AGEING –
A CHALLENGE AND AN OPPORTUNITY FOR THE COUNTRIES OF EASTERN EUROPE, CAUCASUS AND CENTRAL ASIA

Chisinau, March 2007

The Demographic Factor

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1. Definition and measurement of ageing:
   - Indicators, trends, pyramids

2. Demographic causes of ageing:
   - Changes in fertility; recent trends
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   - Marital status of the aged
   - Gender differences in the aged population

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1. Defining aging:

- Who is old? A person can be biologically old; or a person in pension; or a person who is a grandparent, etc.
- A demographic definition of “old people”: the proportion of the population aged 65 or more years (or 60 or more)
  - This is a basic indicator of population ageing
- Oldest-old: more than 80 years old
Other indicators:

- Median age of the population
- Old-age support ratio

Usually defined as the ratio of the population aged 65+ to the population aged 15 to 64 completed years of age (per 100 persons)

Other definitions: 65+/20-64; 60+/15-64; …
BELARUS

UN projection medium variant
<table>
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<tr>
<th>Country</th>
<th>Percent 65+</th>
<th>Dependency ratio</th>
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<td>Region</td>
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<td>Italy</td>
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</table>
UKRAINE 1960

UKRAINE 2005

AGE

Males

Females

AGE

Males

Females
Note: per thousand distribution of the total population
ALBANIA, 2005 / ALBANIE, 2005
Age-pyramids on January 1st, 2005, with total population reduced to 1,000 persons in both cases
Pyramides des âges au 1er janvier 2005, populations totales ramenées à 1 000 personnes dans les deux cas
compared to the 46 member states of the COUNCIL of EUROPE
comparées à l’ensemble des 46 états membres du CONSEIL de l’EUROPE

Males / Sexe masculin

Females / Sexe féminin

Population 1.1.2005 : 3.1 millions
ARMENIA, 2005 / ARMENIE, 2005
Age-pyramids on January 1st, 2005, with total population reduced to 1,000 persons in both cases
Pyramides des âges au 1er janvier 2005, populations totales ramenées à 1 000 personnes dans les deux cas
compared to the 46 member states of the COUNCIL of EUROPE
comparedes à l’ensemble des 46 états membres du CONSEIL de l’EUROPE

Males / Sexe masculin

Females / Sexe féminin

Population 1.1.2005 : 3,2 millions
TURKEY, 2005 / TURQUIE, 2005
Age-pyramids on January 1st, 2005, with total population reduced to 1,000 persons in both cases
Pyramides des âges au 1er janvier 2005, populations totales ramenées à 1 000 personnes dans les deux cas compared to the 46 member states of the COUNCIL of EUROPE
comparées à l'ensemble des 46 états membres du CONSEIL de l'EUROPE

Population 1.1.2005 : 71,6 millions
Bulgaria:
1950
2000
2050
Causes of demographic ageing:

Two main causes:

• *Drop in fertility. It has a relative effect*
• *Drop in mortality. It has a direct effect*
• *(Migration may have an effect)*
Stages in the process of ageing:

The demographic transition caused population ageing in all countries:

- **First, a steady drop in fertility**
  - the pyramid shrinks from below
- **Second, a drop in mortality rises life expectancy**
  - may effect the whole age structure;
- **Exceptions: both changes start about together**
  (some CEE countries).
Which cause has stronger effect?

- During the first stage: fertility
- During the second stage: mortality (after child and adult mortality have declined, old-age mortality decline continues)
- At present times the cause is country-specific
  - The first stage prevails in the CARK countries
  - The second stage prevails in the other countries (of our interest)
Fertility: recent trends

• TFR
• Mean age
• Postponement effects
Mean age at first birth

EU members

- Czech Rep.
- Estonia
- Hungary
- Latvia
- Lithuania
- Poland
- Slovak Rep.
- Slovenia

Balkan countries

- Bosnia-Herzegovina
- Bulgaria
- Croatia
- Macedonia
- Romania
- Serbia and Montenegro
First-order TFR

New EU members

Russia and Baltic countries

- Czech Rep.
- Hungary
- Slovenia
- Poland
- Slovak Rep.
- Estonia
- Latvia
- Lithuania
- Russian F.
### The effect of postponement of births on the TFR

24-yr. olds born in: 1973 1974 1975 1976 ...

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<th>...</th>
<th>1997</th>
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<td>2</td>
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</tbody>
</table>
Observed TFR is distorted, because of the tempo effect;

Demographers discuss the estimation of a TFR clear of tempo effect. It is called adjusted TFR;

The adjusted TFR is a measure of quantum;
Adjustment is done for each birth order.
Adjusted TFR(1)

- It is app. 15-20% higher than the observed one.

<table>
<thead>
<tr>
<th>Country</th>
<th>Year</th>
<th>Observed</th>
<th>Adjusted</th>
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<tbody>
<tr>
<td>Bulgaria</td>
<td>2001</td>
<td>0.72</td>
<td>0.90</td>
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<tr>
<td>Croatia</td>
<td>1998</td>
<td>0.60</td>
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<td>Romania</td>
<td>1997</td>
<td>0.69</td>
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<td>1998</td>
<td>0.79</td>
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</table>
Fertility Trends - Summary

Before the start of the transition:

- Universality of childbearing;
- First child at an early age;
- Stopping childbearing at an early age;
- App. 2 children per woman
After the start of the transition

- No universality of childbearing, voluntary childlessness increased
- Drop in fertility: Single-child families prevail
- Postponement of childbearing
- Increase in extra-marital births
- Diversity in choices increased
Fertility forecasts

• Very high uncertainty
• Assumption that TFR goes back to replacement level is not as favorite as in the past
• UN projections:
  - Medium variant: ultimate value of TFR=1.85
  - Low variant: TFR(2005) - 0.5
  - High variant: TFR(2005) + 0.5
Mortality

- Expectation of life at birth
- Infant mortality
- Adult mortality
- Causes of mortality
Expectation of life at birth: Balkan countries (1)

Left – females, right - males
Balkan countries (2)

Left – females, right - males
CIS - Europe

Left – females, right - males
CARK countries

Left – females, right - males
Infant mortality

• Definition: number of deaths of babies less than 1 year old to 1000 live births

• WHO and ex-Soviet definitions of a birth differ and their impact on infant mortality
Infant mortality 1990-2003

Balkan Countries

- Albania
- Bulgaria
- Croatia
- FYR Mac.
- Romania
- Turkey
Causes of Death

- Definitions: ICD-10
- Main cause: Increase in cardio-vascular diseases and injuries in CIS+CARK;
- Alcohol consumption and Smoking;
- Reasons: unhealthy diet and lifestyle, result of impoverishment and stress;
- Impact stronger among people with lower education, lower income, unemployed
Mortality forecasts

- Lower uncertainty than those for fertility
- Gradual increase in life expectancy at birth due to:
  - fall in infant mortality
  - fall in adult mortality
  - fall in old-age mortality: main component
Demographic aspects of ageing

– Gender differences in the aged population
  Old women outnumber old men (cf. sex-specific life expectancy)
– Marital status of the aged
  Many old women are widows; frequently living alone
– Regional aspects of ageing: T-shaped pyramids can be observed!
SUMMARY
(Back to population ageing)

• Population ageing is a slow, long-term process. Once begun, it lasts for decades.
• The pace of the process is determined by:
  - The age structure of the population
  - Changes in fertility
  - Changes in mortality
Summary: support ratio

- Old-age support ratio does not change considerably during the first state of population ageing (can even temporarily decline)
- It can be estimated with high accuracy for at least 15 years ahead
Summary: population ageing

• Is it a negative process? NO!
• Problems caused by population ageing need to be addressed with adequate policies
• Longer life raises the issue of healthy life
• Oldest-old: an emerging population subgroup