

The Effect of Changing Population and Inflation on the Indian GDP

Naman Mishra

Undergraduate Researcher, Division of Economics,
School of Liberal Education (SOLE), Galgotias University, Greater Noida, Uttar Pradesh, India

ABSTRACT

This research relates the two very crucial aspect of the economy i.e., the rate of inflation and the population growth with the change in GDP. As we know that inflation is quite unstable therefore studying its implication on the GDP helps us better understand it and therefore deal with it. The increase of population boosts the GDP while the increase of inflation decreases the GDP as thought in terms of the laymen, but their intricate relations need more understanding. To be able to deal with such volatile influences over the GDP and being able to control their effects with a better understanding is what is aimed in this research.

KEYWORDS: *Economy, GDP, Inflation, Population*

INTRODUCTION

We are living in a society which has been jolted by a recent health crisis, changing the way of lives as well as the route of the economic development. The period of the lockdown pushed the people to the edge, changing their perceptions about comfort and the way of using technology, people began to give more importance to the digital world as well as trusting the process of ecommerce industry. We see that the period led to many mis-happenings in terms of loss of many lives as well as the boost of digital payments and ecommerce so as to facilitate the wall of safety and maintain the required social distance among the masses; it instilled among the masses regarding the confidence of trusting and buying without seeing as well as paying through digital currency which cannot be touched and seen. The period of the lockdown also had a effect on many businesses as they were all forced to either shut their operations or find way to survive owing to these new restrictions, this lead to many small time businesses finding their life support with the ecommerce giants such as flipkart, amazon, swiggy, Zomato and what not; so that they could still survive the drastic changes. Even the things which were considered luxury such as ordering food and

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vegetables from online websites and apps like blinkit (formerly grofers) became a trend as well as businesses like urban clap and urban ladder which provide services at home for minute things boomed to a great extent. The medical industry was the prime one which carried the flag of economy, because the rest of the major industries were shut due to lack of manpower and the unavailability of raw materials, which lead to the inflation in many sectors of the economy. The mortality rate which increased to the recent health crisis also had its impact on the GDP, while the birth rate helps in increasing demand of commodities leading to a significant impact on the GDP. The main aim of this study is to understand the intricate relation between all of these terms and their effect on the economic condition of a country.

Purpose

The aim of this study is to focus on the impact of GDP on inflation and how the two change their course they get intertwined. Inflation is termed as the rise in the price of the daily commodities, so it affects the economy in a negative fashion; we also focus on the rising population of our country and how it impacts the graph of the GDP. As GDP talks about any

country's average production in terms of goods and services; therefore, its change when the factor of inflation and population come into play are noteworthy. We see that our country is experiencing an unprecedented nature of the population growth as well as a high mortality rate due to the recent pandemic; it becomes imperative to determine its effect on the GDP on the whole as far as the rate of inflation is considered it is quite volatile and keeps changing due to the external factors such as the covid health crisis makes it important to study its effect on the GDP.

Methodology

The study was performed using mostly the data presented by the World Bank and the RBI in their financial reports, to perform tests to gauge the effect that inflation and population give to the GDP. We have taken into account the GDP as dependent variable while Population and Inflation are considered as independent variables.

Significance of Study

The study is significant because it highlights the importance of studying these underlying factors such as the inflation and population which greatly steer the course of our GDP. As we are a vast country therefore the effect of population created ripple effects on our economy and the constant changing dynamics of the world economy compels us to understand the everchanging rate of inflation which greatly effects the lives of normal humans. The change in both these directly affect our daily lives therefore it is important for us to study them and understand them in terms of our national economy.

Inflation

In terms of the international monetary fund (IMF) we can define inflation as how much the price of a commodity has changed or more appropriately increased in the span of the calendar year.[1] To understand inflation affects the daily lives of the common people directly as the prices are a thing which effect every individual; this creates a ripple effect which impacts the economy in a general basis. Inflation as considered in its natural and normal form is consistent with the economy as prices are volatile and can change without being under anyone's whim and fancy; but what disrupts this normal flow is when this rate of inflation breaches the set threshold value for any country and then what is triggered is termed as an economic crisis. To understand further we shall first understand the numerous reasons which lead to such a situation:

➤ Inflation starts with the fact that the cost of production rises drastically and too unbelievable to be handled normally. This is chain effect which

starts with the raw materials and ends to the final, finished product which reaches the consumer; when the prise of the raw materials increase it effects the production costs which in turn would definitely increase the cost for the end user. This chain reaction leads to what is called rising of prices or simply put inflation.

- In certain scenarios when a country in undergoing a certain crisis then the government can opt to print money to suffice the needs of the people. This way of getting out a crisis puts the country to greater risk as the prices of commodities start to rise to make up for excess flow of cash, this is termed as the demand-pull inflation.
- Another reason which can be termed as the cause of inflation can be attributed to taxes and regulations. If for any reason the tax levied is changed to a hefty amount it is reflected in the rise of the prices. The increased prices never come down even if the taxes or the reason for them change; this situation often leads to inflation over a longer period of time.

What we see that there are many reasons which puts the country into such a deplorable situation, but it effects the country on the whole. One such effect of inflation can be termed as depletion of national savings; people tend to look for ways to but essential stuff in such a situation thereby leading them to spend their whole savings in the process.[4] Another effect of inflation can be attributed to increasing the atrocities faced by the corporate people, from their perspective we see that there is no change in their income but on the other hand the prices of the commodities continue to rise and hurt them in the process. For the country as a whole, inflation leads to degradation of the value of its currency in the international market, the currency loses its face value and becomes weaker compared to its original position. Thus, such incidents tend to make the country lose its purchasing power and makes it weaker compared to the other world economies.

Population

When we look at the term population we clearly understand its meaning and the word is trying to say but what escapes is the fact that what role does it play in terms of economy. To understand further we must first look at the two definitions which govern the rate of population of any given country:

Mortality rate

Mortality rate is commonly known by the people as the death rate, which takes into account the number of deaths which are happening in a country over the span of year. It is an important factor which guides the

government to form health policies, and this has been the one which was highlighted during the public health emergency of the year 2019-2020. This is a factor which indirectly changes the course of the economy.

Birth Rate

Birth rate in layman terms means the rate at which children are born in a country over the span of an year. With the rapid industrialization and modernization of the society we see that the birth rate of our country has been up on a tremendous rate, sharply pushing us to the first position in the race of the most populous country of the world.

These two factors are those which drive what we call the population rate of our country. They are the empirical factors which relate to the rate of population of the country, their relation can be defined as follows:

$$\frac{dN}{dt} = B - D$$

Where we say B = birth rate,

D = death rate,

dt = change in time and N = the size of the population

Therefore, we see that Birth rate and Death rate determine the rate of population growth of a country, which plays a role in influencing the demand and supply of the country. Before moving on we shall see the different reasons which has led to this population explosion in our country:

- The current birth rate of the country stands at about 17.23 per 1000 people and the death rate stands at an approximate 7.34 per 1000 people. This wide gap and imbalance between the two leads to a boom in the general population, because the death rate is unable to make up for the sharp rise of birth rate therefore a definite increase of population as the formula depicts.
- Although the country is progressive there still is room for improvement and one such area would be the child marriage. Due to the large prevalence for child marriage in the country there leads to a sharp rise in births in the country due to lack of any proper guidance and maturity among the children.
- In the urban areas we see that the rate of illiteracy is too high, this is another cause of population boom in our country. We see that people are not aware of the concepts like family planning, contraceptives and do not think of the future as well as they should leading to a higher birth rate and contributing to this growth.
- The preference for the male heir in our country is another prime factor which is pushing India to the

front of the most populous country. Many families are still under the garb of gender discrimination and therefore are stuck with the opinion that without a boy their family is incomplete, this is another reason we see that lead to the growth of population in our country.

We see that overpopulation is a huge issue in the country and has some serious effects on the condition of the country. The ill effects of overpopulation are numerous which start with the foremost problem of scarce resources like the necessary resources such as food, clothing, shelter, these leads to starvation of masses. Another aspect which makes this problem horrific is the rising menace of unemployment which is because the number of resources are limited but people are increasing to a huge extent. We are also facing an unprecedented time wherein the natural resources are being depleted at a faster rate owing to the menace of overpopulation.

Inflation and GDP

GDP stands for the gross domestic product of a country which is a tool used to measure the capacity or the size of the economy of a country. In other words, it can also be termed as the value of all the goods and services which a country produces. GDP helps in determining the state of production of a country as well as gauge the economic performance of the same. The predictions for the GDP of a country shows how well its economy is progressing as well as guides the policy makers to make appropriate policies for better economic growth.

We see that in our economy money has its power in the form of a storage value, a person is considered wealthy with respect to the amount of money he holds; but when inflation occurs in any economy it effects this value of money. Since money is in excess during inflation therefore the storage value of it decreases thereby making money losing its face. We already know that inflation has a negative impact on the national income as it decreases the value of money as well as the export power of the nation.

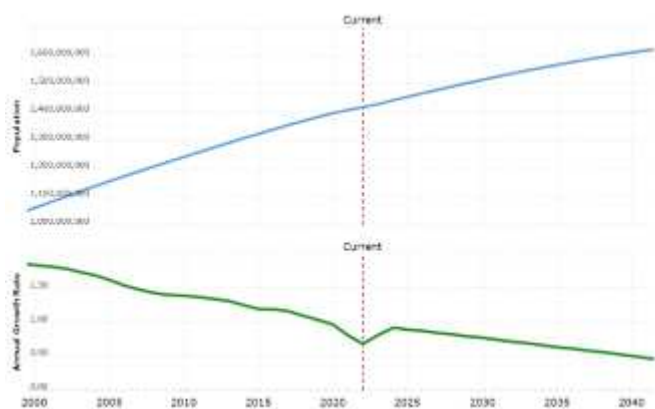


Source: World bank [2]

We see that inflation is also good for the economy in a miniscule form as increasing the prices of commodities contributes to the GDP which a no inflation stable economy can never do. Therefore, we see that there is a very intricate relation between the two factors, and both drive each other with equal importance. We see that the growth of GDP is important to maintain the profitability and growth of the commercial sector, but as it is said the excess of everything is detrimental and therefore with the excessive increase of GDP we see that the prices of products also increase in turn paving the way for inflation and all the increased profits becomes worthless due to the sliding value of money. The vicious relation between inflation and GDP seems vicious because it forms a loop wherein one thing leads to another, for example when there is hyperinflation the value of money is nothing and therefore it is watered down in the markets but to make up for the same the sellers increase the prices of the goods and services and maximize their profits, this leads to a boost to the GDP in the short term and the cycle of increasing prices and GDP continues.

Population and GDP

Over the last years we have seen that the Indian subcontinent is booming with population and projections showing India to be at the forefront of the world population race. From the graphs we can easily see that the population graph of India is not going to subside soon.



Source: United Nations - World Population Prospects[3]

Although we see that the growth rate has subsided as well as the growth rate will continue to drop further it seems that the population curve will go down, but the reality is different owing to the fact that even a small growth rate for an exponential increasing population is detrimental. We see that the relation between GDP

and population is not a linear one, on one hand the direct effect which the layman can understand lies in the fact that this explosion of people will create more demand for products and services. When the demand rises we see that the GDP also rises and thereby supports the economy. But in depth when we look at this relation the increasing population is detrimental to the GDP in terms that it increases a burden on the natural resources and thereby it does more harm to the GDP than anything good. Therefore, it is necessary to strike a perfect balance between these factors.

Conclusion

We see that every factor is intertwined with each other population is affected by inflation as with increasing inflation we see that the population is also affected on the other hand we have already seen the relation between the two individual factors, so it seems imperative to strike a balance between all these factors which influence the economic growth of the country. Excess of all these factors will create an imbalance and even the absence of either one of them would cause great turbulence, so what remains is to strike the perfect balance so that none has any ill effect on the other while bringing out the best in all of them.

References

- [1] Jearth, Palvi & Munjal, Shikhil & Singh, Gurcharan. (2019). an Emperical Study of GDP in Indian Economy on Inflation and Population.
- [2] Data Accessed from <https://www.macrotrends.net/countries/IND/india/inflation-rate-cpi>
- [3] Data Accessed from <https://www.macrotrends.net/countries/IND/india/population-growth-rate>
- [4] Singh, Rubee. (2018). Impact of GDP and Inflation on Unemployment Rate: "A Study of Indian Economy in 2011-2018".
- [5] Peterson, E. (2017). the Role of Population in Economic Growth. SAGE Open. 7. 215824401773609. 10.1177/2158244017736094.
- [6] Hysa, Eglantina & Mansi, Egl. (2020). Challenges of Sustainable Economic Development in Albania.