

Unit - IV Demography.

Population Projection Technique:

Introduction:

Projection of population implies forecasting of population in the future years to come, on the basis of suitable assumption on the determinants of population growth such as future pattern in,

- (i) fertility (ii) mortality and (iii) migration

The success of projection or forecasting lies not only on the technique of population projection but also on how far realistic are the assumptions relating to the demographic factors affecting the size and growth of population in future years to come.

The technique of population projection can be divided into following cases:

- (i) Projection by using a single mathematical model such as projections by logistic, Gompertz curve or any other deterministic models which have been believed by demographers to describe the natural growth of population.

- (ii) Population projections by taking into consideration of the components of population growth known as "Component method of population projection."

These techniques are understandable and empirically valid since these take account of each component of growth individually but again success in projection depends on the reality of the assumption.

techniques in future years to come.

i) Population Projection by employing the techniques of stable or quasi-stable population techniques:

These techniques are valid to stable population or population which shows departure from stability because of departure of assumptions in respect of one of the fertility or mortality parameters only.

~~Form~~

Representation of the component method by the use of Lestic matrix (L-matrix) (the population stable i.e. the fertility and mortality parameters are independent of time.)

Let us translate the idea of component method of Projection illustrated (A) and (B) in a set of linear equations while assuming the adjustment due to migration is nil, i.e. assuming a buoy balance in emigration and immigration while representing the Projection process, we make the following assumptions:

The projection is made on every fifth year $t=5$. Representation of the component method in the form of a series of equations is made with respect to female population only. The population is also taken as stable with birth and death parameters independent of time.

child bearing age is taken for 15 to 45 for the sake of convenience, we denoted by

$nP_x^{(t)}$ = female population in the age x to $(x+n)$ at time t

nfx = Age specific fertility rate in the age x to $(x+n)$

9-5

CBCS course

S. S. in Statistics
V. V. Ujjain

M.A./M.Sc Statistics II sem

Paper IV Demography

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Teacher: Dr. Ruchi yada @
9993482294