

Population Structures observed by Small-areas in Indonesia

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Population Structure

There are various types of population structure such as age and sex status, marital status, literacy and educational status, employment status, religion status and etc., recorded as the results of a population census, which shows static aspects of a characteristics of a population in a small areas or in a country.

Age and sex structure constitutes most basic and fundamental structure among various types of population structure.

Population size of Kecamatan in D.I.Yogyakarta

Among 75 Kecamatan

1. Kecamatan with the largest population:

DEPOK: 158,264

2. Kecamatan with the smallest population:

PAKUALAMAN: 10,593

3. Median population size: 35,165

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1. Sex composition of the population

1.1 Uses of sex classification

The **sex classification** is very important and useful in population and gender issues as well as in many types of planning, both public and private.

Educational status, labor force status, health status and etc. require separate population data for males and females for the planning.

The balance of the sexes affects social and economic relationships within a community.

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1.2 Sex ratio

An important indicator to summarize the sex composition of a population is sex ratio.

Sex ratio = $(M / F) \times 100$

where: M=the number of males

F= the number of females

The ratio more than 100 means an **excess of males** over females,

The ratio less than 100: means an **excess of females** over males.

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The sex ratio of a “closed” population, which is not affected by the migratory movement of the population, is usually very **close to 100 on the whole.**

The sex ratio at birth:approximately **105.**

: an excess of males over females by 5%.

Because of higher mortality rates among males than among females in general, this **excess of males at birth is reduced gradually with advance in age.**

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Table 1. Sex ratio in 2005 and sex ratios at birth in Indonesia and the world, 2000-05

Major area, region, country	Sex ratio	(%)
		SRs at birth
World	101	105
More developed regions	94	106
Less developed regions	103	105
ASIA	104	106
China	105	110
Japan	96	106
Indonesia	100	105
Malaysia	103	106

Source: United Nations, *World Population Prospects, The 2004 Revision*.

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Table 2. Sex Ratio by Province 1971 and 2000, Urban and Rural Areas

Province	1971	2000	2000	
			Urban	Rural
Lampung	102	106	103	108
DKI Jakarta	102	103	102	-
DI Yogyakarta	94	98	100	96
Nusa Tenggara Barat	97	94	95	95
Kalimantan Tengah	102	107	105	108
Kalimantan Timur	107	110	108	113
Sulawesi Selatan	95	95	96	95
Papua	141	110	116	111
INDONESIA	97	101	101	102

Source: 1971, 1980, 1990, 2000 Population Census,

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1.3 Sex ratio by Province in Indonesia

Provinces with high sex ratios (≥ 105) in 1971

Riau, Jambi, Kalimantan Timur, Sulawesi Tengah and Papua

Provinces with low sex ratios (≤ 95) in 1971

Sumatora Barat, Jawa Tengah, Jawa Timur, Sulawesi Selatan and Sulawesi Tenggara

Provinces with high sex ratios (≥ 105) in 2000

Lampung, Kalimantan Barat, Kalimantan Tengah, Kalimantan Timur, Sulawesi Utara, Sulawesi Tengah, Maluku Utara and Papua

Provinces with low sex ratios (≤ 95) in 2000

Nusa Tenggara Barat and Sulawesi Selatan

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1.4 Sex ratio by Kecamatan in D.I.Yogyakarta, 2000

Among 75 Kecamatan

1. Kecamatan with high sex ratios (≥ 105) :

DEPOK(112), MLATI and WIROBRAJAN

2. Kecamatan with median sex ratios(97)

:WONOSARI and other 6 kecamatan

3. Kecamatan with low sex ratios (≤ 95)

:GANDOMANAN(86) and other 19 kecamatan

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Table 3. Sex ratios for Population ages 25 and over by Educational Attainment in Indonesia, 2000

Educational level	Indonesia	D.I. Yogyakarta
Did not completed primary school	71	55
Primary school	98	95
Junior high school	124	115
Senior high school	148	137
Total	98	90

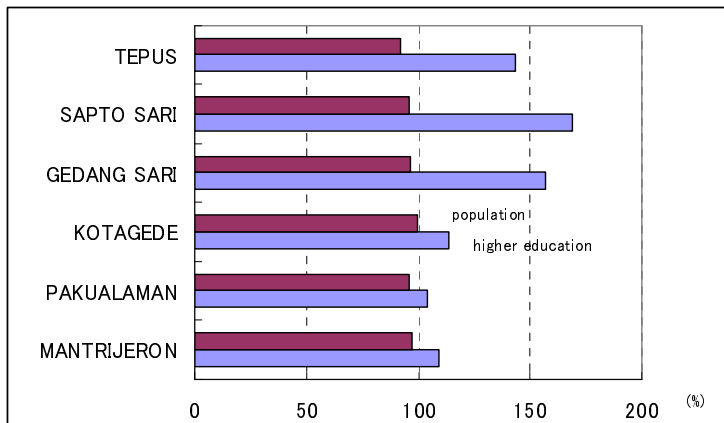
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Table 4. Sex ratios of various indicators by Kecamatan in D.I. Yogyakarta, 2000

Kecamatan	Sex ratio M/F*100				% of industry and services to total workers
	Total Population	Compleing junior high or higher education	Working population	Un-paid worker	
MANTRIJERON	97	109	131	26	93.8
PAKUALAMAN	96	104	121	26	92.5
KOTAGEDE	100	113	133	28	91.8
GEDANG SARI	97	157	94	25	13.2
SAPTO SARI	96	169	90	23	9.3
TEPUS	92	144	88	31	5.6

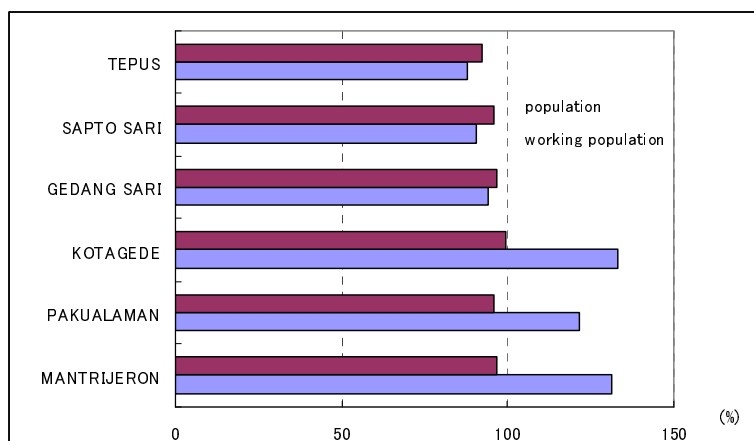
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Fig. 1. Sex ratio of population and completing junior high or higher education by selected Kecamatan in Yogyakarta, 2000



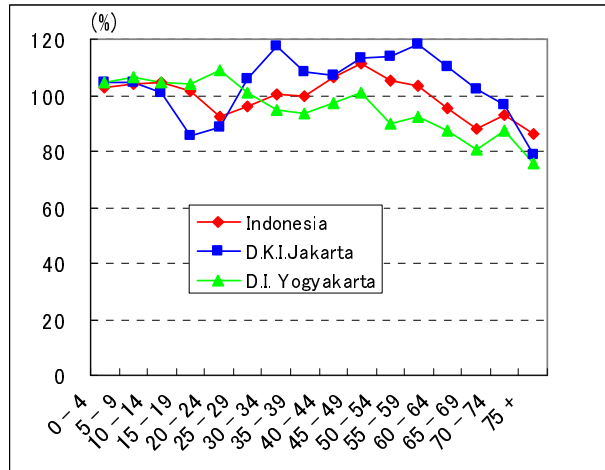
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Fig. 2. Sex ratio of population and working population by selected Kecamatan in Yogyakarta, 2000



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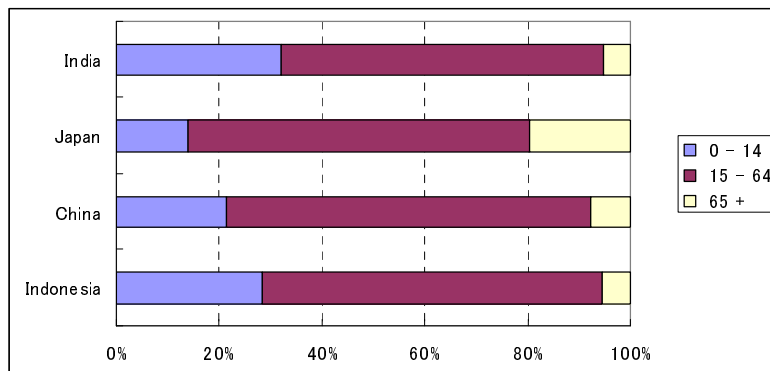
Fig.3. Sex ratio by age for Indonesia, D.K.I. Jakarta and D.I. Yogyakarta, 2000



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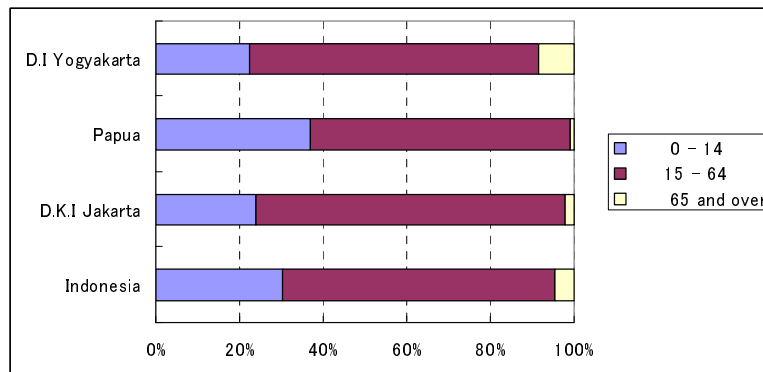
2. Age composition of the population

Fig. 4. Age Composition in the Asian countries, 2005



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Fig. 5. Age structure in Indonesia by Province, 2000



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2.2 Child –woman Ratio

$$\text{Child –woman ratio} = P_{0-4} / F_{15-49} \times 100$$

where P_{0-4} : population at ages 0 – 4

F_{15-49} : females at ages 15 – 49

Child–woman ratio is useful as an indicator of a certain aspect of the age structure in connection with fertility potential. It is an **alternate indicator for the fertility in the country where vital statistics is not available.**

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Table 5. Child Woman Ratio and Total Fertility Rate, 2000

	CWR (%)	TFR
Indonesia	36	2.59
D.K.I Jakarta	26	2.00
Papua	47	2.96
D.I Yogyakarta	26	2.00

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Table 6. Child Woman Ratio and Children ever-born for females ages 15 and over, Kecamatan in Yogyakarta, 2000

Selected Kecamatans	Child Woman Ratio (%)	Mean CEB (F15+)	% industry & services to total workers
MANTRIJERON	22	1.76	94
PAKUALAMAN	18	1.63	93
KOTAGEDE	26	1.77	92
GEDANG SARI	33	2.54	13
SAPTO SARI	32	2.38	9
TEPUS	24	2.25	6

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3. Sex–age composition of a population

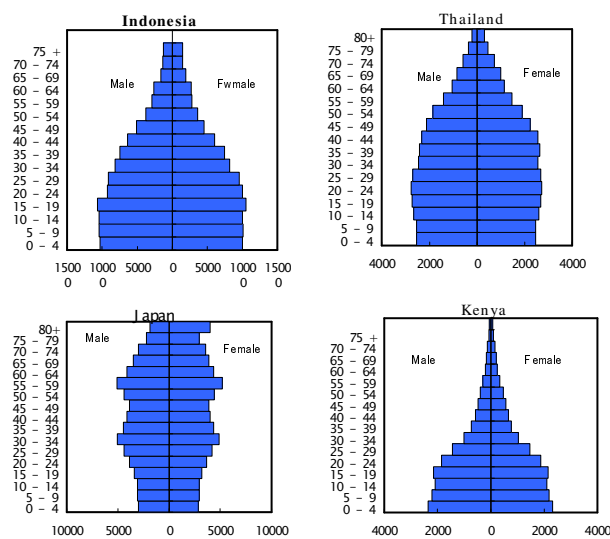
One of the common methods of representing the sex-age composition of a population for a general comparison is **population pyramid** or **age pyramid**.

Two types of population pyramids:

1. **Absolute number of population by age and sex**
2. **Percentage of population by age and sex**

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Fig. 6. Population pyramid by sex and 5-year age group, Indonesia and other selected countries, 2005



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3.1 Types of Population Pyramid

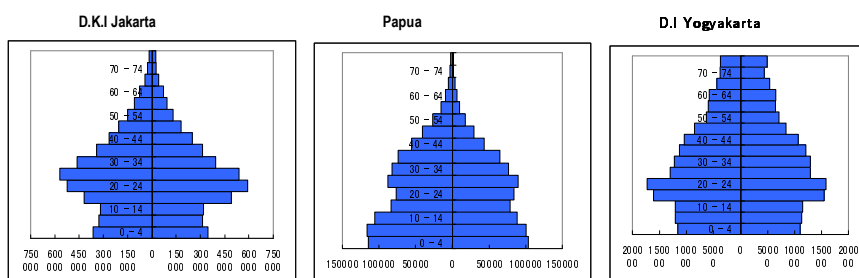
Volcano type: with broader foot. (Rapidly increasing population with high fertility and declining mortality): Kenya

Pot type: with narrower bottom
(Population with rapid declining fertility and declining mortality): Thailand

Verse or Bell type: (Increasing population aged 65 or more and decreasing child population)
:Japan, and other developed countries

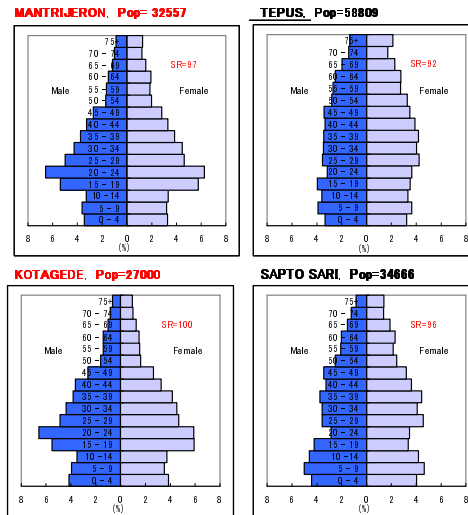
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Fig. 7. Population pyramid, D.K.I. Jakarta, Papua and D.I. Yogyakarta, 2000



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Fig. 8. Population pyramid, Kecamatan in Yogyakarta, 2000



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Conclusion

The features and uses of age and sex structure which constitutes most basic structure are illustrated here mainly based on kecamatan in D.I. Yogyakarta.

We can also utilize other types of population structure such as marital status, literacy and educational status observed in small areas for the local planning in both public and private sectors.

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