Question 2

POPULATION AGE 65 OR OLDER IN 2000 AND 2050 (in percent)

<table>
<thead>
<tr>
<th>Country</th>
<th>Population Age 65 or Older, 2000 (percent)</th>
<th>Population Age 65 or Older, 2050 (percent)</th>
<th>Change in Proportion 65 Years or Older (percent)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Belgium</td>
<td>17</td>
<td>28</td>
<td>65</td>
</tr>
<tr>
<td>Denmark</td>
<td>15</td>
<td>24</td>
<td>59</td>
</tr>
<tr>
<td>Japan</td>
<td>17</td>
<td>32</td>
<td>86</td>
</tr>
<tr>
<td>Russian Federation</td>
<td>13</td>
<td>25</td>
<td>100</td>
</tr>
<tr>
<td>Ukraine</td>
<td>14</td>
<td>27</td>
<td>91</td>
</tr>
<tr>
<td>United Kingdom</td>
<td>16</td>
<td>25</td>
<td>56</td>
</tr>
</tbody>
</table>

The average age of the population in selected developed countries listed in the table above has been increasing.

Part A (4 points)

Identify and explain two reasons that the average population age is increasing in developed countries. (1 point for each identification to a maximum of 2 points; 1 point for explanation associated with identification to a maximum of 2 points.)

Reduced Fertility
- Improved education of women, more women working, delays in starting families
- Children are an economic liability in MDCs, too expensive to have several, societal norms (1–2 children)
- Birth control: cost, availability, accessibility, acceptance, quality
- More urban societies: less need for children to work on farms
- Government and private pensions reduce “children as pension”

Increased Life Expectancy
- Improved health care (e.g., medicine, facilities, research/knowledge, personnel, technologies, accessibility)
- Improved lifestyle (e.g., knowledge of health risks, improved diets, technology, nutrition and exercise)
- Improved food security/availability
- Less conflict (e.g., less crime, fewer wars)
- Improved work conditions (e.g., less physically demanding labor, better safety standards)
- Improved public health (e.g., sanitation, water supply, housing, standard of living)
- Improved financial security for elderly (e.g., pensions, care facilities)
- Improved safety standards (e.g., sports, transportation, building codes)

Out-migration of Youth
- Out-migration of youth for better lifestyle (e.g., jobs, security)
### Question 2 (continued)

**Part B (4 points)**

Identify and explain one social consequence and one economic consequence that countries face as their populations age. (1 point for each identification to a maximum of 2 points; 1 point for explanation associated with identification to a maximum of 2 points.)

<table>
<thead>
<tr>
<th><strong>Social Consequences</strong></th>
<th><strong>Explanations</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Changing roles of children/elders</td>
<td>• Adult children tending to the personal needs of elders</td>
</tr>
<tr>
<td>Increased grey power</td>
<td>• Seniors with more political/personal influence, social and political action on behalf of elderly, more elderly workers, shift in consumerism (e.g., tourism, courses, media, entertainment)</td>
</tr>
<tr>
<td>Increased immigration</td>
<td>• Increased immigration results in increased cultural diversity, perhaps social conflicts, growth of ethnic neighborhoods</td>
</tr>
<tr>
<td>Changing housing stock</td>
<td>• Homogeneous seniors’ neighborhoods (e.g., smaller homes/condos, less maintenance), increased availability of homes for youth</td>
</tr>
<tr>
<td>Decline of services for youth</td>
<td>• Closure of schools, reduction in daycares</td>
</tr>
<tr>
<td>Need for/growth of services for elderly</td>
<td>• Geriatric medical/social services and facilities</td>
</tr>
<tr>
<td>Social conflict due to generational differences of opinions</td>
<td>• Elderly may resist societal changes desired by young, elders resented for requiring excessive human/capital resources</td>
</tr>
<tr>
<td>Accessibility</td>
<td>• Changes to building code, signage (e.g., larger font, audio messages)</td>
</tr>
<tr>
<td>Development of pro-natalist policies</td>
<td>• Created to sustain population</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Economic Consequences</strong></th>
<th><strong>Explanations</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Increased cost to society due to government programs/taxes</td>
<td>• Medical care, housing, accessibility, pensions</td>
</tr>
<tr>
<td>Increased economic pressure on the labor force (dependency ratio)</td>
<td>• Challenges sustaining the economy, fewer people working, fewer people paying taxes</td>
</tr>
<tr>
<td>Labor supply issues</td>
<td>• Shortage of labor, hiring of elderly, less competition among youth for jobs, need for increased immigration, automation</td>
</tr>
<tr>
<td>Changes in employment opportunities</td>
<td>• Growth of senior-based employment</td>
</tr>
<tr>
<td></td>
<td>• Decline of youth-based employment</td>
</tr>
<tr>
<td>Economic pressure on adult children</td>
<td>• Financially assist their aging parents, stay at home rather than work, help pay for others to assist, help pay for nursing homes, help pay medical costs</td>
</tr>
</tbody>
</table>
A. Population age increase is the product of a lower birth rate and lower death rate. More developed countries are stage 3 or 4 in the demographic transition model and therefore exhibit both the aforementioned qualities. MDC’s are in the medical revolution and have access to healthcare that allows more people to live longer. If a person is sick, they can go to the doctor and get medicine quickly, unlike in LDC’s where the resources most likely are not readily accessible. Another reason that the average population age is increasing is because in MDC’s more women are educated and have jobs. When women are educated and knowledgeable of birth control, they are less likely to have as many children. Furthermore, if they have a job, they will not have as many children because they need to be at that job. Since there are less children in MDC’s, more of the population is older and therefore the average population age is increasing.

B. A social consequence of a rising average population age is that certain commodities suited for younger people are no longer of use. Because the majority of the population is older, places like clubs, amusement parks, or late night activities are in less demand than retirement complexes and other elderly activity places. This ties into an economic consequence that is, who is going to support the aging population and now? In Belgium, it is predicted that in 2050, 25% of its population will be 65 or older, which is about retirement age. Less people of working age means that things like
Social security are not being fed into as much. Unless every person has an independent retirement fund, there will not be enough workers to support them. That could lead to an increase in retirement age on the next generation in order to replenish the economy.
20. One reason the average population

Burns off age is increasing in developed
countries is because of medical
advancements. Having better health care,
vaccines, and appropriate medical attention
when needed is vital to helping people
live longer lives. Another reason is better
living conditions. Sanitary conditions, such
as clean drinking water and proper
garbage disposal can help stop the spread
of bacteria and other viruses that thrive in
unsanitary conditions and kill many people.

20. One social consequence that countries
face as their populations age is that they
may need people, such as family members,
to take care of them. This could force
someone to quit their job in order to
help them out full time, or perhaps move
to a home where someone in their old
age can live (such as a place with no steps).
An economic consequence would be
social security. As more people are
reaching the retirement age, the social
security funds will be strained as more
ADDITIONAL ANSWER PAGE FOR QUESTION 2

AND MORE PEOPLE WILL DEPEND ON THEM TO SURVIVE.
The average population is increasing in developed countries. The reasons are that, the gross domestic product is high in the country in which allows for more goods to be imported and exported. Also, the technology in the country has increased rapidly, causing better medicine and more hospitals for the civilians to have a longer life expectancy. Another reason is the literacy rate has increased and the educated numbers of people has increased in MDCs, causing a more older and healthy population in MDCs.

A social consequence that countries face is that as the population ages than the more the population will increase and cause an overpopulated country in MDCs. A economic consequence is that as the population ages and has a longer life expectancy than eventually retirement funds and Medicare as well as public are not going to be given or supported by the government anymore. This is because there would not be enough tax money from civilians to support it. So the jobless, and unemployed lack of paying their taxes.
Overview

This question was designed to give the students an opportunity to apply their knowledge of the demographic transition to a contemporary population development of concern in all developed countries, but especially Japan and European countries. Rather than asking students to discuss the model of the demographic transition, they were asked to assess the consequences of lower birthrates and higher life expectancies for populations in the fourth stages of the demographic transition. This is an authentic question because essentially all students taking the test live in developed countries. The question probed the students’ understanding of changes in the dependency ratio without actually asking the students to define that concept. Part A asked students to identify and explain two reasons why the average age is increasing in developed countries. Part B asked students to identify and explain one social consequence and one economic consequence countries face as their population ages in the future.

Sample: 2A
Score: 8

The response earned full credit and demonstrates a comprehensive understanding of aging populations, as well as the social and economic consequences of an aging population. Full credit (4 points) was earned in part A and part B (4 points). The response received 2 points in part A for correctly identifying increased life expectancy as a reason for the higher average age in developed countries and for explaining that increased life expectancy is due to improved access to health care. Part A received 2 more points for correctly identifying reduced fertility as a reason for the increasing average age in developed countries and then explaining that the reduced fertility is due to the education of women. Part B received 2 points for correctly identifying the changing demand for services from youth based activities towards senior based services and observing that there will need to be more “retirement complexes and other elderly activity places.” One point was also earned part B for correctly identifying the increased economic pressure on the labor force. The response received 1 explanation point in part B for explaining the challenge of fewer people in the labor force to support social security programs for the aging population.

Sample: 2B
Score: 6

The response earned partial credit (2 points) in part A and full credit (4 points) in part B. The response received 1 point for correctly identifying increased life expectancy as a reason for the higher average age of developed countries and 1 point for explaining that increased life expectancy is due to improved health care because of medical advances. No additional part A identification and explanation points were awarded because the explanation of drinking water and garbage disposal are also related to increased life expectancy. In part B, 1 identification point was earned for correctly identifying the changing roles between children and elders, and 1 explanation point was earned for correctly explaining that family members may have to take care of elders. The response earned 1 explanation point in part B for correctly explaining that government social security programs will be strained as the number of aged in the population increases. Part B also received 1 identification point for correctly identifying the increased cost to society through government programs.
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Question 2 (continued)

Sample: 2C
Score: 4

This response earned partial credit (2 points) in part A and partial credit (2 points) in part B. The response received 1 point for correctly identifying increased life expectancy as a reason for the higher average age of developed countries and 1 point for explaining that increased life expectancy is due to improved health care as a result of better medicine and more hospitals. No additional identification and explanation points were earned in part A because of the incorrect discussion about literacy rates in developed countries making the population healthier. Part B received 1 identification point for identifying increased cost to society and 1 explanation point for explaining retirement and Medicaid programs may lose government support. No additional points in part B were earned because of an incorrect social consequence identification and explanation that an aging population will overpopulate developed countries.