

Non-linear relationship between inflation and economic growth: empirical evidence for Bolivia

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ABSTRACT

We analyze, for the Bolivian case, the presence of a non-linear relationship between inflation and economic growth for the period 1987 – 2013 through the identification of a threshold level above which inflation could generate negative effects on the economic growth.

For this purpose we use statistical and econometric methods. The results obtained by statistical techniques were preliminary while the econometric approach gave a more specific result. The first statistical method finds that the highest average economic growth was consistent with inflation ranges between 4% – 6% and 13% – 15%. Another more precise statistical method indicates that the highest average economic growth was achieved when the average inflation was 5.4% and 13%. With an econometric approach, we use a non-linear least squares technique and confirm the presence of a non-linear relationship between economic growth and inflation in Bolivia; we found that the threshold above which inflation may have negative effects on economic growth is 6%.

Furthermore, the results show that when inflation is less than 6% its effect on economic growth is positive (0.57) and when it reaches values above this threshold, the effect is negative and statistically robust (-0.14), highlighting the asymmetric effect of inflation on economic growth.

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