

The Ageing of Croatian Population

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ABSTRACT

With a share of people older than 65 years of 16.64 per cent in total population, Croatia is considered a very old country regarding its population. This percentage is one of the highest in already old Europe. Demographic projections reveal a further increase of share of people older than 65 years in future. There are many causes of this condition. This fact carries negative economic and health care implications which burden Croatia. Many administrative reforms are necessary to resolve this issue and to avoid economy problems and intergenerational conflicts.

Key words: ageing, population, Croatia, demography, health care, society, economy

The Process of Ageing of Croatian Population

Over the past decades, the ageing of our society has become a widespread phenomenon. The twentieth century has witnessed in many world regions perinatal and infant mortality control, improvements in nutrition and health care, but also a decline in birth rates. Mortality rates are also decreasing. Furthermore, declining proportion of children in total population, as a result of low fertility rate, increases the proportion of older persons. A continuing increase of the elderly population is particularly present in more developed regions of the world. However, demographic changes are also soon expected in less developed regions as a consequence of socio-economic development.

In year 1950, just 5 per cent of the world population was aged 65 and over. By year 2005, that proportion had risen to more than 7 per cent. In year 2050 it is expected that proportion of world population aged 65 and over will be almost 16 per cent¹. By year 2050, the number of older persons in the world will exceed the number of young². In more developed regions, the percentage of people aged 65 and over is expected to increase from 15 per cent in the year 2005 to 25,9 per cent by year 2050¹. Furthermore, in more developed regions, the proportion of older persons already exceeds the proportion of children, and by year 2050 it is expected to be double the number of children².

Croatian population is very old. In June 2004 Croatia approximately counted 4 439 400 inhabitants, whereof the number of older than 65 years was 738 500 (16.64 per cent) which represents a very significant and warning share (Figure 1). Elderly women represent a significant majority of older population in Croatia with a share of 19.7 per cent (Figure 2). Demographic projections for the year 2025 show an increase in the percentage of elderly people up to 27.4 per cent, and a further growth of life expectancy which, according to the same evaluation for the year 2004 was 72.0 years for men and 79.0 years for women. (Table 1, Figure 3). This dramatic changes in the age structure of population happened due to a permanent increase of life standard and constant improvement of medical care (Figure 4). The average age in Croatian population increased from 27.9 in year 1950 to 39.3 years according to Census 2001 (Figure 5). The projections for year 2031 indicate further increase up to 44.5 years^{3,4,5} (Figure 6). Similar trends can also be recognized all over the world, particularly in other European countries (Figure 7). Such population age structure has numerous negative demographic as well as economic implications. Because of the demographic ageing of the population, there is a constant decrease of the working population and a worrying increase of retired people. This causes a crisis in

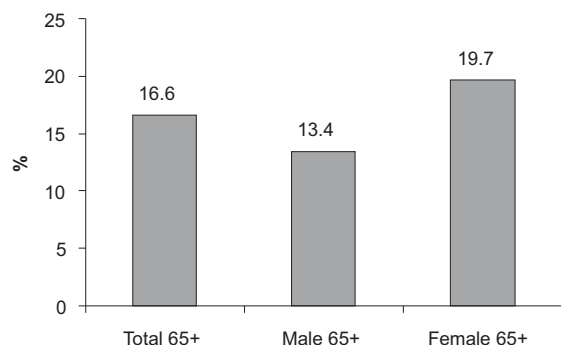


Fig. 1. Percent of population aged 65 and over in total Croatian population, year 2004⁴.

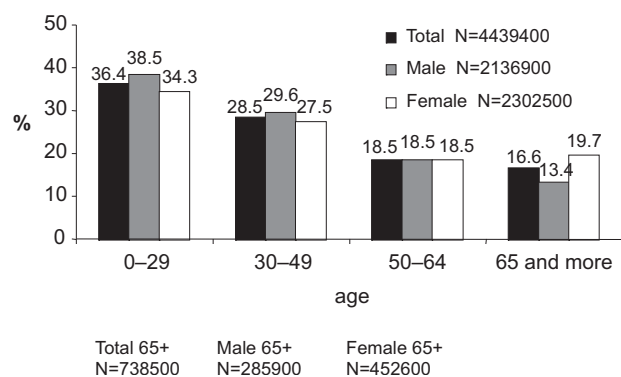


Fig. 2. Share of population aged 65 and over in total Croatian population, by age and sex, 2004⁴.

the state pension system. Furthermore, the growing number of the older population influences and makes significant changes for the health care system, health care policy, educational and clinical medicine approach. The ageing is associated with rising medical costs and increasing demands for health services, since older people are typically more vulnerable to chronic diseases and are dependent on social welfare³.

In last five decades, Croatian society experienced great transition from traditional, patriarchal, rural type to urban, industrialized-developed society. This transition brought many new additional problems. Large rural families, where old people were protected and adequately cared for, disappeared. Traditional families, by linking genera-

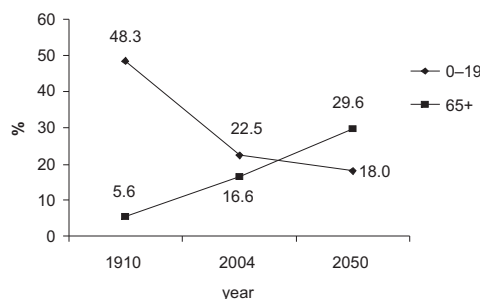


Fig. 3. Decrease in young population share (0–19 years) and increase in old population share (more than 65 years). From year 1910, nowadays, towards a warring demographic projection for the future⁴.

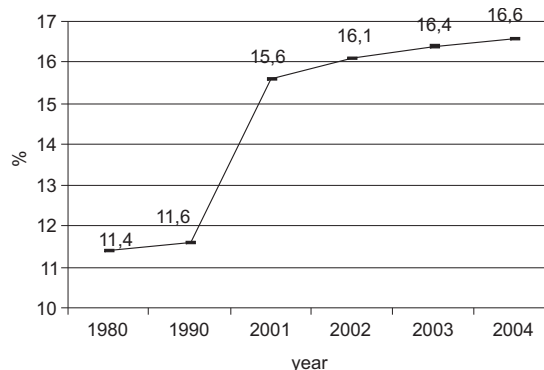


Fig. 4. Permanent increase in the percentage of population older than 65 years in Croatia 1980–2004⁴.

tions, represented a fundamental unit of the society. However, in modern society the provision of care within the family becomes more and more difficult, as the family size decreases and women are increasingly engaged in employment outside the home. Modern families are not capable to care for their old members.

Raising Challenge for the National Health Care and Economy System

Population ageing has raised many social, economic, political as well as scientific questions. Concerns are growing regarding the long-term viability of intergenerational social support systems, which are crucial for both older and younger generations. Since people live longer, retirement, pensions and other social benefits tend to extend over longer period of time. An increase in old-age dependency ratio (the ratio of population aged 65 and over to the population aged 15–64, expressed per 100) is evident in many developed regions of the world. It is expected that the old-age dependency ratio will almost double, increasing from 22.6 persons aged 65 and over per 100 persons in working age in year 2005 to an expected value of 44.4 in year 2050¹. Furthermore, today, older people are significantly less likely to participate in the labour force than they were in the past. Over the past

TABLE 1
BASIC DEMOGRAPHIC INDICATORS OF CROATIAN POPULATION FOR YEAR 2004⁴

Life expectancy – Men	72 years
Life expectancy – Women	79 years
Live births per 1000 inhabitants	9.1
Natural increase per 1000 inhabitants	–2.1 ‰
Average age of woman at birth of first child	26.3 years
Birth rate (births per family)	1.5

POPULATION BY AGE AND SEX, CENSUSES 1953 AND 2001

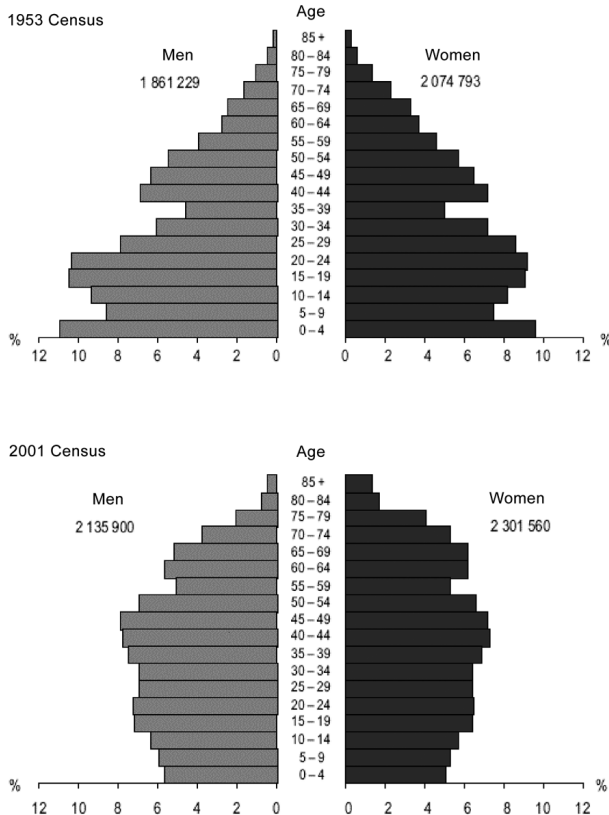


Fig. 5. Population pyramide (Census 1953 and 2001). Evident increase in the proportion of the elderly population and declining proportion of children and youth⁴.

50 years labour force participation of persons aged 65 or over declined by more than 40 per cent². In the developed regions it was primarily a result of public policies regarding early retirement. The increasing female share of the older population is also relevant for public policy. Older women are more likely to be widowed. They also have less education, less work experience and less access to public assistance.

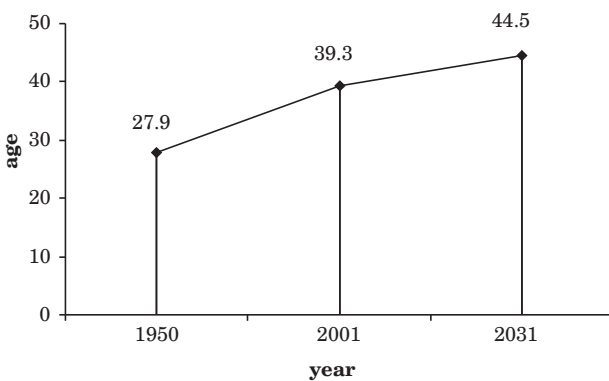


Fig. 6. A rise of the average population age in Croatia with projection for the future⁴.

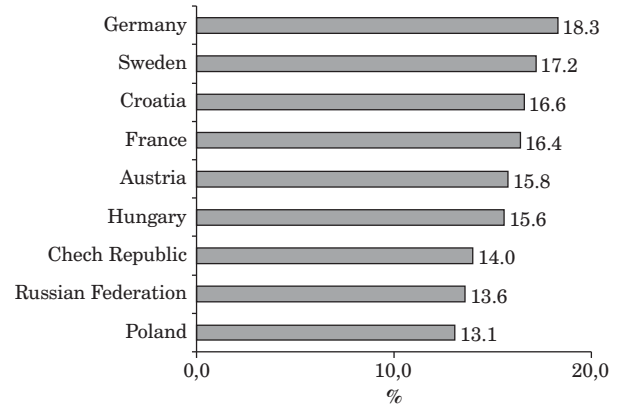


Fig. 7. Percent of population older than 65, European countries and Croatia, year 2004¹.

Croatian Demographic Transition and Current Condition

In the year 1910 there was 48.3 per cent of the population between 0–19 years in Croatia, and only 5.6 per cent of older than 65 years. However, in the year 2000, there was only 24.5 per cent younger than 20 years, but 15.2 per cent older than 65 years. According to Census 2001, there were 42 553 persons aged 85 and older in Croatia with a share of 6.14 per cent in the overall old population (693 540).

The American office for statistics gives an allarming data for Croatia for the year 2050. The projections for the population shares are as follow: 0–19 years 18 per cent, older than 65 years 29.6 per cent and the rapid increase in the proportion of persons older than 85 years of about 12 times^{3,4}.

It is expected that presented demographic trends will have significant economic influence. According to the statistics, the healthcare management for the geriatric patients is five times (500 per cent) more expensive than the health care needs for the population in the generative age⁴. Therefore, it is clear that this state of continuous demographic disbalance will bring to an inevitable inter-generational conflict⁶. Gerontological public health analysis in Croatia indicates that on one Croatian retired person in year 2003 comes a bit more than one employee (exactly 1.45), explicitly representing considerably unfavourable economic and social situation, what can hardly be found in Europe^{4,7}. At the time of retirement Croatian workers are too young towards European average age of retirement. Therefore, immediate reforms of pension systems as well as health care and health insurance system is inevitable. It is well known that only one safe source of income for old people is mostly their pension which are objectively too low in Croatia.

In some aspects, the delay of this crucial reforms slows down Croatian economical development. Due to long period of communism in Croatian history, many companies which were employing majority of population experienced total breakdown in transition to market

economy. Therefore, Croatia now has many young retired persons what additionally burden the state economy. The period of war and migration changes also significantly contributed to the unemployment and the increase in many young invalid persons.

Health Care Needs of Older Population

Old people need expensive medical care, because they suffer of many chronic diseases and they have higher prevalence of cancer⁸. They often require hospitalizations, mostly with prolonged stay which also increases costs. Furthermore, hospital complications in treatment are rather principle than the exception. Drug administration in older age is connected with many side-effects⁹. Croatia has experienced enormous rise in medical costs due to technological development, following medical care standards of the most developed countries, and the number of old people who are the greatest consumers of medical care. However, health care in Croatia is available to all people without restrictions regarding financials and health care insurance.

The health care management for old people is of great importance in future development of Croatian economy and in the process of Croatia joining to the European Union. The objective is to design appropriate standards, health care procedure programs and measures in primary, secondary and tertiary prevention. According to data from gerontologic database every fifth older person in Croatia depends on social welfare and gerontologic/geriatric care^{10,11}.

Current Possible Solutions and Plans for the Future

Taking into account the demographic and economic situation in Croatia, drastic changes are inevitable, which are foremost referring to the most efficient measure – extension of the working life, which should in a certain way slow down the outflow of labour force to retirement and increase the number of workers⁶. Developed countries, like the United States, Germany and mainly Japan, stimulate employers to retain functionally capable employees by labour laws⁷. The purpose is to insure the transfer of knowledge and skills to younger employees. By this additional role, older employees become usable and useful potential in the development of economies⁹. Urgent pension systems reforms are needed in many west European countries, in which the age of the retirement is being prolonged, depend upon the market laws. For example, in Germany recently the age of retirement has risen from 65 to 68 years, for both the gender, and the obligatory working life period is 45 years⁷. The mentioned deep structural changes require immediate reform in labor, pension system and legislative field which has been taking place in Croatia. The emphasis of the legislative reform is transition from generation solidarity principle which was in long-term unsustainable and insufficient towards voluntary pension funds. Immediate reforms of

health care and health insurance system is also inevitable. This remains a strong political and social issue. Measures which can help in dealing with the permanently increasing costs of old people health care, are introduction of new categories of health insurance and bigger participation in the costs. However, these measures seem to be unpopular and demand political consensus. Croatian curiosity is presence of The Retired People Party which takes active part in state political life.

A policy of a long term import of a highly educated working force is not possible for Croatia because the whole of Europe has the same problem and only the most developed countries will have potentials to acquire educated people from less developed countries³.

Is it Possible to Solve the Demographic Disbalance?

At the present, Croatia has no potential to use models used by the world richest countries. Croatia needs to have it's own vision for the development strategy. It is necessary to find way how to produce economic standard which would enable increase in the birth rate from the former 1.5 to 2.2 births per family, which means 60 000 birth per year, needed to assure the working potential. A probirth politic strategy should create as well as legislative programs, gerontologic norms, algorithms and visions. The main aim is to obtain an active and healthy old population. It is important to mention that all of us are responsible for it; the elderly themselves, the interdisciplinary teams of professionals in healthcare and social care, but all other sectors are also important such as education, economic, touristic and other resources³.

Gerontology Care in Croatia

Methods and instruments for the health care management of the elderly people can be divided in supreme, middle and basic system. The Refferal National Centre for gerontology in Zagreb, the capital of Croatia, as the supreme health management for older persons does the most complex tasks. It is responsible for professionally-methodological help, evaluation, supervision, scientific research, as well as formation of standards, algorithms and programs of health care for the elderly people¹². At the middle health care management level are the regional centres for gerontology in Croatia. The basic health management for elderly consists of gerontological centers, homes for old and disabled people, geriatric hospitals, daily hospitals for geriatric patients, geronto-services, centres for the rehabilitation, working therapy, help for older people, societies and clubs for elderly. Every one of the three levels of health management for the elderly is vital for the better future of older persons and is not able to function successfully separately, without the interconnection with the remain two levels. Special importance in the health management of elderly is to insure permanent education in gerontology and geriatrics according to European gerontological standards. This

gerontology management should fill all demands and set aims for a rational and efficient health protection, advancing health care and preservations of the functional abilities of the Croatian older population. New organisation of gerontology teams was developed. Each gerontological team is composed of experts: medical doctor specialised in public health (epidemiologist-gerontologist), higher nurse or a higher occupational therapist for elderly and a statistician. Gerontological teams have a normative population of 30 000 older than 65 years^{11,13}.

Conclusions

Transition from rural to urban society that happened in last five decades significantly influenced the socio-economic and demographic features. Medical cost in the state health system are in constant growth directly due to increasing share of old people in total population. Many administrative reforms are necessary to resolve this problem and to avoid an economy collapse and intergenerational conflict. Croatia now has many young retired persons what additionally burden state economy. Drastic changes are inevitable, such as extension of the working life, which should in a certain way slow down the outflow of labour force to retirement and increase the

number of workers. Croatia is just starting to enter into demanding reforms of family, labour and pension legislative. Management of the health care for the old people is of great importance in the development of Croatian economy. Only with own visions and programs it will be possible to fulfill all the acquired needs of the Croatian population and specially of its most vulnerable age group which is older than 65 years. The best solution of problems associated with care for old people would be promotion of traditional, spiritual and cultural values in the society. Furthermore, enforcement of the families and stable marriages with more than two children is important. The growth of national economy is relevant to produce better economic standard which is one of the measure in order to increase the birth rate from the former 1.5 to 2.2 births per family, it means 60 000 births per year. This figure is needed to assure the working potential in future. The challenge for the future is to ensure that older people can live in security and dignity and continue to participate in the society as citizens with full rights. Modern society is hardly possible without young and old people balance. Younger people need old people's wisdom and experience and old people need young people's strength and solidarity. Herewith, old people would not be burden but equal members of the community.

REFERENCES

1. United Nations Department of Economics and Social Affairs/Population Division. World Population prospects: The 2006 Revision. Accessed: 12.2006. Available from: <http://www.un.org/esa/population/unpop.htm>. —
2. WORLD POPULATION AGEING 1950–2050. (United Nations Population Division, New York, 2002). —
3. LJUBICIC M, BAKLAIC Z, TOMEK-ROKSANDIC S, Liječ Vjesn, 128 Suppl 1 (2006) 35. —
4. Croatian National Statistic Bureau. Accessed 09.2006. Available from: <http://www.dzs.hr>. —
5. KALITERNA LIPOVCAN LJ, TOMEK-ROKSANDIC S, PERKO G, MIHOK D, RADASEVIC H, PULJAK A, LUBICIC M, TUREK S, Liječ Vjesn, 128 Suppl 1 (2006) 51. —
6. SCHULZ JH, The economics of aging (Auburn House, New York, 1992). —
7. SKUPNJAK B, TOMEK-ROKSANDIC S, PERKO G, CULIG J, TUREK S, Liječ Vjesn, 128 Suppl 1 (2006) 96. —
8. STRNAD M, ZNAOR A, Liječ Vjesn, 128 Suppl 1 (2006) 39. —
9. World Health Organization. Healthy ageing is vital for development. Information office: Press Release WHO, 2002, 24. —
10. TOMEK-ROKSANDIC S, BUDAK A, Guidelines for Health Care for the Elderly (Akademija medicinskih znanosti Hrvatske, Zagreb, 1999). —
11. TOMEK-ROKSANDIC S, GORAN P, MIHOK D, PULJAK A, RADASEVIC H, Eur J Public Health, 15 Suppl 1 (2005) 182. —
12. TOMEK-ROKSANDIC S, PERKO G, PULJAK A, MIHOK D, RADASEVIC H, LJUBICIC M, Liječ Vjesn, 128 Suppl 1 (2006) 19. —
13. TOMEK-ROKSANDIC S, PERKO G, PULJAK A, MIHOK D, RADASEVIC H, CULIG J, SOSTAR Z, LJUBICIC M, TUREK S, Liječ Vjesn, 128 Suppl 1 (2006) 27.

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STARENJE HRVATSKOG STANOVNIŠTVA

SAŽETAK

Udio ljudi starijih od 65 godina u Hrvatskoj iznosi 16,64 % od ukupnog broja stanovnika, što Hrvatsku čini zemljom sa vrlo starim pučanstvom. Navedeni udio je jedan od najviših u već ionako staroj Europi. Demografska predviđanja govore u prilog daljnjem povećanju udjela starijih od 65 godina u budućnosti. Mnogi su uzroci tog stanja. Ova činjenica donosi niz negativnih posljedica koje značajno opterećuju Hrvatsku, prije svega u području gospodarstva i zdravstvene skrbi. Potrebno je provesti administrativne i strukturne reforme da bi se umanjio ovaj značajni problem i izbjegao mogući međugeneracijski sukob.