Geo Factsheet

Rural and Urban Population Structures - How and why they vary in LEDCs and MEDs

Introduction

Population structure is the percentage distribution of males and females by age group within an area and is usually shown by means of a population pyramid. Fig 1a and 1b show the population pyramids of Peru and Japan.
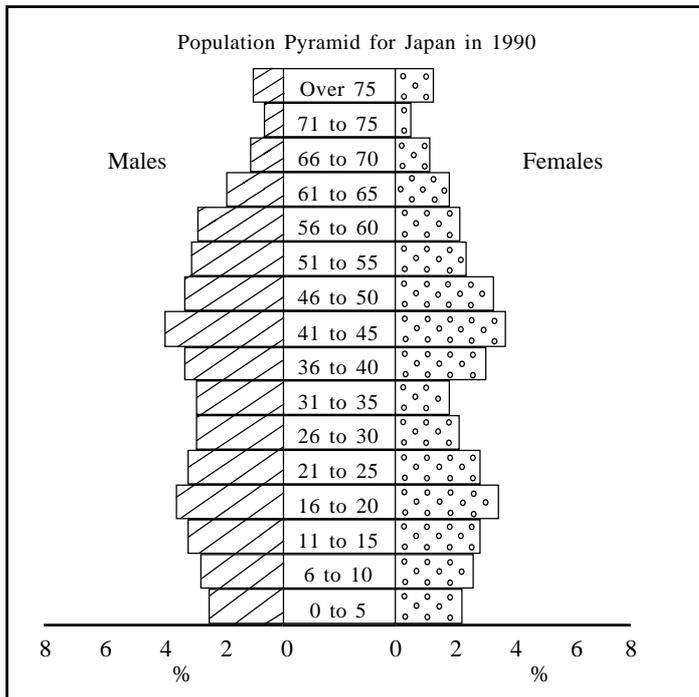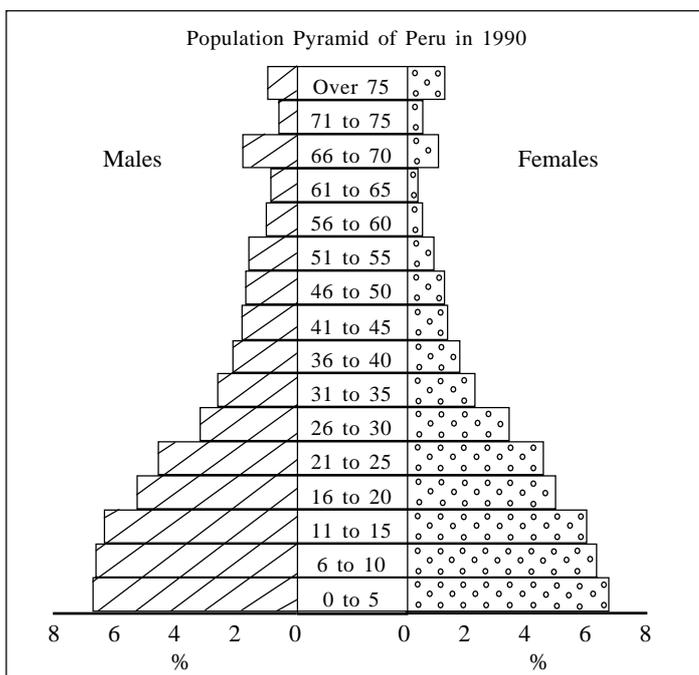
Fig 1a. Population Pyramid of a typical MEDC

Population Pyramid for Japan in 1990

Fig 1b. Population Pyramid of a typical LEDC

Population Pyramid of Peru in 1990

It can be seen that the shapes of these graphs are very different. Countries which are LEDCs, such as Peru have pyramids with a roughly triangular shape. They have a broad base due to the high birth rates. They have sloping sides due to the high death rates but are not as tall as those for MEDCs where life expectancy is usually higher. Population pyramids for MEDCs tend to be more rectangular in shape due to the lower birth and death rates. The age-structures of places **within** a country often vary considerably and it is these differences which we shall be examining in this Factsheet.

The values which we shall be using are percentages of the total rural or urban populations and do not reflect actual numbers of people. Consider the data for France contained in Table 1.

Table 1. Rural and urban age structures of six selected countries

Country	0 to 15 rural	0 to 15 urban	16 to 65 rural	16 to 65 urban	Over 65 rural	Over 65 urban
Peru	46%	35%	45%	61%	9%	4%
Zambia	48%	31%	44%	68%	4%	1%
China	30%	23%	64%	73%	6%	5%
United Kingdom	19%	23%	57%	63%	24%	16%
Japan	17%	18%	67%	71%	16%	11%
France	23%	19%	61%	67%	16%	14%

The total population of France is 11 million 61% of this 11 million (6.7 million) are aged 16-65. However the number of urban residents in this age group is much greater (67% of 47 million) = 31.5 million.

LEDCs

Table 1. shows that rural areas tend to have higher percentages of younger and older people and lower percentages of the middle age groups. In the countryside of Peru nearly half of the population are in the youngest age group, whereas in the urban areas the figure is only just over one third. The percentage of people in the older age group in rural areas is twice as high as that of the towns and cities. It is in the middle age category that the percentage is much higher in urban areas. A similar pattern is also found in Zambia and China. These three countries are in different continents and have very different economies and cultures. What can be the reasons for these differences?

Note the boundaries of these groups 0 - 15, 16 - 65, over 65, are chosen because 0 - 15 and over 65 years are considered non productive, whereas 16 - 64 is the productive group. The ratio between non-productive and productive groups is termed the **dependency-ratio**.

In most LEDCs much of the countryside has a subsistence, often poor, farming economy. Birth rates are also high for several reasons:
- large families are needed to work on the farms.
- large numbers of children are needed to look after their parents when they are old (limited pension systems).
- there is a lack of widespread knowledge of reliable birth control methods.
- there are few family planning clinics and little money to spend on contraception.
- infant mortality rates are high, due to a poor diet and living conditions and so the people have large families to ensure that they have the desired size of family.
- large families are also linked to religious beliefs and cultural traditions in some countries.
- it is considered to be a sign of a man's virility to have a large family in certain cultures. To have only one child (especially a girl) is considered a great misfortune.

However, in the urban areas birth rates, and so numbers of children below 16, are lower because:
- there are more single women with no families
- people adopt more westernised views and standards as they start to work in factories and service industries. They begin to believe that it is better to provide more opportunities for fewer children.
- there is more knowledge and availability of family planning services and methods, with improved access to health care.

In the middle age group there are always higher percentages of people in the urban than the rural areas as might be expected, due to the rapid process of urbanisation which is found in most LEDCs. Rural-urban migration is taking place due to the many "push" factors of the rural areas such as overpopulation and increased mechanisation and the "pull" factors of the urban areas such as better services and living conditions. Overall it is the 20 -40 age group which tend to migrate, usually slightly more males than females.

In the oldest age group there are always lower numbers in the towns and cities than the countryside as many of the rural migrants tend to return to their original villages as they grow older. Equally the older group tend to be more conservative and less likely to leave their homes to migrate to the city.

Exam Hint - *Make sure that you have this general pattern of rural and urban structures firmly fixed in your memory as it is a very popular population topic. Also, make sure that you can explain this pattern.*

Case Study - Zambia

Factfile

Population:	*8 million*
Population Growth Rate	*2.2% per year*
Life Expectancy	*44*
Infant Mortality	*111 per 1000 live births*
GDP	*$382*
Urban/rural %	*43/57*

Zambia is a small country in South Central Africa. Most of its people are subsistence farmers although the mining of vast deposits of copper ore has been of some economic importance. Zambia has a typical LEDC population structure with almost half of its total population under the age of 16 and only a very low percentage of people over the age of 65.

From Table 1. it can be seen that there is a much higher percentage of young people in the rural areas than in the cities for similar reasons to those mentioned in the case of Lima. The percentage of rural dwellers in the middle age group is much lower than that in the towns and cities. In the older age group there is a higher percentage of rural people.

However, Zambia differs from Peru in the distribution of males and females in the older age group. Out of the 68% of the urban population that are in this age group 46.6% are men and 21.4% are women, whereas in Peru there are approximately equal numbers of men and women. This difference reflects the male dominated society of Zambia and the more westernised views of Latin American countries. Moreover in Zambia many of the males migrate to urban areas to work in the copper mines.

Case Study - Peru

Factfile

Population:	*25 million*
Population Growth Rate:	*1.7% per year*
Life Expectancy:	*67*
Infant Mortality	*55 per 1000 live births*
GDP	*$2497*
Urban/rural %	*71/29*

Peru is an LEDC in South America. Table 2. shows that there are considerable differences between the age-structures of Lima, the capital city which houses one third of the country's total population, and Apurimac, a small village in the poorer, rural, Andes mountains.

Table 2. Age distribution of population in Peru.

Age group	Peru Males	Peru Females	Lima Males	Lima Females	Apurimac Males	Apurimac Female
O to 15	19.7	19.7	17.3	17.2	23.5	22.4
16 to 65	78.5	79.0	81.2	81.0	73.4	74.3
Over 65	1.8	2.3	1.5	1.8	3.1	3.3

When comparing Lima and Apurimac it can be seen that the capital has a lower percentage of people in the 0 to 15 age group than Apurimac. The reasons for these differences are similar to those mentioned above, e.g. high infant mortality, a lack of family planning facilities in the village and the more advanced values and attitudes in the cities.

There are much higher numbers in the middle age group in the city as might be expected. These figures reflect the significance of rural- urban migration in LEDCs such as Peru. The people who leave the rural villages in search of a better life in Lima are the young adults. It is interesting to note that the numbers of women migrating to the cities in Latin America is often much higher than in other LEDCs, especially in the under 30 age groups. This is because the jobs available in the cities are often in the service and retail industry which are more suited to female workers. Urban women are often more career minded and want to have a better standard of living for themselves and their families. They marry at a later age and often have a smaller family. This affects the percentage of under 15s in urban areas. People stay in the urban areas until they reach retirement age and then very often return to their original villages. This helps to explain the higher percentage of over 65s in the rural areas.

Case Study - China

Factfile

Population	1243,738 millions
Growth rate	1.1% per year
Life expectancy	69
Infant Mortality	44 per 1000 live births
GDP	582$
Urban/rural	30/70

China has the largest population in the world. Many studies have been made of its growth and the effects of the governmental attempts to control further increase by limiting family size.

Table 3. shows changes in China's population structure over the last thirty years. It can be seen that the percentage of young people in China as a whole and in both its urban and rural areas has decreased dramatically as a result of government planning and high profile birth control policies such as the 'one child policy'.

Table 3. Changes in China's Age Structure

AREA	YEAR	0 to 15	16 to 65	Over 65
China	1964	41%	56%	4%
	1990	29%	65%	6%
Urban Areas	1964	41%	56%	3%
	1990	23%	73%	4%
Rural Areas	1964	43%	54%	3%
	1990	30%	64%	6%

The percentages in the middle group have all increased but this is larger for the urban areas than the countryside. The percentages of over 65s have also all increased but this is less significant in urban areas than rural ones. The increase of elderly people is a result of improved standards of basic medical care.

In 1990 the countryside has higher percentages in the younger and older age groups than the towns and cities but lower values for the middle age group. Many of the rural areas have poor economies and their high fertility rates and high death rates tend to a "young" population structure. In China many people leave these overcrowded rural areas and move to the eastern provinces and cities which are undergoing rapid economic growth. Leading to the higher percentage of urban residents. Some of these rural-urban migrants do return to the farming areas but there is not as great a difference between the two over 65 values as in other LEDCs .

Although the percentage of over 65s in the rural provinces is generally higher than in the urban areas, some large cities do have quite high percentages of elderly, as can be seen in Table 4.

Table 4. Areal distribution of the elderly in China

Region / City	% aged over 65
North	5.4%
Shanghai	9.4%
North East	4.6%
East	5.9%
Centre-South	5.6%
South-West	4.8%
North-West	3.9%
Beiijing	6.4%

This could be due to the fact that certain cities, and the way of life there, are so attractive that people are reluctant to return to their villages or it could be linked with political restrictions on internal movements.

It can thus be seen that there are certain common patterns of rural and urban age structures in LEDCs with the rural areas having higher values in the young and old age groups and lower ones in the 16 to 65 group.

Exam Hint: *Examiners often ask for case studies in their questions. Make sure that you learn at least one LEDC in detail.*

MEDCs:

From Fig 1. and Table 1. it can be seen that an overall pattern for rural and urban age structure in MEDCs can be seen. There are always lower percentages for rural areas than for towns and cities in the young and middle age groups. In the older age groups it is the rural areas which have the higher values.

If this general pattern is compared to that of the LEDCs it can be seen that the two groups of countries have different rural and urban patterns in the youngest age group. In the three LEDCS there are higher percentages of young in the countryside than in the urban areas and the difference in value is usually quite high.

In the MEDCs there are lower percentages rural population in the 0 to 15 group than there are in urban areas and the differences between the values are lower.

In the oldest age group there are always higher percentages in the rural areas than in the urban areas although the values range from 4% to 9% in the LEDCs and from 14% to 24% in the MEDCs.

Exam Hint: *It is important to be able to compare the patterns found in LEDCs and MEDCs and to be able to explain and differences and similarities.*

Case Study - The United Kingdom

Factfile

Population	58 millions
Population Growth rate	0.2% per annum
Life Expectancy	76
Infant Mortality	7 per 1000 live births
GDP	18913$
Urban/rural%	89/11

Table 5. shows the age structures of six places in the UK.
With the amount of UK census data available it would be possible to study any part of the country but these places were selected as they illustrate a variety of socio-economic characteristics. Norfolk and South Lakeland are predominantly rural areas, inner London and Liverpool are typical urban areas and the last two towns are holiday resorts / retirement areas.

Table 5. The age-structure of six places in the UK

Place	0 to 15		16 to 64		Over 65	
	males	females	males	females	males	females
Norfolk County	19.3	18.4	58.3	54.4	22.4	27.2
South Lakeland	19.0	16.3	57.8	54.2	23.2	29.5
Inner London	21.5	20.0	64.2	63.4	14.3	16.6
Liverpool	22.1	19.8	59.6	56.2	18.3	24.0
Eastbourne	15.0	14.9	51.5	55.4	34.6	29.6
Bournemouth	17.8	15.7	59.5	53.7	22.7	30.6

For the 0 to 15 age group the percentage values are lowest for both sexes in the two resorts, next come the rural areas and the towns have the highest values. In the middle age group the percentages are lowest in the resorts, with higher values in the rural areas and the highest percentages in the cities. In the older age group Eastbourne has the highest percentage for males and Bournemouth for females. The next highest figures are for the rural areas. Inner London has nearly half of the values given for the resorts.

So how can these patterns be explained. The two resorts are places where retired people choose to settle, giving populations with up to one third of the population in the older age-group. This high percentage of elderly lowers the birth rate there resulting in the lower percentages of young people.

The percentage in the middle age group is lower than in the cities but some workers will be needed to cater for the needs of the retired residents. In general holiday resorts provide a limited range of employment and this leads to some outmigration by the 16 - 45 year age group.

The two rural areas have higher numbers of young people as there are more people overall in the middle "child- producing age-group". There are more males than females in both areas in the middle group as farming has more male than female workers. There are also high numbers in the older group as South Lakeland is near to large industrial areas such as the North West, North East and West Yorkshire. People can move here on retirement and still be within two hours driving time of friends and family still living there. Norfolk has similar links with London, especially as the M11 provides easy access to the capital.

Fig 2. Age Structure of Manchester

Legend:
- 0 to 15 years
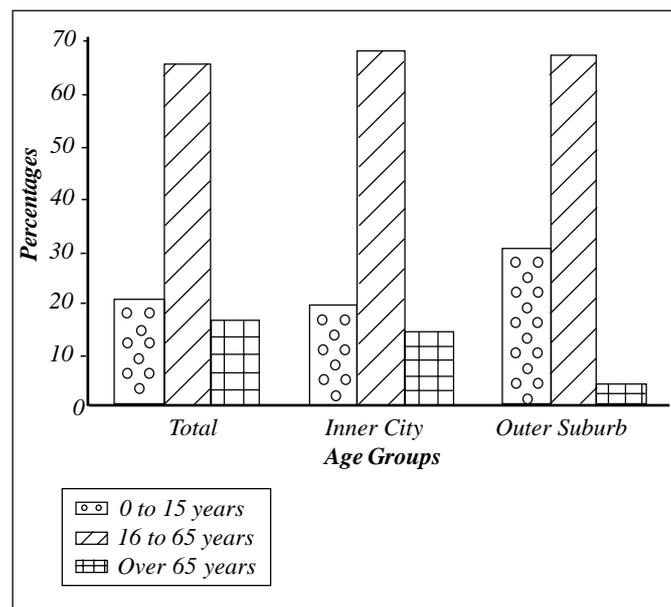- 16 to 65 years
- Over 65 years

Fig 2. shows the age-structure of Manchester. It can be seen that there are also considerable differences in age-structures within urban areas. The inner city and outer suburban wards have similar values in the middle age group but the suburban ward has a higher percentage of young people and a lower percentage of older people. This is probably because suburban areas tend to house families with parents in the middle age group and children in the younger one.

Inner cities are more likely to have single people in the middle age group and have a higher percentage of elderly who cannot afford to live elsewhere.

Case Study - Japan

Factfile:

Population	125 millions
Population Growth Rate	0.3% per annum
Life Expectancy	79
Infant Mortality	4 per 1000 live births
GDP	41718$
Urban/rural%	78/22

Table 1. shows that Japan has a lower percentage of rural people in the young and middle age-groups than urban population.

This is the same pattern as in the UK. The age structure of Tokyo, the capital city, shows differences from the overall age structure of urban areas. Table 6. below shows this.

Table 6. Population Structure of Urban Areas in Japan and Tokyo

	0 to 15	16 to 65	over 65
Urban areas	18%	71%	11%
Tokyo	15%	75%	10%

Case Study - France

Factfile:

Population	59 millions
Population Growth Rate	0.2% per annum
Life Expectancy	78
Infant Mortality	7 per 1000 live births
GDP	26444$
Urban/rural %	75/25

Unlike the UK, in France there is a higher percentage of rural population under 16 than that found in the cities. France is predominantly a Roman Catholic country, a religion which discourages contraception. Families are often larger than in other MEDCs, partly as result of good child support policies. The traditional Catholic values are likely to affect rural communities more so than urban ones. In the other two age-groups the age structure pattern is similar to that of the UK with higher urban than rural percentages in the middle age group and lower urban ones in the over 65 group.

By looking at Table 7. it can be seen that Paris has a lower percentage of young people than other urban areas. This could be attributed to the larger numbers of single professional people living in the capital whilst families tend to live outside the city. In both the middle and older age-groups there are higher percentages of females, which is linked to the higher life expectancy for women. (82 for women and 74 for men in France).

Table 7. Population Structure of France

Area	0 to 14	15 to 24	25 to 34	35 to 44	45 to 54	55 to 64	Over 65
France	19.8	15.8	15.4	13.8	11.1	10.9	12.9
Paris	13.7	13.6	19.6	16.9	12.6	8.8	16.8
Urban Areas	18.9	15.5	15.7	15.2	10.5	10.	13.9
Males	20.1	16.1	15.0	15.6	10.8	9.9	11.3
Females	17.7	14.9	16.4	14.8	10.2	10.3	14.5
Rural Areas	22.5	11.3	13.2	15.6	12.2	10.2	16.0
Males	23.0	12.0	13.6	14.8	12.6	10.2	13.8
Females	22.0	10.6	12.8	16.4	11.8	10.2	18.2

Conclusion

It can be seen from the above discussion that there are certain general patterns of age-structures for rural and urban areas within both LEDCs and MEDCs.

Table 8. Generalised Pattern of Age-structures

	0 to 15		16 to 65		over 65	
	rural	urban	urban	rural	urban	rural
LEDCS	higher	lower	lower	higher	higher	lower
MEDCs	lower	higher	lower	higher	higher	lower

Although there are certain overall similarities but the actual values of the percentages do vary considerably for example from 48% rural population in the 0 to 15 age-group in Zambia to 17% in Japan and from 1% urban population over 65 in Zambia to 16% in the UK.

These patterns seem to be closely related to birth, death and fertility rates and also to life expectancy and infant mortality. However, they do not appear to be related to cultural background. Within the LEDCs there was much greater diversity depending on the nature and rate of economic development.

This Factsheet is based on only six countries due to limited space. You may choose to extend your studies by researching other countries yourself to see whether they follow the overall pattern mentioned above. Most public libraries have data sources which you could use including UN yearbooks, World Development guide, etc.

Practice Questions

1. Define the term population structure and with the aid of annotated graphs show how it varies between LEDCs and MEDCs.

2. Compare the age-structures of the rural and urban populations in one named LEDC.

3. Explain why the percentages of people below the age of 16 can vary in the rural and urban areas of MEDC.

Answers

1. Structure is the division of the population of a country into age groups by sex. In LEDCS there are many young people, fewer middle age people and very few older people. In MEDCs there are fewer children, similar numbers in the middle age group and larger numbers in the older group. The question requires annotated population pyramids. Use the ones in Fig 1 and include explanatory annotation.

2. Take one of the examples in the text above emphasising the overall pattern where there are more rural young, and old and fewer in the middle age group.

3. In the rural areas there are less young people than in the urban areas as people of child-bearing age have often migrated to the urban areas, lowering the fertility and birth rates there. There are more elderly people living in the countryside.