Geography IB Course IB1 SL: Changing population

(Core: Geographic perspectives - global change)

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Population change - Syllabus Tasks & Requirements

Key issues:



- How does population vary between places?
- What are the factors influencing population distribution?
- Processes of population change and their effect on people and places
- Population possibilities and power over the decision-making process
- What are the global patterns and classifications of economic development?

Required case studies:

- Two detailed and contrasting examples of uneven population distribution
- Detailed examples of two or more contrasting countries
- One case study of a contemporary megacity experiencing rapid growth
- Detailed examples of two or more forced movements, to include environmental and political push factors, and consequences for people and places
- One case study of a country benefiting from a demographic dividend

The global economic pattern at the turn of the 21st century

Brandt's Line

 a line dividing the world into Global North and Global South

The line comes from Brandt Report published in 1980 – at the time 90% of the value of the industrial production was concentrated in Global North



Source: Knox P.L., Agnew J., McCarthy L., 2003, The Geography of the World Economy, Oxford University Press, New York, str. 24

The "Third World", Developing Countries, Global South



European colonization 1500-1945 and 1960s/70s (simplified overview)



World system analysis (I. Wallerstein)

- World system analysis part of a broader dependency theory
- Looking at individual countries in isolation was too simplistic and suffered from ethnocentric developmentalism (everybody / every country follows the same development path of the West)
- The capitalist world system has four main characteristics:
 - a global market
 - many countries which allow for political and economic competition

- three tiers of countries defined as **the core** (the developed world), **the periphery** (the developing world including LDCs), and **the semiperiphery**

 development of core is not neutral – it has been taking place at the cost of the rest (periphery and the semiperiphery) > consequently the development of the periphery (and semiperiphery) is an "dependent development"



Wallerstein's World System Theory Model

World-system in 1800



Źródło: Knox P.L., Marston S.A., 2003, *Human Geography. Places and Regions in Global Context*, Pearson Education, Upper Saddle River, str. 55.

Figure 2.11 The world-system core, semiperiphery, and periphery in 1800 (Source: Map projection, Buckminster Fuller Institute and Dymaxion Map Design, Santa Barbara, CA. The word Dymaxion and the Fuller Projection™ Map design are trademarks of the Buckminster Fuller Institute, Santa Barbara, California, ©1938, 1967 & 1992. All rights reserved.)

World-system in 1900

Źródło: Knox P.L., Marston S.A., 2003, *Human Geography. Places and Regions in Global Context*, Pearson Education, Upper Saddle River, str. 60.

Figure 2.15 The worldsystem core, semiperiphery, and periphery in 1900

(Source: Map projection, Buckminster Fuller Institute and Dymaxion Map Design, Santa Barbara, CA. The word Dymaxion and the Fuller Projection[™] Map design are trademarks of the Buckminster Fuller Institute, Santa Barbara, California, ©1938, 1967 & 1992. All rights reserved.)



World-system in 2000



Figure 2.22 The world-system core, semiperiphery, and periphery in 2000 (Source: Map projection, Buckminster Fuller Institute and Dymaxion Map Design, Santa Barbara, CA. The word Dymaxion and the Fuller Projection™ Map design are trademarks of the Buckminster Fuller Institute, Santa Barbara, California, ©1938, 1967 & 1992. All rights reserved.) Źródło: Knox P.L., Marston S.A., 2003, Human Geography. Places and Regions in Global Context, Pearson Education, Upper Saddle River, str. 69.

Task: what has happened "recently"?

Watch two short lectures by Hans Rosling:



- <u>http://www.ted.com/talks/hans_rosling_at_state#t-9211</u>
- <u>https://www.youtube.com/watch?v=BZoKfap4g4w</u>

Watch a TED lecture:

http://www.ted.com/talks/nic_marks_the_happy_planet_index#t-93598

What is development?

1. Economic growth

• Increase in output of goods and services

2. Economic development

- Quantitative change (growth)
- Qualitative change:
 - Innovation and creativity
 - New technologies
 - New markets, new professions, new opportunities
 - etc.

2

3

3. Socio-economic (human) development

- Economic growth and development
- Human development:
 - Quality of life and personal wealth
 - Meeting the basic needs
 - Access to basic public services (e.g. electricity, water)
 - Access to education and healthcare
 - Mobility
 - Social justice and equal opportunities
 - No discrimination (gender, ethnicity, culture, etc.)
 - Political empowerment and democratic governance
 - Human rights (e.g. freedom of speech)
 - Peace and safeness
 - Environment conservation and sustainable development
 - etc.

"Development" indicators

- **Quantitative**, like: GDP, GNP, GNI
- **Qualitative:** describing development instead of measuring it (welfare, security, freedom, etc.)
- **Composite:** combine several measures into one Interesting example: QLI - Quality of Life Index that uses basic literacy rate, infant mortality, and life expectancy at age one: <u>https://www.numbeo.com/quality-of-life/rankings_by_country.jsp</u>

- The measurements mostly used are GDP, GNP or GNI
- Gross Domestic Product (GDP) the value of a country's overall output of goods and services (typically during one fiscal year) at market prices, excluding net income from abroad - geographical location of production
- **Gross National Product** (GNP) the value of output of goods and services produced by labor and property supplied by the citizens and companies of a country (typically during one fiscal year) at market prices **location of ownership**
- **Gross National Income** (GNI) the total value of goods and services produced within a country, together with the balance of income and payments from or to the other countries

In reality GDP, GNP, GNI measure the size of the economy (and economic growth), not the socioeconomic development

Other limitations of GDP, GNP, GNI:

- They do not give any information about distribution (spatial and social) of wealth
- They include only transaction in formal sector, so they do not include subsistence agriculture, cash-in-hand work, informal economy
- In some countries statistics are unreliable
- Affected by changing currency exchange rates
- Do not include external costs (social, environmental)
- Not always they reflect the **purchasing power parity**
- Purchasing power parity (PPP) the number of units of a country's currency needed to buy the same amount of goods and services in a country as 1 USD would buy in US
- For comparison purposes GDP/GNI per capita in purchasing power parity should be used

GDP in absolute terms vs. GDP in relative terms (per capita)





2016 Source: World Bank, <u>http://data.worldbank.org/indicator/NY.GDP.PCAP.CD?view=map</u>



Source: World Bank, http://data.worldbank.org/indicator/NY.GDP.PCAP.PP.CD?view=map

United Nations Development Program developed Human Development Index (HDI)





- Max: Norway (0,949)
- Min: Central African Republic
- North Korea, Somalia were not classified due to lack of data



HDI in 2016

• Poland is 36th (HDI: 0,855)



47 (as of 2017) Least Developed Countries - (LDCs)



Africa 34, Asia 9, Caribbean 1, Pacific 4



Note: The boundaries and names shown and the designations used on this map do not imply official endorsement or acceptance by the United Nations.

20

More information: https://www.un.org/development/desa/dpad/least-developed-country-category.html

The naming

- LDCs Least Developed Countries
- LEDCs Less Economically Developed Countries
- **RIC** Recently Industrialized Countries (industrialization from 1980s and 1990s, e.g.: China, Brazil, India, Indonesia, Thailand)
- NIC Newly Industrialized Countries (industrialization from 1960s, e.g.: Asian Tigers, Portugal)
- **MEDCs** More Economically Developed Countries
- "Asian Tigers" Hong Kong, Singapore, South Korea, Taiwan
- BRIC countries Brazil, Russia, India, China
- MINT countries Mexico, Indonesia, Nigeria, Turkey

Developing countries / Global South / LEDCs / LICs+MICs

- Out of 7,5 billion people living in the world, over 6 billion lives in the global South
- Around 54% of the global population (~4 billion people) lives in urban areas;
 3 billion out of 4 billion lives in the cities of the global South
- At the same time global South including China generates around 40% of the global GDP (excluding China the share drops to around 30%)



- Since 1990 the share of people living in absolute poverty (less than 1,25 USD per person per day) in the developing world dropped from almost 50% (!) to 14%
- Yet still around 850 million people suffer from absolute poverty; 800 million people are undernourished; around 650 million people have limited or no access to safe drinking water

The naming

• The development path (this is developmentalism - everybody is supposed to follow the same development path)



• <u>The World Bank</u>: for the current 2018 fiscal year, lowincome economies are defined as those with a GNI per capita (...) of \$1,005 or less in 2016; lower-middle-income economies are those with a GNI per capita between \$1,006 and \$3,955; upper-middle-income economies are those with a GNI per capita between \$3,956 and \$12,235; high-income economies are those with a GNI per capita of \$12,236 or more

(https://datahelpdesk.worldbank.org/knowledgebase/articles/906519-world-bank-country-and-lending-groups)

The changes of the "recent" years

- **Decolonization** (number of UN member states rose from 51 in 1945 to 193 in 2011; most of the new member states were former colonies and later on, from 1992, former Soviet republics)
- Radical changes in communication and transport and technological revolution
- **Growing economic interdependence** international trade rose from 11% (1950) to 30% (2008) of the global GDP - that follows the neoliberal agenda (liberalization of trade, reduction of tariffs, privatization)
- The end of the bipolar world (the end of the Cold War: 1989-1991), period of the unquestionable hegemony of the U.S. (1991-2001/2008), multipolar world (symbolically since 2008)
- Global crisis (since 2008) hurting mostly the countries of the Global North and the rise of the Global South

Globalization consequences

FIGURE 3

- Reconfiguration of development processes within geographical space
- New inequalities (international, but especially internal)
- The rise of the global South politically and economically

Brazil, China and India combined are projected to account for 40% of global output by 2050, up from 10% in 1950



Source: Human Development Report 2013, UNDP 2013, http://hdr.undp.org/en/2013-report 25

G7 and G20

G20 members



Global development?



World population

<u>http://www.worldometers.info/world-population/</u>

World population growth



29

World population growth

- Exponential growth an increasing or accelerating rate of growth
- Doubling the population: 1650-1850 (200 years); 1850-1920 (70 years); 1920-1970 (50 years); 1970-2025 (?) (55 years?)
 Billions



The world's population is expected to reach 9.1 billion by 2050, with virtually all population growth occuring in less developed countries.

(population, billions)



World population growth

Figure 3.30 World population projection by region This graph represents a medium-variant projection, one that is in the middle of three possible scenarios. In this projection, population continues to expand in the periphery, though in some regions more than others. Africa is projected to experience the greatest growth, followed by Asia (not including China), where growth is expected to level off by 2150. Less dramatic growth is expected to occur in Latin America, while in the core population, numbers remain constant or drop slightly. Though the total number of people in the world will be dramatically greater by 2150, the mediumvariant forecast indicates a gradual leveling off of world population. (After I. Hauchler and P. Kennedy (eds.), Global Trends: The World Almanac of Development and Peace. New York: Continuum, 1994, p. 109.)



Źródło: Knox P.L., Marston S.A., 2003, Human Geography. Places and Regions in Global Context, Pearson Education, Upper Saddle River, str. 122.

World population by country:

http://data.worldbank.org/indicator/SP.POP.TOTL?view=map&year_high_desc=true 32

World population growth

• The growth rate peaked in the second half of the 20th century (1960-1990) and now it is stable and will consequently decrease



Population growth measurements / statistics

- **Crude Birth Rate (CBR)** the number of births per 1,000 people in a population
- Current world CBR is 19.2 births /1,000 population
- CBR peaked in 1963 and amounted to 36.1 / 1,000 population
- CBR of more than 30 per 1000 are considered high and rates of less than 18 per 1000 are considered low
- The Crude Birth Rate is called "crude" because it does not take into account age structure or sex differences of the population
- <u>http://data.worldbank.org/indicator/SP.DYN.CBRT.IN?year_high_desc=true</u>

Population growth measurements / statistics

- **Crude Death Rate (CDR)** the number of deaths per 1,000 people in a population
- Current world CDR is 7.74 / 1,000 population
- CDR used to be much higher around 15-17 / 1,000 in 1960s
- CDR of less than 10 per 1000 are considered low
- CDR of more than 20 per 1000 are considered high
- http://data.worldbank.org/indicator/SP.DYN.CDRT.IN?year_high_desc=true

Population growth measurements / statistics

- Annual Growth Rate expressed as a percentage and is calculated by subtracting the crude death rate from the crude birth rate; growth is often described as natural increase or natural decrease (natural because it does not include migration)
- Rate of Natural Increase (RNI) difference between the number of live births and the number of deaths occurring in a year, divided by the mid-year population of that year, multiplied by a factor (usually 1,000). It is equal to the difference between the crude birth rate and the crude death rate. This measure of the population change excludes the effects of migration. The rate may be positive or negative
- Current (2016) world RNI is 1.18% per year
- http://data.worldbank.org/indicator/SP.POP.GROW?year_high_desc=true
- Population Growth Rate (PGR) the average annual percent change in the population, resulting from <u>a surplus (or deficit) of births over</u> <u>deaths and the balance of migrants</u> entering and leaving a country. The rate may be also positive or negative 36
Population growth measurements / statistics

- Rate of Natural Increase (RNI) countries ranking
- Max: Niger (36), Uganda, Gaza Strip, Ethiopia, Zambia, Burundi, Mali, Burkina Faso, DRC - over 30
- Min: Bulgaria (-5.7), Serbia, Latvia, Lithuania, Ukraine, Hungary, Estonia, Germany, Belarus, Slovenia, Croatia, Romania Russia - all way below 0
- **Population Growth Rate (PGR)** countries ranking
- Max: Oman (8.5), Lebanon (6), Kuwait (4.8), Qatar (4.7), South Sudan (4), Niger (4.0)
- Min: Andorra (-3.6), Syria (-2.3), Lithuania (-1.6), Georgia (-1.2), Latvia (-1.2)

Population growth measurements / statistics

- Reproductive age range or childbearing age between 15 and 49
- General fertility rate (GFR) the number of births per 1,000 women of childbearing age (15-49 years)
- **Total fertility rate (TFR)** the average number of births per 1,000 women of childbearing age (15-49 years) or the average number of birth per woman in childbearing age (15-49 years)
- Current world TFR is 2.45
- <u>http://data.worldbank.org/indicator/SP.DYN.TFRT.IN?year_high_desc=true</u>
- Replacement rate the total fertility rate needed for a country/region to replace and maintain its population; it is about 2.1

Population growth measurements / statistics

- Infant Mortality Rate (IMR) the number of deaths of infants (children less than one year old) per 1,000 live births in a year
- Current (2015) IMR is 31.7 deaths / 1,000 live births
- Max: Angola (96), Central African Republic (92), Sierra Leone (87), Chad (85), Somalia (85), DRC (75)
- Min: Luxembourg, Iceland, Finland, Norway, Japan, Slovenia, Singapore (2); EU (4)
- <u>http://data.worldbank.org/indicator/SP.DYN.IMRT.IN?view=map&year_high_desc=true</u>
- Child Mortality Rate (CMR) the number of deaths of children under 5 years old per 1,000 children in a year or per 1,000 live births
- Current (2015) CMR is 42.5 deaths / 1,000 live births
- Max: Angola (157), Chad (139), Somalia (137), Central African Republic (130), Sierra Leone (120), Mali (115)
- Min: Luxembourg, Iceland, Finland (2), Slovenia, Norway, Japan (3); EU (4)
- <u>http://data.worldbank.org/indicator/SH.DYN.MORT?view=map&year_high_desc=trge</u>

Population growth facts

- The world population is expected to stabilize around 2050-2080 at between 10-12 billion. By 2100-2150 it could be down to 9 billion
- At the time the population is expected to be falling in all but two regions: North and Latin America
- India soon (by 2020) is expected to overtake China as the most populated country in the world
- About 10% of world's population is over 60 by 2100 this proportion will have risen to one-third
- The fertility rate dropped from 5.06 in 1964 to 3.28 in 1990 and then further to 2.45 currently
- Although world population continues to rise there are fewer children born around the world and adults tend to live longer than ever before
- Birth rates have fallen and are expected to drop further in less developed countries, whereas in more developed countries, they are expected to remain fairly constant. At the same time, death rates are holding fairly steady

Population growth facts

• Except for economic changes, the key factors in achieving low birth rates are associated with cultural change and decline in traditional beliefs and customs, but mostly with the changing women's role, their position and status (emancipation) within society

FACTORS CAUSING HIGH BIRTH RATES

- Primary based economy where children are needed to work on land
- Women maintained in traditional role of rearing children and taking care of house
- Lack of education about contraception and family planning
- The need for children to care for elderly residents
- Status symbol of having a large family or the need to obtain a male heir
- Pro-natalist policy
- Religious or legal practices (no abortion or discouragement of using contraception)
- Marriage at a young age

FACTORS CAUSING LOW BIRTH RATES

- · Availability and affordability of contraception
- Education about contraception and family planning
- Reduced infant mortality (less need to have more children to make up for infant deaths)
- Female emancipation (females are free to get an education and work)
- Cost of children
- Anti-natalist policy (like China)
- Delayed marriage
- Better care for old dependents (less need for children to care for their parents in old age)
- · Mechanisation of primary sector and shift to secondary and tertiary sectors

There is an explanation for all of it -Demographic Transition Model



Life expectancy

- Life expectancy average number of years that a person can be expected to live (usually in a given country), if demographic factors remain unchanged (life expectancy at birth, at age 10, etc.)
- Life expectancy rose rapidly in the twentieth century due to improvements in public health, nutrition and medicine. It's likely that life expectancy of the most developed countries will slowly advance and then reach a peak in the range of the mid-80s of age.
- In 1900 the world life expectancy was approximately 30 years, in 1960 - 52.5, in 1990 - 65.4 and currently it is 71.9
- The differences between regions and countries are quite severe
- <u>http://data.worldbank.org/indicator/SP.DYN.LE00.IN?view=map&year_high_desc=true</u>
- There are also differences between men (69.8) and women (74.1)
- http://data.worldbank.org/indicator/SP.DYN.LE00.MA.IN?view=map&year_high_desc=true
- <u>http://data.worldbank.org/indicator/SP.DYN.LE00.FE.IN?view=map&year_high_desc=true</u>

Task

- <u>Watch a lecture by Hans Rosling:</u> <u>https://youtu.be/FACK2knC08E</u>
- <u>Related article:</u>

https://www.theguardian.com/global-development/datablog/2016/jun/28/over-populated-or-under-developed-real-story-population-growth



Task

- Pick a country from:
 - Latin America & the Caribbean
 - North Africa or preferably Sub-Saharan Africa
 - Western Asia including so called Middle East
 - Southern Asia, Eastern Asia or South-Eastern Asia
- Using World Bank data (or other trustworthy source) **prepare charts** representing economic growth / human development and population change since 1950s (or later depending on the data availability):
 - GDP per capita change and HDI position
 - income/development category
 - number of people / population size
 - population growth (RNI & PGR)
 - fertility rates
 - life expectancy
- Find or prepare current population pyramid



Life expectancy vs. income

Figure 8 Life expectancy at birth vs average annual income¹⁶



- The global dynamics moves countries away from short life expectancy
- <u>https://ourworldindata.org/grapher/life-expectancy-globally-since-1770</u>
- Broader perspective: <u>https://www.gapminder.org/tools/bubbles#</u>

Age-Sex Pyramids / Population Pyramids

- Population pyramids tell a great deal about the age and sex structure of population and about population growth
- They are used as tools for public services and facilities planning, as well as for population projections

Basic rules on population pyramids:

- Males on the left, females on right
- Actual number of people or percentage of the total population representing following cohorts (age groups) can be presented
- A wide base suggests a high birth rate
- A narrowing base suggests a falling birth rate
- Straight or near-vertical sides show a low death rate
- Concave slopes suggest high death rate
- Bulges in the slope indicate high rates of in-migration
- Deficits in the slope show out-migration or age-specific or sex-specific deaths (e.g. epidemics, war)

Age-Sex Pyramids / Population Pyramids - types

- **Expanding pyramid** a population pyramid that is very wide at the base, indicating high birth and death rates; as the base remains wide, but the mid-part of the pyramid widens, it indicates high birth rates and lower death rates
- **Stationary pyramid** a population pyramid typical of countries with low fertility and low mortality, very similar to a contracting pyramid
- **Contracting pyramid** a population pyramid that comes in at the bottom indicating low or negative population growth rate



Age-Sex Pyramids / Population Pyramids - differences

• <u>http://www.worldlifeexpectancy.com/world-population-pyramid</u>



Remaining population-related concepts

- **Population structure** the composition of the population (age, sex, ethnicity, language, religion, occupation, etc.)
- Sex ratio the ratio between the number of males and the number of females in a population; sex ratios are typically around 105/100 at very young ages because naturally more boys than girls are born, with sex ratios tending to equalize by adulthood, as more males than females die and, moreover, female life expectancy is longer. However, in some countries, female infanticide, neglect of female newborns, and selective abortion of female fetuses have resulted in sex ratios of over 108/100 at very young ages
- **Doubling time** the length of time it takes for a population to double in size. It is calculated by dividing 70 by the growth rate

Population momentum

- **Replacement rate** the total fertility rate needed for a country to replace and maintain its population
- **Population momentum** the continued growth of a population after fertility rate is equal or actually below the replacement rate. This happens if there is a large concentration of people in the reproductive age range (both pre-childbearing and childbearing age)

Related links:

- UN Population Projection: <u>https://esa.un.org/unpd/wpp/</u>
- World Population Data Sheet: <u>http://www.prb.org/swf/2015WPDS/index.html#map/world/population/2015</u>

Dependency ratios

- A country's population can be divided into three groups: old dependents, young dependents and economically active
- Young dependents anyone under the age of 15
- Old dependents anyone over the age of 64
- Economically active people between the ages of 15 and 64
- Dependency ratio the relation of population aged<15 and >64 (the dependents) to population aged 15-64 (the economically active)
- Older dependency ratio the relation of population aged >64 to population aged 15-64; also: an indicator of the balance between working-age people and the older population that they must support



Dependency ratios

A country's dependency ratio may increase for a number of reasons:

- Increasing life expectancy
- Falling death rates
- Rising birth rates
- Immigration of dependents
- Emigration of economically active

Japan's Ageing Population

- Japan has an ageing population because the birth rates have fallen and it has one of the world's highest life expectancy's (Okinawa has the highest life expectancy and the greatest percentage of centenarians in the world)
- Japan has the highest proportion of old dependents (~26%) and the lowest proportion of young dependents (~13%) in the world. The total fertility rate is 1.25
- Even though the Japanese are working longer, it may have to look outside its borders to prevent future population decline and economic decline. Japan is traditionally a very insular country so allowing large scale immigration would involve huge social and cultural changes. <u>Related links:</u>
 - <u>http://www.bbc.com/news/world-asia-16787538</u>



Population (in millions)

Age Group

Population (in millions)

<u>https://www.theguardian.com/money/2010/mar/20/japan-ageing-population-technology</u>

Pros and cons...

| Problems of a Young Population | Solutions to a Young Population | Advantages of Young Population |
|--|---|--|
| Cost of childcare and education Increased dependency ratio Increased cost of child benefits paid by the government Shortage of workers (in the short-term) Cost of healthcare (midwives, health visitors, etc.) Spending diverted from defence, transport, etc. | Anti-natalist policy (see below - China) Increased immigration of economically active Privatised education (remove cost from government) Privatised healthcare (remove cost from government) Privatised healthcare (remove cost from government) Removal of child benefits Reduced birth rates (family planning, contraception, etc.) Reduced infant mortality rates (people then normally have less babies) Greater care of old dependents (less children needed to care for elderly) Immigration restrictions (quotas) | Lower death rates so less money spent on care homes/hospitals Educated and IT literate population (many elderly people are unfamiliar with new technology) Abundance of future workers Strong military in the future Large future market (young people are often interested in consumer goods) |

Pros and cons...

| Causes of an Ageing Population | Problems of an Ageing Population | Solutions to an Ageing Population | Advantages of Ageing Population |
|--|---|---|---|
| High life expectancy caused by: Good medical care Good diet and improved water supply Good sanitation and hygiene Low birth rates caused by: Emancipation of women Cost of children Emigration of economically active | Shortage of economically active Reduced taxation income for the government Cost of providing healthcare and care homes (elderly tend to get sick more frequently) Reduced spending on education, policing, transport network, etc. Cost of paying for pensions Service decline (schools, sports centres, etc. not used by older residents) | Pro-natalist policies (see below - Singapore) Increased immigration of economically active Increased retirement age Private pensions Private healthcare Increased taxes of economically active | Elderly people have a lot of experience and can be valuable in the workplace Less money spent on schooling and natal medical care Lower crime rates and less money needed to be spent on policing |
| | | | |

Pros and cons...

| Advantages of Elderly Workers | Disadvantages of Elderly Workers | |
|---|--|--|
| Workers will have a lot of experience of the workplace (wide skill base) Elderly workers will not take maternity or paternity leave Employers probably won't have to pay into a government pension scheme Elderly people are often seen as more friendly and approachable making them ideal for the service sector Elderly workers can act as mentors for newer staff Elderly workers may be more willing to work part-time or flexitime so companies can alter staff to meet demand. Elderly workers are often more loyal and seen as been more reliable | It might be necessary to retrain some staff in new skills e.g. ICT Elderly workers are more likely to get sick Employers might have to pay higher health insurance premiums Elderly people might be unable to work in many manual (physical) jobs Elderly workers may be less open to new ideas and new technology Elderly workers may only want to or be able to work part-time. Elderly workers are harder to invest in, because they could retire at any time | |

Population distribution

People are not distributed evenly across space:

- 75% of the world population live within 1000 km from the sea
- 40% of the world population live within 100 km from the sea
- 85% of the world population live in areas less than 500 m high
- 85% of the world population live between latitudes 68°N and 20°N

The most favoured locations include:

- Fertile valleys
- Places with regular supply of water
- Temperate climate zone climate that is not too extreme
- Accessible places
- Disadvantageous areas include: deserts, mountains, high latitudes, rainforests
- **Significant exception:** monsoon climate zone (hot, wet season and hot, dry season) being a host to high number of people

Population distribution and megacities (10 million inhabitatns or more)

Uneven population distribution and migration

Read the textbook, pages 388-395:

- Global population distribution and factors affecting it
- Population distribution in China
- Population distribution in South Africa

Internal migration in China

• The largest migration flow in human history

<u>Links:</u>

- <u>http://edition.cnn.com/2013/02/07/world/asia/china-lu-stout-great-migration/</u>
- https://www.youtube.com/watch?v=KNXg-kYk-LU
- <u>https://vimeo.com/4273757</u>
- <u>https://www.theguardian.com/cities/2016/may/10/story-of-cities-39-shenzhen-from-rural-village-to-the-worlds-largest-megalopolis</u>











Migration

- **Migration** the movement of people, involving a change of place of residence. It can be internal or external (international) and voluntary or forced (key difference between migrants and IDPs + refugees, including "climate and economic refugees")
- It is usually for an extended period and does not include temporary circulations such as commuting or tourism
- Migration can be also legal or illegal
- Migration can be also permanent or temporary
- **Migrant** person leaving given area voluntarily to improve his/her life
- **Refugee** person fleeing armed conflict or persecution recognized by the international law; cannot be forced to return to the place of origin if it means threat; has the right to asylum procedure
- **IDP Internally Displaced Person**; not recognized by the international law
- Related and important link: https://www.iom.int/world-migration

Migration

Emigration
 Immigration



- When a migrant returns home periodically it is known as a circular migration
- Voluntary migration decision is taken by migrant because of i.e. economical reason
- Involuntary or forced migration political reasons, wars but also infrastructure development (e.g.: building a dam: <u>https://www.youtube.com/watch?v=HetgsONTvSM</u>), economic conditions and natural hazards like volcanos, hurricanes, floods, etc. and climate change consequences

Forced migration

Types of forced migration

Conflict-induced displacement

- Development-induced displacement
- Disaster-induced displacement

Types of forced migrants

- Refugees
- Asylum seekers
- Internally Displaced Persons (IDPs)
- Development displacees
- Environmental (also climate) and disaster displacees
- Smuggled people
- Trafficked people

Exam requirements and case studies

- In Paper 2 Section B the task is to interpret: Infographic or visual stimulus, with structured questions
- Interpret the infographics on following pages
- Using one of these online tools (whichever you like):
 - https://www.canva.com/create/infographics/
 - https://piktochart.com/
 - https://venngage.com/

prepare your own infographics on one of the forced migration movements:

- Syrian refugees crisis with its peak in 2015
- 2017 Rohingya refugees crisis
- Trafficking Nigerian women to Europe
- Displacement and potential migration caused by the climate change (Maldives, Pacific Islands)
- South Sudan IDPs and refugees in Uganda





Population, forced migration materials (1/2)

• Syrian refugees crisis with its peak in 2015

- http://www.bbc.com/news/world-europe-34131911
- <u>https://www.theguardian.com/world/2017/mar/30/syrian-refugee-number-passes-5m-mark-un-reveals</u>
- <u>http://www.unhcr.org/syria-emergency.html</u>
- http://data.unhcr.org/syrianrefugees/regional.php
- 2017 Rohingya refugees crisis
- <u>https://www.theguardian.com/world/rohingya</u>
- <u>https://www.theguardian.com/artanddesign/2017/oct/03/the-boat-crashed-to-shore-tipping-everyone-out-photographing-rohingya-refugees-myanmar-bangladesh</u>
- <u>https://www.nytimes.com/2017/10/25/learning/lesson-plans/teaching-about-the-rohingya-crisis-in-</u> <u>myanmar-with-the-new-york-times.html</u>
- <u>http://www.unhcr.org/rohingya-emergency.html</u>
- Trafficking Nigerian women to Europe
- <u>https://www.theguardian.com/global-development/2016/aug/07/nigeria-trafficking-women-prostitutes-italy</u>
- <u>https://www.theguardian.com/global-development/2016/aug/08/trafficking-of-nigerian-women-into-prostitution-in-europe-at-crisis-level</u>
- <u>https://www.theguardian.com/global-development/2017/sep/02/juju-curse-binds-trafficked-nigerian-women-sex-slavery</u>

Population, forced migration materials (2/2)

- Displacement and potential migration caused by the climate change (Maldives, Pacific Islands)
- <u>https://www.theguardian.com/environment/2014/jul/01/kiribati-climate-change-fiji-vanua-levu</u>
- <u>https://www.theguardian.com/vital-signs/2014/sep/15/climate-change-refugees-un-storms-natural-disasters-sea-levels-environment</u>
- <u>https://www.theguardian.com/global-development-professionals-network/gallery/2016/feb/15/pacific-islands-sinking-states-climate-change</u>
- <u>https://www.theguardian.com/environment/2017/may/08/australia-and-nz-should-allow-open-migration-for-pacific-islanders-threatened-by-climate-says-report</u>
- <u>https://www.theguardian.com/world/2017/may/14/our-country-will-vanish-pacific-islanders-bring-desperate-message-to-australia</u>
- <u>https://www.theguardian.com/world/2017/oct/31/new-zealand-considers-creating-climate-change-refugee-visas</u>
- <u>https://www.theguardian.com/environment/2017/nov/02/climate-change-will-create-worlds-biggest-</u> refugee-crisis
- <u>http://www.sameworld.eu/en/discover-the-project/environmental-migrant</u>
- South Sudan IDPs and refugees in Uganda
- <u>https://www.theguardian.com/world/south-sudan+refugees</u>
- <u>https://www.theguardian.com/world/south-sudan</u>
- <u>http://www.unhcr.org/south-sudan-emergency.html</u>



Source: UNHCR / 19 June 2017

The 2015 refugees challenge



The 2015 refugees challenge



Source: http://www.metronews.ca/news/world/2015/12/20/the-rising-flow-of-syrian-refugees-infographic.html

The 2015 refugees challenge



International migration - a historical perspective



Rysunek 2.24. Migracje ludności w czasach nowożytnych Źródło: H.J. Blij 1981, s. 127.
International migration - current situation



Contemporary international migration

- Migration has become a global phenomena more countries, more people, different reasons, different directions (South>North, South>South, North>South)
- Migration is accelerating growing volume
- **Migration is becoming more differentiated** economic & political & cultural background; cheap labor & skilled labor; permanent & temporary migration; voluntary & forced migration
- However most migration occurs from rural to urban areas in case of both: domestic and international migration
- Migration is being feminized women not only moving to join earlier male migrants, but also being independent migrants
- According to the UN in 2015 there were 244 million international migrants worldwide - people residing in a country other than their country of birth

74

International migration - current situation



Source: http://publications.iom.int/system/files/wmr2015 en.pdf

Theories of migration - Push-Pull Model

- Push-Pull Model by Everett Lee (1966)
- Combination of positive, negative and neutral factors in regions of origin and of destination
- Evaluation of the individual factors by the potential migrant
- The existence of intervening obstacles and intervening places



Theories of migration - Push-Pull Model

4 main categories of push and pull factors:

- Physical, environmental, and locational considerations
- Economic considerations
- Social, personal/family considerations
- Political, cultural and human-conflict considerations



Foreign-born population in major cities



Foreign-born population %

Source: Compiled by IOM from various sources – see list at the end of the References section.

Source: http://publications.iom.int/system/files/wmr2015 en.pdf

Migration pros and cons

| | ADVANTAGES | DISADVANTAGES |
|-----------------------------|--|--|
| SOURCE COUNTRY (LOSING) | A reduction in unemployment as more jobs become available Remittances are sent home from migrants living abroad Migrants may return home with new skills Increased political ties with migrants host country Reduced pressure on education and healthcare system Reduction in births rates and total fertility rate as many migrants are in the reproductive age range | Brain drain - losing your most educated and skilled workers. A shortage of workers, especially during periods of harvest An increase in the dependency ratio as economically active migrate Separation of families. This may include children losing one or both of their parents Creates dependency on remittances |
| HOST COUNTRY (RECEIVING) | Brain gain - Receiving educated and skilled workers. As well as trained migrants there will be as source of cheap migrants (low paid) to fill manual jobs. There will be increased cultural diversity as migrants arrive with their own culture of food, dance, language, etc. Growth of local market with increase of population If migrants are legal, then an increase in tax revenues for the government | There may be an increase in racial tensions between newly arrived migrants and local population The increased population will cause greater pollution and overcrowding There may be a rise in unemployment when migrants accept lower paid positions, making more of the local population unemployed. There will be an increase pressure on services. This may include schools and hospitals, but also electricity and water supply. Growth of black market and informal economy if migrants are illegally present |

Rural-urban migration pros and cons

| | URBAN AREA (RECEIVING AREA) | RURAL AREA (LOSING AREA) |
|---------------|---|--|
| ADVANTAGES | New workers that can fill low paid jobs like factory and construction work The government has better control over the population if they leave in urban areas. They may join the formal economy and pay taxes It is easier for the government to provide services like schools and hospitals Migrants may become better educated and reduce birth rates and population growth. | Reduces unemployment rate Reduces overcrowding in schools and hospitals Remittances maybe sent back to families Reduced pressure on limited electricity and water supply |
| DISADVANTAGES | Increased congestion Causes urban sprawl as informal housing is built Increased pollution, especially water and air because of traffic and waste Pressure on schools and hospitals Higher unemployment Pressure on electricity and water supply Possible crime and certainly growth in informal economy as people don't have jobs | Increases dependency ratio, because young and old are often left behind. There maybe a shortage of workers, especially during the harvest season. Families may become separated as young adults migrate. |

Remittances

• **Remittance** - a transfer of money from a foreign worker to an individual in her/his home country (usually family, relatives, close friends)



Remittances



FIGURE 1.3. Top Remittance Receivers in 2017





Sources: International Monetary Fund; World Bank's World Development Indicators; staff estimates. *Note:* GDP = gross domestic product.

Source: The World Bank, http://www.worldbank.org/en/topic/labormarkets/brief/migration-and-remittances

Remittances



Remittance flows to developing countries **decreased by 2.4 percent to \$429 billion** in 2016 but are **larger than Official Development Assistance** (ODA) and **more stable than private capital flows**

Remittances

\$800 billion



REMITTANCE FLOWS TO DEVELOPING COUNTRIES, PROJECTED-2017



Related link:

<u>https://www.ted.com/talks/dilip_ratha_t</u>
 <u>he_hidden_force_in_global_economics_se</u>
 <u>nding_money_home</u>

Like 7.7K 🎔 Tweet

2

Urbanisation, 2015 🕟

Search cities

GLOBAL CITY POPULATIONS*



Source: The Economist: http://www.economist.com/node/21642053 + CNN: http://edition.cnn.com/CNNI/Programs/urban.planet/

Megacities

- **Agglomeration** an extended city comprising the built-up area of a central place (usually a municipality) and any suburbs linked by continuous urban area; agglomeration is monocentric
- **Conurbation** a region comprising a number of cities, large towns, and other urban areas that, through population growth and physical expansion, have merged to form one continuous urban and industrially developed area (e.g. BosWash); in most cases, a conurbation is a polycentric urban agglomeration, in which transportation has developed to link areas to create a single urban labour market or travel to work area (e.g. Rurghebiet, Upper Silesia)
- Megacity large metropolitan area of urban agglomeration(s)/conurbation of 10 million inhabitants or more

"Traditional" **Conurbations**

- U.S. East Coast (BosWash): Boston-Newark-NewYork-Philadelphia-Baltimore-Washington
 - Population: ~50 million
 - Extent: ~700 km
- Next slide: U.S. West Coast (Southern California, SoCal): Los **Angeles Basin** (SantaMonica-LosAngeles-SanBernardino-SanDiego+Tijuana)
 - Population: ~25 million
 - Extent: ~250 km



120 miles

100

80

60

40

20

0

more than 7.500



"New" Conurbations

- Chinese Pearl River Delta
 - Population: at least 60-65 million (the below data is outdated)



The Pearl River Delta Megacity

Will it be the death of Hong Kong?

Pop: 4.38m

Pop: 4.83m

Artificial island

ng Kong–Zhuha

Town

🚯 Airpo

Tunnel

Bridge link Pop: 14.8m

Zhuha

Macau

Guangzhou

on: 3 95n

The Pearl River Delta is slowly growing into a single colossal megapolis. And as controversy reigns over the continued urban development into the HKSAR's northeastern territories, we dissect the future of the extravagant sprawling metropolis and see how its emergence will affect and perhaps eventually kill - Hong Kong, By Samuel Lai

Shenzhen

Pop: 13.55m

Pop: 10.3m

Pearl River Delta GDP (RMB): 135,000 million Life expectancy: 80 years

Guangzhou GDP (RMB): 230,276m Birth Rate: 0.62% Industry: Services, finance

Pearl River

Huizhou GDP: 105,948m Birth Rate: 0.61% Industry: Petrochemical Dongguan GDP: 98,794m Birth Rate: 0.20% Industry: Manufacturing

Shenzhen

GDP: 221,883m Birth Rate: 0.42%

Industry: Hi-tech,

manufacturing

Zhuhai GDP: 179,698m Birth Rate: 0.84% Industry: Transport hub

equipment

GDP: 146,918m Birth Rate: 0.32%

Industry: Machinery

Zhongshan GDP: 152,291m Birth Rate: 0.38% Industry: Healthcare, fine chemicals Foshan

Hong Kong GDP: 269,279m Birth Rate: 1.1% Industry: Finance

long Kong

GDP: 76,057m Birth Rate: 0.65% Industry: Advanced manufacturing

Pop: 5.75m

Pop: 7.3m

Zhouqing GDP: 78,851m Birth Rate: 1.71% Industry: Manufacturing

Megacities



Source: Cologne University

Megacities



Source: Cologne University

92

Migration to one megacity

Read the textbook, pages 404-405:



- The consequences of megacity growth for individuals and societies
- And Mumbai case study

Additional materials on Mumbai:

- <u>http://www.coolgeography.co.uk/A-</u> <u>level/AQA/Year%2013/World%20Cities/Mumbai/Mumbai.htm</u>
- <u>https://www.youtube.com/watch?v=Im0tHRs9Bng</u> (Episode 1)
- <u>https://www.youtube.com/watch?v=l-yjpvzGKZQ</u> (Episode 2)

Read also the material "Indian urban change and Megacities" available on IDU

Three more topics on population and development

- Gender inequalities and the role of women in a social, cultural and demographic change - Hans Rosling was commenting that in his lecture where he used the example of Bangladesh (in case you have forgotten: <u>https://youtu.be/FACK2knC08E</u>); you'll also find it in the textbook (pages 414-415 and 420) and on the following slides
- **Pro-natalist and anti-natalist policies** we have used China's onechild policy number of times; you can read about it in the textbook (pages 412-413) and on the following slides where you'll find some basic info, data, samples of propaganda materials and links to external materials
- Population dividend the concept also covered in the textbook (pages 421-422), as well as on the following slides and in additional on-line materials

Gender and change

- **Gender** the condition of being man or woman, used with reference to social and cultural differences and roles rather than biological ones
- We are born as males and females, but becoming girls, boys, women and men is something that we learn from our families and societies
- Gender is a very fluid concept. It changes not only over time, but also from one culture to another and among different groups within one culture. Therefore, gender roles, inequities and power imbalances are not a "natural" result of biological differences (and the "Natural Law"), but are determined by the systems and cultures in which we live the are being negotiated by us (or imposed on us)
- **Empowerment** to invest with power, this may be legal power to do something or social power and belief to do something
- Emancipation freedom; emancipation of women, which means that women have the freedom to do whatever they want, including getting an education, a job, decide by their own on their sexual behaviors and reproductive health, as well as have access to family planning tools

Gender and change - an approach





How to measure gender disparities?

- Gender Development Index (GDI) the ratio of the HDIs calculated separately for females and males using the same methodology as in the HDI. It is a direct measure of gender gap showing the female HDI as a percentage of the male HDI
- http://hdr.undp.org/en/indicators/137906



How to measure gender disparities?

- Gender Inequality Index (GII) measures gender inequalities in three important aspects of human development: reproductive health, empowerment, and labor market. The GII is built on the same framework as the IHDI and the higher the GII value, the more disparities between females and males and the more loss to human development
- http://hdr.undp.org/en/indicators/68606



Why gender disparities are so important?

- UN: Women often work twice as many hours as men, earn only fraction of the income of men, consume less food and water than men and own only one hundredth property of men
- Despite efforts at local, national, and international levels, women and girls continue to face discrimination of different forms:
 - Human rights including violence
 - Work more work, less money, unpaid work
 - Assets unfair tenure rights, limited property ownership
 - Education
 - Early marriages
 - Sexual harassment and violence
 - Access to healthcare, especially to reproductive health and family planning
- Related links:

- https://www.youtube.com/watch?v=av1FFB9M5uU&feature=player_embedded

- <u>http://www.girlsnotbrides.org/</u>

Global Gender Gap

- Global Gender Gap Index (and Global Gender Gap Report)
- The Global Gender Gap Index was first introduced by the World Economic Forum in 2006 as a framework for capturing the magnitude of gender-based disparities and tracking their progress over time. This year's edition of the Report benchmarks 144 countries on their progress towards gender parity on a scale from 0 (imparity) to 1 (parity) across four thematic dimensions - Economic Participation and Opportunity, Educational Attainment, Health and Survival, and Political Empowerment - and provides country rankings that allow for effective comparisons across regions and income groups.
- <u>Related links:</u>
 - http://reports.weforum.org/global-gender-gap-report-2017/
 - <u>https://www.youtube.com/watch?v=dWpszEzmmzw</u>
- Also read about it in the textbook pages 414-415 (Kerala, India case study) and 420 and watch a documentary: <u>https://www.youtube.com/watch?v=KecF3KASw6w&feature=share</u>
- Read also additional material available on IDU



Source: Global Gender Gap Index 2017, World Economic Forum



Global Average, Annual Earnings





A working day for men and women





Women's political empowerment



Figure 7: Global Gender Gap Index and subindexes evolution, 2006–2017, by region

1.0

Global Gender Gap



Note: Covers the 106 countries which have consistently been featured in the Index since 2006



Global Outlook

Top 10 of the Global Gender Gap Index

| rank | AVG | score |
|-----------------|-----|-------|
| 1. Iceland | | 0.878 |
| 2. Norway | | 0.830 |
| 3. Finland | | 0.823 |
| 4. Rwanda | | 0.822 |
| 5. Sweden | | 0.816 |
| 6. Nicaragua | | 0.814 |
| 7. Slovenia | | 0.805 |
| 8. Ireland | | 0.794 |
| 9. New Zealand | | 0.791 |
| 10. Philippines | | 0.790 |

Source: Global Gender Gap Report 2017, World Economic Forum Note: *2017 rank out of 144 countries

Managing population change

- **Pro-natlist policy** a policy that tries to increase birth rates and total fertility rates leading to increase in population size; normally works by offering incentives
- Anti-natalist a policy that tries to reduce birth rates aiming at limiting the population growth rate; this can be done through better education on family planning and better provision of contraception or a more rigid forced policy
- **Family planning** attempts to limit family size; methods include:
 - education and women's emancipation (!)
 - better healthcare (maternal and for children)
 - contraceptives (pills, condoms) availability and subsidies
- Brutal and forced policy may include
 - forced sterilization
 - forced abortion
 - infanticide








- Formally imposed in 1978-1980
- Mitigated in 2007
- Formally phased out in 2015
- Prevented ~400 million births
- Resulted in limiting the population growth and allowed China to avoid traps of overpopulation, but...
 - ...at the same time in many cases was violent and led to ageing population
- Read the textbook case study: pages 412-413

Disappearing act

China's fertility rate, live births per woman

ONE-CHILD POLICY INTRODUCED



The burden of ageing

China's population by age group, m



• <u>Related links:</u>

- https://www.theguardian.com/world/2013/nov/15/china-one-child-family-policy-timeline
- https://www.theguardian.com/world/datablog/2015/oct/29/impact-china-one-child-policy-four-graphs
- <u>https://www.theguardian.com/world/2015/oct/29/china-abandons-one-child-policy</u>
- https://www.theguardian.com/world/china-s-one-child-policy

Demographic dividend

- The demographic dividend refers to a bulge in the number of adults in a population. It occurs when fertility rates decline, allowing faster economic growth. The decline in fertility often follows a decline in infant and child mortality rates, as well as increased life expectancy.
- As families recognise that fewer children will not die during infancy or childhood they begin to have fewer children.
- However, this drop in fertility rates is not immediate. The lag between falling death rates and falling fertility produces a bulge in the population that surges through age groups (cohorts).
- For a period of time this 'bulge' increases the dependency ratio. Eventually this cohort begins to enter the work force.



Demographic dividend

- Read the the textbook pages 421-422
- <u>Related links covering the same case studies as in the textbook</u>
 <u>(Ethiopia and South Korea):</u>
 - http://blogs.osc-ib.com/2016/09/ib-teacher-blogs/demographic-dividend/
 - https://www.populationeducation.org/content/what-demographic-dividend

Thank you for your attention Robert Łuczak robert@robertluczak.eu