USA**	***4.5***	***2.5***
2	**India**	***3.2***	***3.4***
3	**China**	***3.8***	***4.2***

Nominal GDP (T USD)	PPP Factor	GDP (PPP) (T USD)	Real GDP
4.39	***1.00***	***4.50***	***4.44***
3.12	***1.51***	***4.85***	***3.89***
3.71	***1.27***	***4.84***	***4.24***

Nominal GDP = 100 * Normal GDP / (100 + Inflation %)

GDP PPP = Normal GDP * PPP Factor of USA/ PPP Factor of Other Countries

Real GDP (PPP and Inflation) = Square-root (Nominal GDP * Real GDP)

Hence, we see that the GDP is adjusted to PPP and inflation terms, when both are taken into account. Square root is taken for factoring the lesser value of GDP. Kindly look into the excel sheet for a better perspective.

Once adjusted to inflation, the real GDP is calculated for PPP adjustments. The graph below shows the corresponding changes.