



ORIGINAL RESEARCH PAPER

Environmental Science

EFFECTS OF POPULATION ON ECONOMY AND ENVIRONMENT

KEY WORDS:

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ABSTRACT

Population plays an important role in the betterment of the world. But due to the issue of overpopulation, we are facing many problems and the natural resources are depleting at a tremendous pace. India being an developing country is facing the problem of overpopulation.

This paper shows how does the fast growth of population affects the economical and environmental resources

INTRODUCTION:

The increase in population of India started in the early 1900s, due to lack of famines the death rate reduced considerably. It further increased in the 1921-1951 period, during this time the population growth fluctuated between 1.0 to 1.35 per cent per annum. The year 1951 is called as **population explosion year**, in just a decade the population increased by 78.1 million which was nearly 21.5 per cent. The population kept on increasing and finally hit 1.027 billion in the year 2001, during this period the per annum population growth rate was 1.9 per cent.

The population growth rate of India was 17.7 per cent during the period 2001-2011 and current growth rate of the year 2017 was 1.13 per cent. The population of India is 1.38 billion which is 17.7 per cent of the world population.

India is the second most populous country in the world and it will most likely overtake China by the year 2027 and in the year 2030 the population will cross 1.5 Billion milestone (Anonymous, 2019).

Objective of the study:

The main objective of this study is to know about the hypothesis i.e. how the population do affects the economy and the environment of the country.

Hypothesis of the study:

- 1) Population is increasing rapidly in India.
- 2) Increasing population is affecting the economy and environment abruptly.

Effects of population growth:

The tremendous increase in the population has affected the country's economic development in many ways, a increasing population helps in economic development by providing more consumers and labour force, whereas when this increasing population turns into overpopulation, it retards the economic development.

Population growth hinders the economic development and the environment in the following ways:

1) Per capita income:

The population growth affects the per capita income unfavourably. The increasing population affects the per capita income 471.7\$ (2001) to 2338.12\$ (2020) per annum (Table 1) and in the year 2016, India ranked 112th out of 164 countries reported by the world bank (data.worldbank.org)

The population growth hinders the per capita income in many ways:

- Increase pressure of population on land.
- It leads to increase in costs of consumption goods

because of the scarcity of the co-operant factor to increase their supplies.

In the current COVID-19 situation the per capita income (PCI) of India has fallen even further by 23.9 per cent and in this situation the most affected areas are the ones which have more population density. More precisely speaking a total of 8 states and union territories (UTs), which constitute as much as 47% of India's GDP, are expected to witness a decline in PCI in double digits in the year 2021.

Delhi and Chandigarh may see a decline of 15.4 per cent and 13.9 per cent respectively, which would be nearly three times the decline at all-India levels. This is due to the fact that these are the urban areas which had stricter lockdown rules. Other states like Maharashtra, Gujrat, Telangana and Tamil Nadu are expected to witness a decline of 10-12 per cent in PCI in 2021, while in the states which had a lower PCI like Madhya Pradesh, UP, Bihar, Odisha the decline in PCI is less than 8 per cent.

SBI's economics wing expects the inequality gap in India to narrow down post COVID-19 pandemic as decline in income of rich states will be much greater than the decline in income of poor states.

Even if India replicates the best case example in history, it would take atleast till year 2024 for India to get back to it's pre-pandemic level of growth rate (Economic Times, June 23, 2020).

2) Per capita land availability:

India is an agricultural country, agriculture and its related activities act as the main source of livelihood for more than 80 per cent population of rural India.

The land availability is decreasing every year with the increasing population, which is causing a huge problem not only for agriculture but also for the land availability for people 0.149 ha (2001) to 0.118 ha (2016).

About 97 million hectares of land in India is degraded, which is nearly 30 per cent of the total land. As the population increases the requirement of food and shelter also increases which in turn increases the demand for land (Inani, 2019).

3) Total unemployment rate:

Unemployment is a huge problem that, the whole world is facing, with mechanization the requirement of labour is decreasing and due to the continuously growing population more people are getting unemployed.

Unemployment and poverty go side by side. Some people after a long time of unemployment start to find wrong ways of earning money.

The COVID-19 pandemic is affecting the employment on a great scale; nearly 8.2 million people are unemployed due to it. Even after reopening of industries, transports, hotels, malls, theatres etc. which gave jobs to many people, the density of consumers there is about 70-80 per cent less than what it used to be, hence there is a shortage of jobs.

The unemployment rate of India fell to 11.6 per cent on 28 June 2020, since then it got a little better after the opening of the lockdown. It eventually rose to 6.67 per cent in September but yet it increased to 6.98 per cent in October according to Centre for Monitoring Indian Economy (CMIE) (Times of India, 2020).

4) Per capita water availability:

Water availability is an huge issue in the world, although about 70 per cent of the earth's crust is covered with water, out of which only 3 per cent is palatable and with the increasing population it's becoming an even larger issue.

The per capita water availability is estimated to decline further to 1465 cubic meter by 2025 and 1235 cubic meter by 2050 (Anonymous, 2018).

Water is an important resource in human life and with the growing population it is decreasing to nothingness.

TABLE 1.
Changes in resources and GDP as per population

Year	Population (In crores)	Land availability (ha)	Water availability (m ³ year ⁻¹)	GDP (\$)
2001	102.8	0.149	1820	471.7
2002	104.5	0.146		491.99
2003	104.9	0.143		571.56
2004	106.5	0.141		656.52
2005	108.02	0.138		747.34
2006	109.5	0.136		837.46
2007	112.9	0.133		1076.84
2008	114.7	0.131		1048.74
2009	116.6	0.129		1153.19
2010	117.3	0.127		1422.93
2011	118.9	0.125	1544	1497.75
2012	120.5	0.123		1481.56
2013	122.08	0.122		1485.6
2014	123.6	0.120		1610.36
2015	125.4	0.119	1441	1639.69
2016	126.8	0.118		1761.63
2017	128.3			2014.01
2018	129.8			2037.69
2019	136.6			2171.64
2020	138		1421	2338.12

5) Literacy rate:

The literacy rate in India has been increasing from 61.01 (2001) to 74.02 (2020) but there are still places where people haven't got education (Table 2). The people who know the importance of education and having good economic conditions are shifting elsewhere, having good education facility. The educational resources are very limited due to the increasing population, which needs our primary focus. The lack of proper resources, knowledge and their implementation is resulting into many children being forced into child labour.

Table 2. changes In Literacy, Unemployment And Registered Motor Vehicles

Year	Literacy rate (%)	Total unemployment rate (%)	Number of registered motor vehicles (In crores)
2001	61.01	5.66	5.499
2002		5.72	5.892

2003		5.73	6.700
2004		5.67	7.271
2005		5.60	8.150
2006	62.75	5.45	8.961
2007		5.32	9.670
2008		5.28	10.535
2009		5.57	11.495
2010		5.64	12.774
2011	69.30	5.64	14.186
2012		5.65	15.949
2013		5.67	18.244
2014		5.61	19.070
2015		5.57	21.002
2016		5.51	23.000
2017		5.42	25.300
2018	74.37	5.33	
2019		5.36	
2020	74.02	11.6	

On the International Literacy day (8th September) 2020, Kerala with 96.2 per cent literacy rate has once again emerged as the most literate state in the country, while Andhra Pradesh came at the bottom of the list with a rate of 66.4 % as shown in a report by National Statistical Office (NSO) (Hindustan times, 2020).

The literacy rate is an important aspect as when the people are literate and woke with the right education it decreases the number of crimes like child labour, child marriage, rapes etc.

6) Waste production:

The population growth has a huge role in the waste production in the world; the more the number of people more the waste generated. India generates more than 100 million metric tones of municipal waste it may cross 150 million metric tones mark by 2030 (Jaganmohan, 2020).

Out of this total waste only a certain amount is treated or recycled, the remaining is dumped into the landfills which causes many environmental as well as health issues in the society.

According to World Bank, India is the largest producer of waste, owing largely to the size of its population. More than a tenth of world's waste is produced in India. Waste disposal also causes CO2 emissions which affects the health of the people and give rise to many diseases. It causes many kinds of pollution like soil, air, water etc. In some areas of India the landfills were supposed to be away from the city, but with the increasing population they are now in between the populated areas. An example of that is the Deonar dumping ground in eastern suburb of Mumbai. It is the largest dumping ground in India which was set up in 1927, which was located far from the city but with the increasing population it is now in the middle of a populated area, and it is causing a lot of health issues amongst the people living there. In January 2016, a fire broke out at the dumping ground and raged for days. The burning garbage gave out gases like methane which are toxic, due to which the schools were forced to shut. The fire was finally extinguished on February 5, almost a week later. (TOI, 2018)

7) Number of motor vehicles (registered):

With the increasing number of population every year, the need of mode of transportation is also increasing thus increasing the number of production of vehicles.

These vehicles cause a lot of air and sound pollution which harms the environment. They also consume a large amount of fossil fuels, because of which the depletion rate of fossil fuels is also increasing.

India had nearly 5.5 crores registered motor vehicles in the year 2001 which rose to 25.3 crores in 2017. With the increase

in motor vehicles the risks involved with them also increased, in the year 2017 there were over 150 thousand road accidents. It is estimated that by the year 2050 India will have 61.1 crores cars which will be the highest number of cars in the world (Asher,2020).

CONCLUSION:

The above study shows that the increasing rate of population is affecting the economy and environment in the developing countries. It also shows us how the growing rate of population is hindering the economical growth of our country. Thus we came to know that the growing population is more of a liability than a asset. With this increasing population the demand for food grains, firewood and other naturally available resources also increases which causes deforestation which in turn causes problems like soil infertility, floods and irregularities in the weather. This condition can only be stabilized if the growth rate of population is proportionate to the resources available.

Propositions to control population explosion:

1. Providing proper sex education to the people.
2. Family Planning
3. Providing proper medical facilities
4. Promoting delayed marriages
5. Proper laws regarding the number of people in the family
6. Providing incentives to the people following the rules properly
7. Women empowerment
8. Providing education
9. Easy and Cheap availability of contraceptives.

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