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See <https://silo.tips/download/mathematical-modeling-of-population-growth-of-uganda> .  
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Abstract: Uganda is a landlocked country in East Africa. It is bordered on the east by Kenya, north by Sudan, west by the Democratic Republic of Congo, southwest by Rwanda and to the south by Tanzania. It has an area of 236,040 square kilometers. The population of Uganda is predominated in the rural with highest density in the southern regions. The purpose of this paper focuses on the application of logistic equation to model the population growth of Uganda using data from 1980 to 2010 (inclusive). The data used were collected from International Data Base (IDB) online and were analyzed by using MATLAB software. We also used least square method to compute the population growth rate, the carrying capacity and the year when the population of Uganda will be approximately a half of the value of its carrying capacity. Population growth of any country depends on the vital coefficients.

In the case of Uganda we found that the vital coefficients alpha and beta are 0.0356 and  $1.20569 \times 10^{-10}$  respectively. Thus the population growth rate of Uganda, according to this model, is 3.56% per annum. This approximated population growth rate compares well with statistically predicted values in literature. We also found that the population of Uganda, 58 years from the year 2010 is expected to be 147,633,806 while the predicted carrying capacity for the population is 295,267,612.

Keywords: Logistic growth model, Carrying capacity, Vital coefficients, Population growth rate