Population Projection For The City Of Saharsa

Dr. Ganesh Prasad*
Dr. Birendra Prasad Yadav*

Population porjections are estimates the total size and composition at future dates. The assumptions involved in the population projections are always subject to much more doubt than those for population estimates. This may involve events which may have not yet taken place occasionally. They are reliable indications of the nature of the assumptions on which a population protection should be based. More commonly, the range of possiblities for each known factor which my inlfulence one or more of the components of population change is os great with hidden factors numrous, that the selection of the basic assumption from among those which are possible may be little more than an intelligent guess. For this reason, two or more projections are commonly prepared on the basis of different set of assumptions so that the user may take the usual probable developments into account or may select the estimates based on the single set of assumptions best suited to his own needs. The word projection is used instead of prediction of forecast because the results are expected to hold true only to the extent that the assumptions are fulfilled.

For the purpose of present discussion it is convenient to treat population estimates and projections together, since similar statistical techniques.

STUDY AREA :-The study area of saharsa city froms part of middle ganga valley stretching roughly between the reverine tracts of the Ganga in the south and tha siwalik hills of Himalaya in the north. Within this limited geographical space magnitude of the pressure of population has to such an extent that numerous problems like unemployment, scarcity of food, shortage of housing and horrible incidence of crime have been acute.

The geographical perspective of the city of Saharsa is diverse due to its location in the flood ravaged belt of the Kosi river. Located on the eastern side of Kosi river just 5 Km. east an north of Telabi river the people in the city of Saharsa always left happiness and hence, it is a place of eternal peace and enjoyment admidst myriads of channels of the Kosi river.

So far as the areal extent is concerned the city of Saharsa extends over an area of 35Km2 and divided into words. According to 2011 census it has a population of 1,56,540 and the density population is 4473 persons per square Kilo,eter. The latitudinal postion of Saharsa is 25052' N whereas longitudinal position is 860E, 0' 0".

The sphere of influence of Saharsa suffers from annaul floods as the surrounding area is lowland river area. Chaur and wetlands formed in course of the river has unequal deposition of sand and silt in the flood plain of the Kosi river.

METHODOLOGY :-The study is based on data collected from different sources, an intensive field as work and analysis and intrpretation of data. The necessary infromation and relevant data hav been collected from various government publications district and block level population data have been obtained from cnesus operations, Patna, Bihar. These data have been suitably computed and interpreted to arrive at the fundings. Field work was done to verify the data and findings.

QUALITY AND TECHNIQUES :-The quality of population estimates and protections is dependent upon (a) the quality of the basic data, (b) the accuracy of the assumptions on which the estimates of projection is based, and (c) the validity of the techniques applied in manipulating the data in accordance with the assumptions. If the basic data the estimate or projection would be entirecly correct no matter how good the statistical procedures used. Consquently, no population estimate or projection should be published without a statement of the underlying assumptions.

Many of the techniques used to prepare population estimates and projections are essentially the same whether one is working with one or more segments of a population or working with the total. If the basic data are reliable. Under certain circumstances. It shall be possible and desirable to treat each age-sex group sparately in preparing estimates or projections for the entire population. If this is preparing estimates or projections for the entire population. If this is done, estimates by age and sex are obatined as a byproduct.

Demographers make use of a wide variety of techniques for preapring population estimates and projections. The most detailed meth-

***Associate Professor, M.A. (Geography) Ph.D P.G Dept. Of Geography Madhepura Bnmu Madehpura**

ods for obtaining estimates and projections treat each of the components of population change separately, and are consequently referred to as component methods. Strictly, mathematical methods do not follow instead this, but simply base the estimates and projections of population size on past growth performance. Such methods are usually less reliable than the component method.

FUTURE ESTIMATES OF POPULATION :

Estimate of the future population growth become necessary for it greatly helps in planning for the future in any region. It is difficult to estimate the future population of an area as small as one under investigation due hampered by any unforeseen calamity. Besides the variable trend may alter the estimated figure (Ram, L.N. 1969).

Therefore, any atteempt to make population projection is flawed with uncertainties as there is no fixed law of population increment and various techniques of population projection are apt to give widely varying results (I sard, 1975). After careefully considering a number of techniques of population projection, it has been decided here to use arithmetic and geometric progressions. The future urban population of Saharsa district has been estimated from 2001 to 2031 cosnidering the period 1991 for estimation of the growth fo population per year. In arithmetic progerssion the estimate has been made in the following way:

SHASRSA : FUTURE ESTIMATE OF POPULATION

Year	Actual Population
1961	14803
1971	23217
1981	57227
1991	80011
2001	124015
2011	126540

ARITHMETIC PROGRESSION

P. 2011 156540

P. 2001 124015

DIFFERENCE 132525

= = 3525 Per Annum Growth

There fore Population. 2021 :

P. 2001+R Years interval

= 124015+3252 20

= 124015+65040

= 189055 (P. 2021)

There fore Population. 2041 :

= 124015 +3252 40

= 124015+130080

= 254095 (P. 2041)

There fore Population. 2031 :

= 124015+3252 30

= 124015+97560

= 221575 (P.2031)

Geometric Progression:

P. 2011 = 156540

P. 2011 = 124015

or log R= 1/10 (log P. 2011-LOG P. 2001)

or log R= 1/10 (log, 156540-kog 124015-LOG P. 2001)

= 1/10 (5.19462-5.09347)

= 1/10 (0.10115)

= 0.01115 Per Anum Growth Rate.

There fore Population 2021

= log P. 2001+R21-1

= 5.09347+0.010115 20

= 5.09347+0.202300

= 5.29577 (Sec Anti log)

= 197100 (P. 2021)

There fore Population. 2031.

= 5.09347+0.010115 30

= 5.09347+0.303450

= 5.3969 (See Anti log)

= 248800 (P.2031)

There fore Population. 241

= 5.09347+.010115 40

= 5.09347+0.40460

= 5.49807 (See Anti log)

= 31400 (P. 2041)

TABLE-01

Actual And Projected Population Of The City O Sharsa

YEAR	ACTUAL	ARITHMETIC	GEOMETRIC
1961	14803	-	-
1971	23217	-	-
1981	57227	-	-
2001	124015	-	-
2011	156540	-	-
2021	-	189055	197100
2031	-	221575	248800
2041	-	254095	314100

Source:- Calculated with the help of the census of various years.

2 2 4; 4 2 = 8 and so on is arithmetical progression whereas in Geometric Progression the growth takes place in the following way:

2 2 = 4 ; 4 4= 16, and so on.

In this way, the method of geometric progression gives a fast rate of population increase in comparison with the arithmetic progression.

Fig. 01 show that the arithmetic and geometric progression more or less gives the correct picture of the trend of population of growth in urban Centre of Saharsa. The growth of urban population is correctly linked with the industrial and economic development lending to the high density of population in urban areas. It has been found that in case of total and urban population both the arithmetic progressions do not give correct picture of population growth from 2011 to 2041 because through the graphical approved (fig. 01) the lives of future population estimate decline to some extent if we consider 2001 to 2011 as a trend time. For this fact extrapolation (hyperbolic growth) may be employed to estimate the future population. This popualtion protection is highly needed I order to see the trend of population growth on limited urban resource in the city of Saharsa.

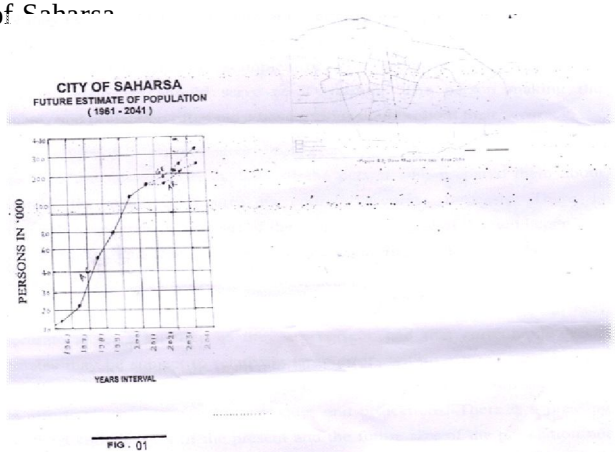

FIG . 01

CONCLUSION :- The job of a population analyst is often directed primarily even entirely twoards the goal of arriving at the most reliable population estimates and projections possible on the basis of the data available to him.

There may be a considerable amount of uncertainty even in population estimates for current dates. The widely varying estimaets of the 2021 population of saharsa presented here as examples of different methods of preparing population estimates should serve as a arning.

The person making the estimates and projection often must have serious doubts about their accuracy.

Perhaps, unfrotunately, the users of population estimates and projections are not often as cautious as the person who prepared them about accepting he resulting figures as entirely accurate forecsts. There is considerable tendency on the part of the users to make use of those numbers; such reservations should be clearly stated in the accompanying text.

The fact is that population projection for most countries are grossly inaccurate at least as often as they are correct and that current population estimates may be subject to relatively large errors within a few years after the census date. This should not discourage the population analyst from making the need for knowledge of the present and the future size of the population not only by the government agencies, but also throghout the business community. Estimates and projections of one sort or another will be made by someone; it is usually better that they be made by a person who is aware of the many factors which are known to have an influence on the population processes and who has at his command on knowledge of the techniques available to take those factors into account in arriving at correct population estimates.

In the city of Saharsa population planning should involve to check the growth of population through natural and artificial means. The welfare of people thrugh proper training, education and provision of assitance for the success of family planning measures. Inspite of these measures are increasing the strees by the people is increasing resulting in an unwanted of population is growth. This trend is suicidal for the nation as well as the city of Saharsa as well.

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