

## DEMOGRAPHY COMPOSITION AND DISTRIBUTION IN INDONESIA PERSPECTIVE FOR POPULATION PROJECTION AND JOBS OPPORTUNITY

Nurman\*

---

**Abstract:** Indonesia is one of larger country in the world with thousands of island and hundreds of culture spread over Indonesia territory. Demography and population is one of the issues in Indonesia because of large region and various culture that currently facing. This study discuss on demography composition and distribution in Indonesia and population projection over Indonesia region to estimate jobs opportunity. Some methods used to find and analysis composition and distribution of population in Indonesia, primer and sekunder data collected from various source to find spread of population in thousand of Islands. Formulas used to calculate distribution and estimate population in future years to find growth of population then number of population in overall can be finding. Population projection calculates used some formula to estimate number of population based on the levels and ages, the projection of population is important to prediction number of jobs needed in a region or city. Population projection related to the jobs opportunity, thus with high number of growth in a city required much number of jobs must be available else jobless is increasing. In this study, the data take from in a city as representative from other city in Indonesia and to find current population In Indonesia.

### INTRODUCTION

Human resources development is an important component in addition to natural resources and technology. The rapid economic developments in some countries were mainly due to these countries already having sufficient human resources and qualified. In connection with the above, it is important to examine and evaluate the human resources that exist in a region or country. The study of the structure, process and quality of human resources is DEMOGRAPHICS. Population structure includes the amount, distribution and composition of the population. This population structure is always changing and these changes are caused by the demographic process of birth (fertility), death (mortality) and migration. The word demography is a term derived from the Greek, which consists of two syllables, namely “Demos” means people or residents and “Grafein” which means to draw or write. So with such demographics can be interpreted as writing or a picture of the population. Demography is the study population (of a region), especially regarding the amount, structure (composition of the population) and development (amendment). Demography is study the number, distribution, territorial and composition of the population and the changes. The causes of those changes are usually caused by (Said Rusli, 1989).

- Birth (fertilitas)
- Death (mortalitas)

---

\* Faculty of Political and Social Science, Universitas Islam Riau, Pekanbaru, Riau, Indonesia.  
Email: nurman07@soc.uir.ac.id

- Teritory movement (migrasi)
  - In migration
  - Out migration
- Social mobility

Ida Bagus Mantra, (2003:2). Demography is study an interesting picture of the population described statistically. Demographics study the behavior of the whole and not the individual behavior (Dudley Kirk, 1996).

- (a) Demography is a statistical analysis of the number, distribution and composition of the population as well as the components of variation and changes.
- (b) Population studies questioning the relationships between demographic variables and variables from another system.

Demographics as one of the disciplines to discuss and assess the population in the aggregate or collectively, it is essential to learn, especially for policy makers both from government and non-government because the science of demography will present comprehensive information about fenomena, demographic phenomena and allow it to be able to play a role in solving development problems concerning the population as a subject as well as objects of development, in addition to the demographic data can be used as a reference or basis for making policy in various sectors. In the infrastructure and regional development planning, population data plays an important role. The more complete and accurate population data available then more easily and appropriate development plan was made (Yu Xie, 2000). For example, in education planning, the necessary data regarding the number of school-age population in and workers in the field of public health requires information on high and low mortality and population mobility. Many other examples where population data is indispensable in the development plan. Information on the population is very important for both private and public institutions, both at national and local levels. Planning related to education, taxation, military, social welfare, housing, agriculture and enterprises that produce goods and services, roads, hospitals, shopping centers and leisure centers would be more appropriate if all of which are based on population data (Walter Scheidel, 2006).

Assessment of the population is one of the things that are very important, because it is directly related to the goals to be achieved, namely "Creating Community Welfare". In the past, the government is interested in population projects primarily for purposes of national security, but in recent decades, the government requires a population project with respect to its responsibility to improve socio-economic conditions of people through planned development. Given all the development plans, both economic and social considerations regarding the number and characteristics of the population in the future. Projections regarding the number and structure

of the population are considered as a minimum requirement for the development planning process. In the development, there are some basic requirements needed such as (Corrigendum, 2012).

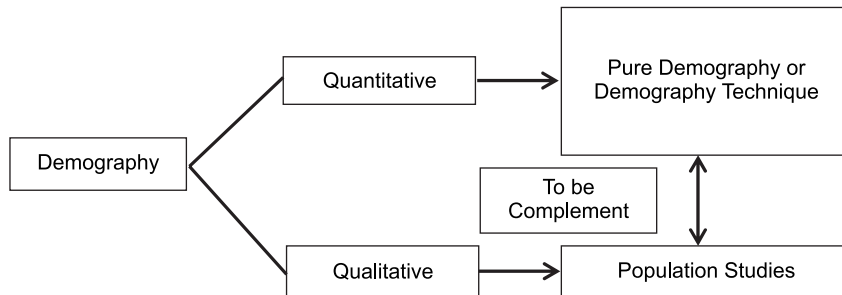
- Natural resources
- Human resources
- Facilities, technology and infrastructure

Large number of population will be an effective basis for national development if the population of good quality. However, with the rapid population growth will be difficult to increase the quality of life and well worthy.

**SCOPE OF DEMOGRAPHY**

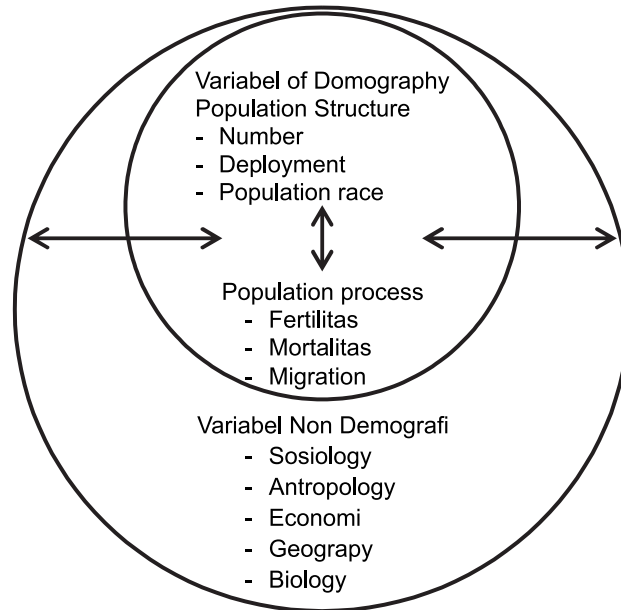
Demographics as one of the disciplines that have evolved over the past century, the natural history of its development problems, especially regarding the distribution branch of science disciplines. Starting from the development process, so that the scopes of scientific study demographics are(Demography Institute, 2007).

- (a) Demographic Studies examines the growth in population of the quantitative (amount, distribution and composition) as well as in terms of qualitative (genetic and biological).
- (b) Studies also examine demographic computation techniques of demographic data.
- (c) The demographic data, measurement, and analysis techniques as well as the consequences and population projections.
- (d) Interdisciplinary Science (Economics, Sociology, Anthropology, Geography and others).



**Figure 1: Scope of study on demography**

Demographics are not only assessing demographic variables such as fertility, mortality, migration, population strktur and processes, but also discuss non-demographic variables that also affect human development such as social, economic, cultural, and geographical and so on.



**Figure 2: Relation between demography variabel demografi to variabel non demography**

### **OBJECTIVE AND BENEFIT DEMOGRAPHY IN INDONESIA**

In general, estimation or the population statistics and demographic data is needed, especially by policy makers (government), both among government and non-government. Data on the number and population growth are used as baseline information for the development of infrastructure, population policy such as policy development declining birth rate, health care improvement, directing the distribution of the population; the population will need food supplies, education, housing and employment. In the regional development planning, population data plays a very important, the more complete and accurate population data more easily available and appropriate development plan was made. For example in education planning, the necessary data regarding the number of school-age population and community health workers need information about fertility rate (births), mortality (death) and morbidity (illness / disease) population (Demography Institute, 2010).

In the political system, population statistics are indispensable to determine the number of voters in every election in particular. Similarly, in the industrial sector in which the company that produces children's needs such as clothing, milk, toys can use the data the number of people especially those who are young (aged 0-14 years) to be used as a basis for planning the production levels. In addition, demographic data can also be used to determine the socio-economic conditions of the population of a region or country. In the employment perspective, for example, community

residents can be seen from the percentage according to the main areas of work, employment status and occupation.

In general, there are four main objectives, namely the science of demography in Indonesia:

- (a) Studying the quantity, composition and distribution of the population in a given area and its revisions.
- (b) Explaining the growth of the past, and its spread to the estimated reduction in population growth in the future.
- (c) Developing a causal relationship between population growth and development of various aspects of social, economic, cultural, political, environmental, and security.
- (d) Studying and anticipating the possibilities of the consequences of population growth in the future.

Based on four main objectives of science demography above, the science of demography will be useful for:

- (a) Development planning related to the education, taxation, military, social welfare, housing, agriculture and others made by the government to be more on target when considering the population composition of the present and future.
- (b) The performance evaluation of the government's development by looking at changes in the composition of the population there now and then along with the factors that influence it.
- (c) Observe on improve living standards through the levels of average life expectancy of the population.
- (d) Observe on how quickly the economic development that seen from the availability of jobs, the percentage of the population that is in the agricultural sector, industry and services.

### **COMPOSITION AND DISTRIBUTION POPULATION IN INDONESIA**

Population growth is a dynamic equilibrium between the adding of number population and reduces of number population in residents. Continually population will be affected by the number of babies born (increasing the number of residents), but on the other hand will be reduced by the number of deaths that occurred in all age groups. Meanwhile, migration also plays a role in affecting the population. Immigrants will increase and emigrants (those come out) will decrease the population. Thus we can conclude that the population growth caused by the three demographic components, namely fertility, mortality and migration (in and out). The difference between fertility and mortality are called changes in the reproductive or of natural growth. The difference between in-migration and out-migration is called net migration. So, population growth is influenced by the natural growth and net migration (Abdul Haris, 2002).

The population growth can be expressed by the following formula:

$$P_t = P_o + (B - D) + (M_i - M_o)$$

Where:

$P_t$  : number of population in year ( $t$ )

$P_o$  : number of population in based yaer (0)

B (Birth) : number of birth in periodice 0 –  $t$

D (death) : number of death in periodice 0 –  $t$

$M_o$  : number of out-migration in periodice 0 –  $t$

$M_i$  : number of in-migration in periodice 0 –  $t$

If the process of population growth and its components are described in the table 1, following a model:

**TABLE 1: MODEL OF POPULATION GROWTH**

Criteria	Migration		
	Positive	Negative	Null
$M > F$	N, T, S	T	T
$M < F$	N	N, T, S	N
$M = F$	N	T	S

Where:

M : Mortality

F : Fertility

N : Increase

T : Decrease

S : Normal

This model shows it can be seen clearly how the influence of each demographic components in the population growth. Moreover, in the study of demographics is also known population age structure.

World Health Organization (WHO) defined by size is as follows:

- Young age (< 15 year / 0 – 14 year)
- Productive age (15 – 59 year)
- Old age (< 60 year)

Based on the deployment of the population by age and gender, the characteristics of the population of a country can be grouped into:

- (a) *Expansive*: If the majority of the population is in the younger age groups, this type is generally found in countries that have a birth rate and high death rate. This type is found in countries with rapid population growth rate is still high as a result of the declining birth rate and death rate. For example found in the countries of Indonesia, Malaysia, the Philippines, India and Costa Rica.

- (b) *Constructive*: If population are in the younger age groups are few in number, this type is found in countries where the birth rate falls rapidly, and low mortality. For example found in Japan and countries in Western Europe such as Sweden.
- (c) *Stationer*: If the number of population in each age group is almost the same, except in specific age groups. This type is found in countries with high levels of low birth and death rates. As shown in European countries such as Germany (Hendrik P., 1999).

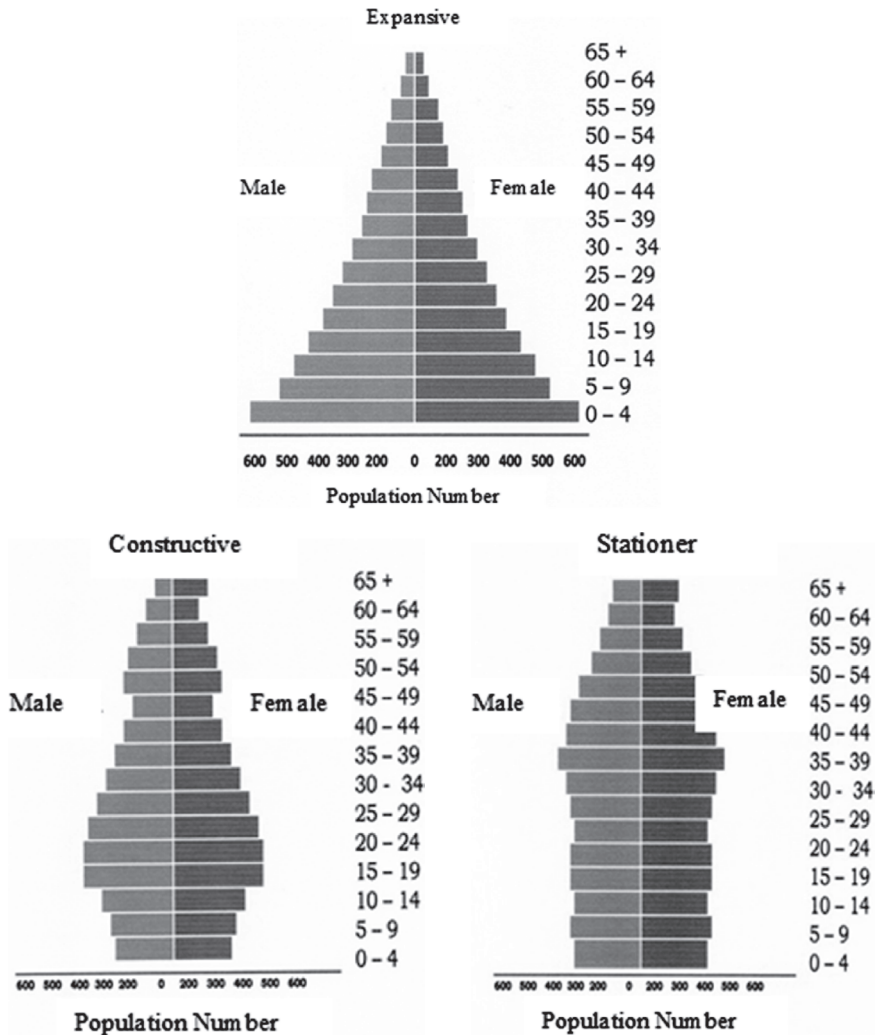


Figure 3: Population pyramid

## POPULATION DISTRIBUTION

Population distribution in Indonesia basically consists of a few model based experience in actual community in several of region. Currently, Indonesia have 34 states (province) started from west region is Aceh Province to the eastest region in Indonesia is Papua Province (Bappenas, 2005).

### (a) Geography Population Distribution

Distribution of the population either in worldwide or in Indonesia geographically is undistributed accordingly. This is due to several factors, natural factors (climate and soil fertility), social and economic (the availability of facilities and infrastructure) as well as cultural and political factors. Such conditions can eventually lead to problems such as providing employment and education that is limited. Results of research conducted at the United Nations in 1998, is known world population  $\pm 5.9$  billion people, 3.6 billion people spread the Asian continent, similarly in Indonesia, geographically too uneven, most people in Indonesia in Java Island almost (60%).

### (b) Government Administrative Population Distribution

According to the Constitution of 1945 Section 18 subsection (1) and Law No. 32 of 2004 on Regional Government Article 2 (1), stated that the Republic of Indonesia is divided into provincial regions and these provincial regions shall be divided into districts or city. If the distribution of the population seen in public administration it can be seen that in general the area that became the center of government level distribution of the population is denser than other areas (Indonesia Act. 1992).

### (c) Development Population Distribution

Law No. 10 out of 1992 Article 14 (1) states that the government sets the policy direction of mobility or distribution of the population in order to achieve optimal population distribution is in accordance with the carrying and environmental capacity. Carrying capacity is the ability of the natural environment and its elements and sources sustainably support human life, while the capacity of the existing only two, namely:

- First, the capacity of the built environment is the ability of man-made environment to meet the needs of the population.
- Second, the environmental capacity is the ability of human social and population groups of different communities to live together as a unified, harmonious, peaceful and safe.

Development can be defined as a process to improve the welfare of society through social, economic, political utilizing natural resources and technology. Development is directed to improve the welfare of the population by taking into account spatially.



**BASIC FERTILITY STANDARD**

The basic standard of fertility can be grouped into two based approach, based approach its size crate latitude, generally one or five years. This measure reflects the level of fertility of a population group or a group of women in a certain time. Approach with its size reflects the history of the birth or reproductive history. This measure reflects the history of births during a woman’s life from the beginning to the end of reproductive life.

There are six standard of fertility, i.e.,:

- (a) *Crude Birth Rate (CBR)*: Crude birth rate (CBR) is the number of births in a given year per thousand of the population in the middle of the same year. The formula for calculating the CBR is as follows:

$$CBR = \frac{B}{P} \times k$$

Where:

- B : number of birth in 1 year
- P : number of population in middle year
- k : constant number, usually 1000

- (b) *General Fertility Rate (GFR)*: General fertility rate (GFR) is the number of births in a year per 1,000 resident women aged 15-49 years or 15-44 years in the middle of the same year, the formula used to calculate the GFR is:

$$GFR = \frac{B}{P_{15-49}^f} \times k \text{ atau } \frac{B}{P_{15-44}^f} \times k$$

Where:

- B : number of birth in 1 year
- $P_{15-49}^f$  : number of women population age 15 – 49 year in middle year
- $P_{15-44}^f$  : number of women population age 15 – 44 year in middle year
- k : constant number, usually 1000

- (c) *Age Specific Fertility Rate (ASFR)*: The birth rate by age group (ASFR) indicates the number of births of women in an age group in a given year per 1,000 women in the age group and the middle of the same year. The formula for calculating ASFR is as follows:

$$ASFR_i = \frac{b_i}{P_i^f} \times k$$

Where:

- $b_i$  : number of women birth in group age of (i) in year
- $P_i^f$  : number of women population in group age (i) in middle of same year

$i$  : group age ( $i = 1$  for women group age 15 – 19 year,  $i = 2$  for 20 – 24 year, ...,  $i = 7$  for 45 – 49 year)

$k$  : constant number, usually 1000

In the Table 2 shows number of ASFR in Pekanbaru City, Riau Province, Indonesia.

**Table 2. Number of birth Pekanbaru City**

<i>Age Women</i>	<i>Population Women</i>	<i>Birth Number</i>	<i>ASFR</i>
(1)	(2)	(3)	(4)=[(3):(2)]x1.000
15 – 19	585.414	15221	26
20 – 24	589.946	57225	97
25 – 29	505.509	61672	122
30 – 34	399.754	33979	85
35 – 39	330.342	13544	41
40 – 44	257.850	2579	10
45 – 49	188.589	754	4
<i>Total</i>	<i>2.857.404</i>	<i>184.974</i>	

Source: BPS 1996, dalam Lembaga Demografi FE-UI, 2010 : 77 danmodifikasi

Benefit of birth rates by age group (ASFR) is as follows:

- ASFR size more closely than has calculated GFR for women's ability to give birth (fertility rate) according to age.
- With ASFR, possible to undertake a study of fertility by cohort (year of birth) or according to specific age groups.
- ASFR is the basis for calculating the standard of the subsequent fertility, ie, the standard of the reproduction.
- Total Fertility Rate (TFR)*: TFR is the average number of children that would be born to a woman at the end of her reproductive life if women follow the pattern of fertility when the TFR is calculated. The formula for calculating the TFR is as follows:

$$TFR = 5 \sum_{i=1}^7 ASFR_i$$

Where:

$ASFR_i$  : number of women birth in group age (i)

$i = 1$  : group age 20 – 24 year, ..., and  $i = 7$  for group age 45 – 49 year.

- Children Ever Born (CEB)*: Children Ever Born (CEB) reflects the number of live births a group or several groups of women during the reproductive began to enter until the time of data collection is done. The formula for calculating the number of children born average life is as follows:

$$P_i = \frac{CEB_i}{P_i^f}$$

Where:

- $P_i$  : average variety of number CEB for women in group age (i)
- $CEB_i$  : number of ever birth by women in group age (i)
- $P_i^f$  : number of women in group age (i)

**Table 3. Shows the calculation of the average number of CEB women in Pekanbaru City.**

Age	Number Women Merried	CEB	Average CEB per Women ( $P_i$ )
15 – 19	29.472	15.817	0,54
20 – 24	199.819	193.928	0,97
25 – 29	344.669	519.533	1,51
30 – 34	344.573	839.536	2,44
35 – 39	311.912	972.647	3,12
40 – 44	247.678	866.289	3,50
45 – 49	182.799	671.519	3,67
<i>Total</i>	<i>1.660.922</i>	<i>4.079.269</i>	<i>2,46</i>

Source: BPS, 1996 dalam Lembaga Demografi FE-UI, 2010 : 80 danmodifikasi

Seen that the older woman, the greater the number of ALH average, varying from 0.54 children per mother in the age group 15-19 years, to 3.67 children per mother in the age group 45-49 years.

- (f) *Female Child Ratio (FCR)*: The ratio of female child (FCR) is the ratio between the numbers of children under five years (0-4 years) with a population of women of childbearing age. The number of children aged less than five years as the numerator is the number of births during the five years prior to the enumeration. The formula for calculating CWR is:

$$FCR = \frac{P_{0-4}}{P_{15-44}^f} \times k \text{ or } FCR = \frac{P_{0-4}}{P_{15-49}^f} \times k$$

Where:

- $P_{0-4}$  : number of women population age 0 – 4 year
- $P_{15-44}^f$  : number of women age 15 – 44 year
- $P_{15-49}^f$  : number of women age 15 – 49 year
- $k$  : constant number, usually 1000

### **Population Projection**

Population projections are calculations based on the number of people in future to the existing population. Projections in general is to know the development in the future coming, based on existing data. Projection is basically an estimate or estimates for the occurrence of an event (the value of a variable) for the future. The projection illustrates the level of capability for the foreseeable future, to avoid or reduce the level of risk of error, then the necessary assumptions made by the decision maker, which is supported by the projection of the level capability breeding population in the future objectively. Population projection is not a forecast but a population of scientific calculation based on the assumption of the components of population growth, namely births, deaths, and migration (N.B Ryder, 1964).

### **Benefit Population Projection**

Population projections are basically used for two kinds of planning, namely:

- (a) Development planning which aims to provide goods services in response to the future development of the population according to the results of population projections.
- (b) Planning in relation to population control policies, especially in terms of directing the trends in fertility, mortality and migration towards the achievement of development goals.

In addition, there are several benefit population projections, in previous era the population projection used in limited aspect which is only to calculate the estimated tax and to know the power of the people in terms of quantity of the population. But with the passage of time, the projected population of the present moment is already usefull in very complex to improve socio-economic conditions of the population and development planning in various fields.

- (a) *Foods*: Population projections are used to determine the need for food in accordance with nutritional and composition of population by age.
- (b) *Health*: Population projections are used to determine the number of medical doctors, medicines, number of beds in the hospital, which is required during the forecast period.
- (c) *Education*: Population projections used to estimate the number of school-age population, the number of students, teachers, school buildings, education in the future.
- (d) *Employment*: Population projections used to determine the amount of the labor force, employment is closely related to projections about the possibility of planning to take into account changes in the level of education, skilled, and experience of the workforce.

- (e) *Production and Services*: With the projected workforce in conjunction with data on productivity is the basis of the estimated product of goods and services in the future.

**Types of Projection in Population**

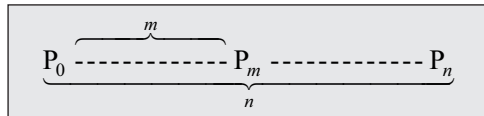
There are several types of projection in order or collect data population in a community, the method such as:

- (a) **In Census**: An estimate of the number of people between the two census, thusan estimate is made based on the results of two successive census. In this case the growth of the population considered to be linear, which means that every year the population will increase by the same amount premises. With the following formula:

$$P_m = P_o + \frac{m}{n} (P_n - P_o)$$

or

$$P_m = P_n - \left(\frac{n - m}{n}\right) (P_n - P_o)$$



Where:

- $P_n$  : number of population in year  $n$
- $P_o$  : number of population in early year
- $P_m$  : number of population in estimate year (year  $m$ )
- $m$  : different year to early year
- $n$  : different year between two census

- (b) **After Census**: Estimates of the number of residents after the population census, the assumption used is the same with the assumption of the census of population growth is linear as formula:

$$P_m = P_o + \{(n + m)/n\} (P_n - P_o)$$

or

$$P_m = P_n + (m/n) (P_n - P_o)$$

Where:

- $P_n$  : number of population in year  $n$
- $P_o$  : number of population in early year
- $P_m$  : number of population in estimate year (year  $m$ )

$m$  : different year to year  $n$

$n$  : different year between two census

- (c) **Projection:** In order to check future population or in the past using the latest basic data is usually based on the last population census.

### Model Population Projection

There are several models of population projections are often used, among other model:

- (a) *Extrapolation Model Trend:* This model is a simple trend extrapolation using population trend of the past to estimate the population of the future. This method is easy to use in the context of population projection. In addition, this method is also used to calculate the levels and ratios in the future based on the level and ratio in the past.
- (b) *Cohort Component Model:* Trend extrapolation models discussed above refers to the estimated population in the aggregate, while the cohort component model refers to the changes in the components of the population (ie fertility, mortality and migration) separately. Grouping people based on the components that influence population changes, age group, gender and ethnicity will help to build a better understanding of the dynamics of the population of a region.
- (c) *Ratio Model:* According to Smith, Tayman dan Swanson (2001), the model-ratio as Trend-extrapolation models is also based on past trends. The model uses the concept that the ratio of the population (population changes) on a smaller area (area of study) is the proportion of the population change from the wider region, or the base region. This model is simple and easy in its calculations and data needs relatively less. However, this model requires a population projection of the base area.

### METHOD POPULATION PROJECTION

There are two methods of population projections, namely:

#### (a) Mathematic Method

Mathematical methods used when the data on the components of population growth, namely fertility, mortality and migration is not known so that in use as the basic data to make population projection is simply the total population. This mathematical method is divided into three, namely:

- (i) *Aritmatic Method:* An estimate of future residents with an arithmetic method assumes that the number of people in the future will increase by the same amount each year. The formula is as follows arithmetical methods:

$$P_n = P_0(1 + rn)$$

Where:

- $P_n$  : number of population in year  $n$
- $P_0$  : number of population in early basis year
- $r$  : number of population growth
- $n$  : periodic (time) between basis year and year  $n$

- (ii) *Geometric Method*: Estimation of population in the future used geometric method assumes that the population will increase based on calculating the geometric use of compound interest. In this case the rate of population growth is considered equally for each year, geometric method formula as:

$$P_n = P_0(1 + r)^n$$

Where:

- $P_n$  : number of population in year  $n$
- $P_0$  : number of population in early basis year
- $r$  : number of population growth
- $n$  : periodic (time) between basis year and year  $n$

- (iii) *Exponential Method*: Estimation of population in exponential method is a method to calculate the population growth that occurs continuously throughout the year, formula exponential method as follows:

$$P_n = P_0 e^{rn}$$

Where:

- $P_n$  : number of population in year  $n$  or  $t$
- $P_0$  : number of population in early basis year
- $r$  : number of population growth
- $n$  : periodic (time) between basis year and year  $n$
- $e$  : basic number in natural logarithm system with value is 2,7182818

**(b) Components Method**

To project the total population in the future in a relatively short period of time can be done either by using mathematical methods or methods of components as a result of the total (population) are almost no difference. However, if the population projections in the longer time (over five years) then the differences in the results of the forecast means different. Especially if there is a change rate of birth, death and migration of the component method more widely used because it includes the determinants of population growth, benefits are:

- Taking into account the changes in each component in the growth of the population, namely fertility, mortality and migration.
- In this method starts with the assumptions of mortality, fertility and migration.

Before starting the manufacture of projection it needs the data as follows:

- (a) The distribution of population by age and gender who had done prorating and adjustment
- (b) Determine the level of mortality of a specific population
- (c) Estimate fertility pattern (ASFR)
- (d) Determining the gender ratio at birth (gender ratio at birth)
- (e) Determine the pattern of migration (migration proportions according to age)

### Basic Standard in Employment

In a study of employment, in use several that describe the employment situation of a country or group of people, the measures are as follows:

- (a) *Number of Participating in Employment*: That describes the number of labor force in the age group as a percentage of the population in that age group. It can also be a total participation rate of the population of working age. The formula is as follows:

$$\frac{\text{Employment}}{\text{Labor/Worker}} \times 100$$

- (b) *Activity Level According to Age and Gender*: These calculations are most widely in use in the analysis of employment, this estimation is the base figure is learned and became the basis for the projections of the labor force. The formula is as follows:

$$\frac{\text{Male Employment} - \text{Male/Female Satern Age}}{\text{Total Male} - \text{Male/Female Satern Age}} \times 100$$

- (c) *Activity Level According to Gender*: Activity level based on gender in the present split between male and female, in view of the pattern, usually the level of activity for male is higher compared to female. The formula is as follows:

$$\frac{\text{Male Emplment}}{\text{Male Worker (labor)}} \times 100$$

- (d) *Estimate Activity Level*: Total labor force divided by the total population above 15 years or older and is expressed as a percentage. It is influenced



by the age composition of the population. It is used for comparison of the relative amount of the labor force regardless of the factors that influence it. The formula is as follows:

$$\frac{\text{Number of Employment}}{\text{Number of Worker (15+)}} \times 100$$

- (e) *Unemployed Level*: Jobless level is a number indicating how many of the total labor force who are actively looking for a job. Definition of unemployed here is actively looking for a job. The formula is as follows:

$$\frac{\text{Number of People Looking for Jobs}}{\text{Number of Employment}} \times 100$$

- (f) *Employment Level*: Employment level is a number indicating how many of the total work force that states was working at the time of enumeration. The formula is as follows:

$$\frac{\text{Number of worker employ}}{\text{Total number of employment}} \times 100$$

### Problem in Employment

There are some employments issues that are common in some countries, including in Indonesia are as follows:

- (a) *Low Quality of Worker*: The quality of the worker in a country can be determined by number at the level of the country's education. Most workers in Indonesia, the level of education is primary school. This led to the mastery of science and technology to be low. The lack of mastery of science and technology leads to low productivity of labor, so this will affect the poor quality of the production of goods and services.
- (b) *Low Number of Workers to the Jobs Opportunity*: The increasing number of labor force that is not offset by the expansion of employment will bring a burden for the economy. The labor force can not be accommodated in the labor market will cause unemployment. Though the government hopes, the increasing number of labor force could be a driver of economic development.
- (c) *Unbalanced Distribution of Worker*: Most workers in Indonesia are on the island of Java, while in other areas is still a shortage of labor, thus in Java a lot going on unemployment, while in other areas there are many natural resources are not managed optimally.
- (d) *Unemployment*: Jobless are people who enter the labor force (15 to 64 years) who were looking for work and have not got it.

There are several types of unemployment, namely:

- (i) Frictional Unemployment, is temporary due to their time constraints, information and geographic conditions between job applicants with a job application opener.
- (ii) Structural Unemployment, is a state in which the unemployed are looking for jobs are not able to meet the requirements specified job opening. The more developed an economy of an area will increase the need for human resources that have better quality than before.
- (iii) Seasonal Unemployment, was unemployed for their situation kegiaan short-term economic fluctuations that cause a person to be idle. Examples such as the farmer awaits planting season, durian seller who awaits durian season.
- (iv) Cyclical Unemployment, is unemployed due to the impact of economic cycles up and down so that the demand for labor is lower than the job offers.

## CONCLUSION

Demography and population in Indonesia is distributed not in even, based on survey most of population live in Java Island, more than 60% of Indonesia population live in Java Island else 40% of population distributed in 4 large Island which are Sumatera, Kalimantan, Sulawesi and Irian Jaya. There are several models of population projections are often used, among other things: Model Exploration Trend is a model projections of population using trend resident the past to estimate the population of the future, Model Components Cohort in example projection model which refers to changes in components of population (namely fertility, mortality and migration) separately as well as ratio model is a model projections are also based on past trends. The model uses the concept that the ratio of the population (or population changes) on a smaller area is the proportion of the population (population change) from the wider region, or the base region (base area). In addition, there are two methods used in population projections are mathematical methods that include arithmetic methods, methods of geometric and exponential methods. And who always have the component method is used to create the population projections in the longer term (over five years).

## *References*

- Abdul Haris and Nyoman Adika (2002), "Population Dynamic and Development in Indonesia", Institute of Islamic Philosophy Study, Yogyakarta.
- Bappenas (2005), "UNFA Indonesia Population Projection on 2000 – 2025", Jakarta.
- Corrigendum (2012), "Population Studies: A Journal of Demography" Population Studies, Vol. 66, No. 2, pp. 219-221.

- Demography Institute (2007), "Dasar-Dasar Demography", Faculty of Economic, University of Indonesia, FE-UI, Jakarta.
- Demography Institute (2010), "Dasar-Dasar Demography", Faculty of Economic, University of Indonesia, Salemba Empat, Jakarta.
- Dudley Kirk (1996), "Demographic Transition Theory", *Population Studies*, 50, pp. 361-387.
- Hendrik P. Van Dalem and Kene Henkens (1999), "How Influential Are Demography Journals?", *Population and Development Review* 25(2): pp. 229-251.
- Ida Bagus Mantra (2007), "Common Demography", Pustaka Pelajar, Yogyakarta.
- Indonesia Act. No. 10 Year 1992 about, "Population Growth and Development of harmony Family". Jakarta
- N.B Ryder (1964), "Notes On The Concept of A Population", *The American Journal of Sociology*, Vol. 69, No. 5, pp. 447-463.
- Said Rusli (1989), "Introduction of Population", LP3ES, Jakarta.
- Walter Scheidel (2006), "Population and Demography", *Princeton/Stanford Working Papers in Calssics*, Stanford University, V.01.
- Yu Xie (2000), "Demography: Past, Present, and Future", *Journal of the American Statistical Association*, pp. 670-673.

