Past-paper walk-through

The Demographic Transition Model ▪ 2.5

eXercise

Questions in this set

- 2024 Set 2 Q3
- 2023 Set 1 Q1

Reading the mark scheme

- **B1** a mark that stands on its own – the point is either made or not.
- **M1** a *method* mark: the right approach, even if the number is wrong.
- **A1** an *answer* mark, and it usually needs its M mark first.
- **C1** a working mark on the way to the answer.
- // separates answers the examiner accepts equally.
- **ecf** = error carried forward: a later part is marked on your own earlier answer.
- **owtte** = "or words to that effect" – the wording need not match.

Question 3

2024 Set 2 ▪ Q3

The demographic transition model can be used to theorize the changes in a country's total population over time.

(a) Select ONE country listed in the table and identify its stage in the demographic transition model.

(b) Define the concept of a pronatalist policy.

(c) Explain ONE factor that affects birth rates as countries move from stage 3 to stage 4 in the demographic transition model.

(d) Describe ONE likely economic effect when countries have negative population growth.

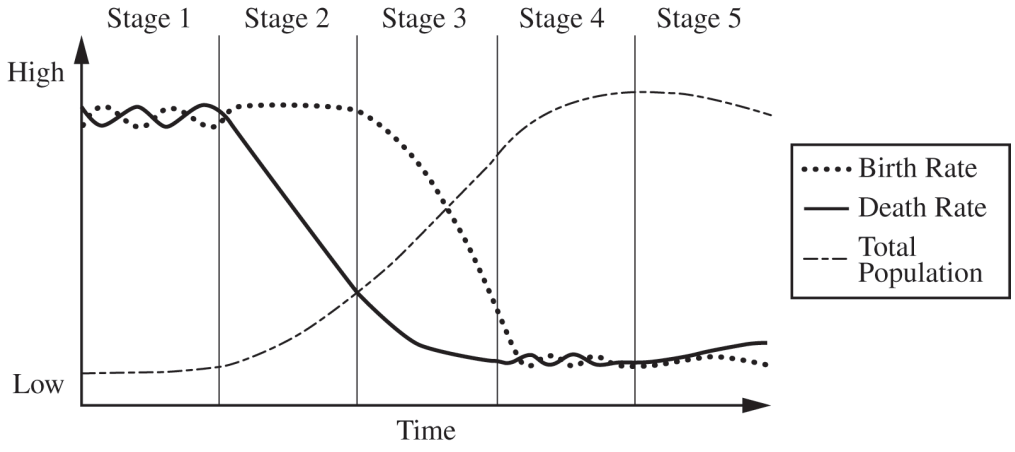
(e) Based on the data shown in the table, describe a policy that a government might develop in response to demographic change.

Question 3

(f) Explain ONE reason why the life expectancy in urban areas may be higher than the life expectancy in the entire country.

(g) Using the data in the table, explain how, over time, low birth rates may impact the country's percent of population over age 65.

Question 3


Stage 1
Stage 2
Stage 3
Stage 4
Stage 5
High
Low
Time
Birth Rate
Death Rate
Total Population

Solution 3

(a)

Mark scheme

- - Any country in the table (Croatia, Estonia, Germany, Greece, Japan, Portugal, or Romania) and stage 4 or stage 5.

Solution 3

(b)

Mark scheme

- - Pronatalist policies are those that encourage or promote population growth.
- - Government programs that provide incentives (e.g., longer parental leave, childcare, tax credits) for increasing fertility rates and/or population growth.
- - Pronatalist policies are designed to increase the birth rate and/or the fertility rate of an area.

Solution 3

(c) Mark scheme

- - Increased access to health care, contraceptives, and/or other family planning information tends to reduce the number of children born.
- - Increased access to education and/or employment of women is generally associated with lower fertility.
- - More people live in urban areas where space is limited or the cost of living makes raising children more expensive, reducing the birth rate.
- - People may have fewer children over time as agricultural production requires less labor (e.g., mechanization, agricultural chemicals).

Solution 3

- - Decreases in infant and/or child mortality rates may reduce the need to have more children.
- - Government policies and/or programs may reduce fertility (e.g., antinatalist policies).

Solution 3

(d) Mark scheme

- - A country with an aging population or a high elder dependency ratio may spend more money on programs for the elderly or retired.
- - A low youth dependency ratio may create an opportunity for public funds to be shifted from education and/or childcare needs to social services for the elderly.
- - Countries may not have a large enough workforce or enough working-aged people to support the economy and/or pay taxes.
- - Employers may need migrants to supplement declining labor pools and/or a smaller workforce.

Solution 3

- - Primary sector activities that are labor-intensive may be limited as the economy shifts to activities that require fewer workers.
- - Economies may shift from labor-intensive primary and/or secondary sector activities to tertiary or higher-sector activities that can be performed by an aging workforce or outsourced to workers in other countries.
- - Large companies may create economies of scale and/or increase usage of technology to create more efficient production processes that use fewer workers.
- - Economic stagnation and/or decline may occur when there are fewer people to purchase goods, real estate, and/or services.

Solution 3

(e) Mark scheme

- - Governments might implement pronatalist or population growth policies and/or increase immigration.
- - Pro-immigration policies might include expanding access to public benefits or services and/or provide assistance with assimilation.
- - Pronatalist policies might include increased parental leave, increased tax incentives, government-subsidized childcare, and/or family-friendly employment law.
- - Governments might redesign finance or tax structures (e.g., changes to social security and/or pension systems) that affect the elderly population.

Solution 3

- - Governments might expand health care options for the elderly population (e.g., retirement or nursing homes, health clinics, specialty hospitals), and/or governments might train professionals specializing in geriatric health care.
- - Governments might support programs to meet the social needs of senior citizens (e.g., adult day care, senior centers, senior housing).
- - Governments might support policies that improve infrastructure to make landscapes, signage, transportation, and/or buildings more friendly to the elderly.
- - Governments might try to slow or halt rural population loss by improving rural-to- urban transportation systems, encouraging remote work, and/or promoting rural economic growth (e.g., tourism, industry).

Solution 3

(f) Mark scheme

- - Urban areas may have better access to food, health care, sanitation, and/or social services.
- - There may be greater access to education, nutritional information, and/or health information in urban areas.
- - Urban working conditions may include shorter daily working hours, fewer weekly hours, less physically demanding work, and/or better safety (e.g., fewer work accidents).
- - Urban living may lead to healthier lifestyles due to greater access to recreation facilities, sports activities, walkable cities, and/or bikeable cities.

Solution 3

(g)

Mark scheme

- - Low birth rates may lead to an increase in the percent of population over age 65 because the overall population ages and/or there are fewer children.
- - If birth rates drop below death rates or if the rate of natural increase is negative, the overall population will age and/or the percent of population over age 65 will increase.

Question 1

2023 Set 1 ▪ Q1

No stimulus.

The rate of natural increase (RNI), also known as the natural increase rate, helps geographers assess annual population growth or decline.

(a) Define the concept of RNI.

(b) Describe how a country may have a negative RNI.

(c) Compare ONE difference between RNI and the total fertility rate as indicators of population change.

(d) Explain ONE reason why RNI in urban areas may vary significantly from RNI in rural areas in the same country.

(e) Explain why there are often differences in doubling times between less developed countries and more developed countries.

Question 1

(f) Explain ONE reason ethnonationalism might lead a government to promote pronatalist policies.

(g) Explain the degree to which a unitary government may be more effective than a federal government in enforcing antinatalist policies.

Solution 1

(a)

Mark scheme

- Define RNI (1 point) — accept any: the difference between the crude birth rate and crude death rate (optionally expressed as a percentage or per thousand of population); the number of live births minus deaths per thousand population; the difference between crude birth and death rates over a set period (e.g., a year); OR the annual percent change in population NOT including immigration or emigration.

Solution 1

(b)

Mark scheme

- Describe a negative RNI (1 point): a country has a negative RNI when the death rate is higher than the birth rate (i.e., the number of deaths exceeds the number of live births) in a given year.

Solution 1

(c) Mark scheme

- Compare RNI vs total fertility rate (1 point) — accept any: RNI is the annual percent growth rate of a population (excluding migration), while TFR estimates the number of children a woman of childbearing age (15–45) may have; RNI combines crude birth and death rates while TFR involves no mortality measure; RNI is an annual statistic for a specific year while TFR is a point-in-time estimate; an RNI of 0 is zero growth while a TFR of 2.1 is replacement level; RNI predicts growth via the demographic transition while TFR predicts growth by comparison to the replacement rate (2.1).

Solution 1

(d) Mark scheme

- Explain ONE reason urban RNI differs from rural RNI (1 point) — accept any well-explained reason, e.g.: urban families have fewer children due to reduced need for agricultural labor; higher urban cost of living (housing, schooling) incentivizes fewer children; greater urban access to health care, education, or family planning lowers fertility; urban women more often work outside the home; less urban living space; higher urban female education/political power/financial stability delays or reduces childbearing; lower urban infant/child mortality reduces the need for more children. Conversely, rural areas may lack access to contraception/family planning, hold traditional pronatalist values, need child labor for agriculture, or have poorer health care raising infant mortality — all raising rural RNI.

Solution 1

(e)

Mark scheme

- Explain differing doubling times LDCs vs MDCs (1 point): LDCs have higher RNI (higher birth/fertility rates from social/economic conditions such as agrarian economies, lower female status/education, early marriage, higher infant mortality, less family planning) $\rightarrow$ shorter doubling time; MDCs have lower RNI (service/technology economies, equitable female roles, later marriage, urbanization, low infant mortality, accessible family planning) $\rightarrow$ longer doubling time.

Solution 1

(f)

Mark scheme

- Explain ONE link from ethnonationalism to pronatalist policy (1 point) — accept any: children seen as a symbol of national pride / a centripetal (cohesion) force; a larger national/ethnic population improves social cohesion; higher birth rates support territorial expansion, economic growth, irredentism, or a larger military; a theocratic state promotes births on religious grounds; boosting the majority (dominant) group's numbers increases its political power over minorities; a state with restrictive immigration promotes births to reverse population decline.

Solution 1

(g) Mark scheme

- Explain the degree to which a unitary government is more effective at antinatalist enforcement (1 point). Must include a statement of degree AND a valid reason. Moderate/high degree: a unitary government can enact uniform countrywide family-planning laws with penalties/enforcement; may run a centralized national health/insurance system delivering family planning efficiently; can deliver incentives directly with fewer levels of governance to lose funds; a federal system's regional variation weakens enforcement. Low/moderate degree: little difference if the health-care/family-planning system is inadequate or inaccessible (or, conversely, if adequate), or if the government lacks enforcement or funding capacity — in which case governance type matters little.