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Summary

THE CZECH SOCIETY IS AGING
(On social and economic implications of demographic aging)

One of the characteristic features of this world is, among others, demographic aging, i.e. the process of gradual change of age structures of populations in which both in absolute and relative terms proportions of old people (defined as those of sixty and over or sixty-five and over) increase while numbers of youngsters decrease. This shift in age structures which is more profound in more developed countries than in less developed ones has already had and will continue to have serious economic, political, and social consequences that will seriously influence the life of societies in the near future.

Czech society in its effort to transform from a former communist country into a modern democratic one has been approaching many problems and difficulties. One of them is the formulation of completely new principles of public policy, new principles of welfare policies and the total change in the system of social assistance. Increasing numbers of the Czech elderly and recent heated public discussions initiated by governmental proposals on changes in retirement policy remind us that the aging dimension can be a crucial test of our ability to shape new and desired features of Czech society.

This book aims to be a small contribution to this effort. Many experts warn that population aging is a demographic revolution which starts to affect every individual and every institution in the society. The goal is to address the possible consequences of population aging which are often deduced from experiences of the developed countries, and to present various aspects of the aging phenomenon stressing the necessity of taking the aging problem very seriously. The massive population aging which we will experience after the year 2010 is a new phenomenon in the life of Czech society. This book is more oriented towards asking questions, based on deep study of foreign 'literature, then towards bringing answers and solutions.

Chapter 1: **Demography of Aging**

This chapter explains in a standard way the basic mechanisms causing population aging - changes in fertility, and changes in mortality. It challenges popular belief that aging of society is caused because more people survive to older ages and explains that at the certain point of mortality improvement (which usually starts with a decrease of infant mortality) the very fact of lower mortality brings about an increase of the young causing rejuvenation of the age structure.

The chapter further describes the processes of first and second demographic transitions to explain why fertility rates have gradually become so low in developed countries. Then the mortality transition is discussed: Omran's epidemiol-

ogical transition is presented and the effects of long-term low mortality for the aging are explained.

Basic data on aging of various world regions are also provided.

Chapter 2: **How Long Shall We Live?**

In developed countries the fertility rates have been low for about three decades which has had the effect of squaring the age pyramid. This means the supply of children has been permanently low. Under such conditions a factor of increased life expectancy multiplies the population aging. Because improvements in life expectancy have been unprecedently and unexpectedly high, this chapter focuses on the reasons for mortality decrease and gives thoughts on the human life span and its possible limits.

First, Preston's and Mosk and Johansson's analyses of relation between income and mortality are presented followed by elaboration of ideas and projections on the human life span with a focus on the latest discussion of American demographers and epidemiologists on the topic. James Fries's argument that the human body is biologically destined to fall apart at the age of 85 is contrasted with the research of James Vaupel who maintains that the idea of biologically programmed death prior to the age of 110 should not be taken seriously. Also brought into the debate are Jay Olshansky's research that regards the age of 85 as very likely to be the practical limits to human life expectancy and Manton, Stalard and Tolley's ideas of upper limits to human longevity of 99.9 years for males and 97.0 years for females.

Although registered declines in old age mortality produce only small gains in life expectancy, the overall result is an extremely large increase in the size of the elderly population. From the point of view of social expenditures, it is very important to examine whether the elderly will be healthy and independent or whether we shall witness a trade off of a longer life for a prolonged period of frailty and dependency. Fries optimistic thesis of the compression of morbidity is introduced (he believes that morbidity will decline and that it will become compressed into a shorter time before death) together with opposing ideas of various authors (Guralnik, Kaplan and Olshansky) which come to the pessimistic conclusion that on the contrary, the possible scenario as far as the old age morbidity is concerned is that of expansion of morbidity.

To increase the active life expectancy and to improve the quality of life of the old age requires significant life style changes. One of these lifestyle changes is the change in diet. Vaclav Smil showed in his research that results in diet altering are controversial. For instance, he found out that correlation between consumption of saturated fat and cholesterol and coronary heart disease mortality was not very high and explain just one third of the total variance. Moreover, there were huge and not easily explainable differences among countries with similar dietary habits, such as Austria, Hungary and Czechoslovakia. In all three

countries the consumption of saturated fats were nearly identical but coronary heart disease mortality was more than 40 percent lower for Austrian males.

Chapter 3: **Mortality in the Czech Republic**

Life expectancy of Czech population was one of the highest in Europe at the end of the 1950's, but has been stagnating since then. The stagnation has been caused mainly by age specific mortality rates for females and especially for males from the age of 35 and over. In this chapter, Czech mortality rates are reviewed in a new perspective: from the point of view of mortality levels of Coale and Demeny's Model Life Tables. The real mortality is contrasted with the model one. Czech male and female life expectancies are also contrasted with hypothetical ones computed by means of Coale's equations which set "standard" patterns of life expectancy development in low mortality countries. They are able to reproduce the past values of life expectancy and also predict them. If Czech mortality had followed this standard pattern of developed nations, life expectancy would be much higher: 79.08 for females and 72.74 for males in 1990. However, the recorded values were 76.01 and 67.54 respectively. The hypothetical 1990 life expectancy of Czech population is similar to that of Austria and the caucasian population of the U.S.A. and the mortality patterns of all Central East European countries are more or less the same. Therefore, it is argued that the causes of high mortality rates in the Czech republic should be sought in the communist way of organization of the political and social systems. This conclusion is also supported by analyses of other authors (e.g. Ansley Coale or Guang Guo). The thesis about a complex influence of political and social systems on human health is also supported by Sagan's ideas about the role of modernization bringing about fundamental psycho-social changes which in turn affect mortality.

These conclusions serve as a basis for the mortality assumptions of the Czech population projection described in the next chapter.

Chapter 4: **Population Projection of the Czech Republic till 2030**

To be able to speculate about the future size of the Czech elderly population, it is necessary for projection data to be available. At the time of writing this book there were no suitable projections available, therefore our own projections have been constructed for the period 1990-2030.

Mortality assumptions have been made by utilizing Coale and Guo's suggestion of how to use their revised Model Life Tables to project mortality. Two variants of mortality development are assumed. One (the less optimistic) is that the current pattern of Czech mortality (i.e. modest mortality levels up to age 35 for both genders but excessive mortality of males and females above the age of 35) will remain in effect, though the mortality of young age groups (0-35) will follow the standard path of western industrialized nations. This assumption would increase the life expectancy at birth for males from 67.54 in 1990 to only 69.66 and from 76.01 for females to 79.08 (table 4.5).

The second variant (more optimistic) assumes that mortality levels will linearly improve, reaching Western levels by 2030 and improving male life expectancy to 76.30 and female to 82.60 by 2030 (table 4.5).

As far as fertility assumptions are concerned, also two variant patterns of fertility are hypothesized: medium fertility (TFR 1.8 - 1.9 throughout 1990-2030) and low fertility (TFR falling to 1.75 during 1991-1995, then decreasing to 1.55 in 1996-2005 and rising to 1.65 and 1.70 by 2030, see table 4.1 and figure 4.3).

Migration assumptions, due to the unpredictability in the turbulent years after the fall of communism in East Central European countries were not taken into consideration; therefore, four possible scenarios of population development are explored and the basic results presented.

Two of these scenarios indicate gradual decrease of the Czech population by 2030 (ranging from 1% to 7%). One scenario foresees a moderate population increase of 5% (see table 4.3). All of them suggest rapid aging of the Czech society after 2010 when the current proportion of the elderly aged 65+ will increase from 13%-14% to 17% in a slow-aging scenario and to 21% in a rapid aging scenario by 2030 (table 4.6).

Chapter 5: **The Czech Society is Aging**

The course of population development between 1990-1994 has revealed that it is very likely that a rapid-aging scenario is in effect: TFR for the period was about 1.79, male life expectancy has increased from 67.5 in 1990 to 68.9 and female from 76.0 to 76.6.

The Czech republic started aging in the 1950s when the proportion of the population at the age of 65 and over was higher than the limit of 8% regarded as aging. However, due to the baby-boom, stimulated by pro-natalist population *policy measures in the 1970s, the process stopped in the next decade. Neverthe*less, the permanent drop in fertility during the 1980s and 1990s has increased aging which will become dynamic especially after 2010 when the baby-boom generation born in 1945-1955 become old. This development is similar to that of other Western countries (see tables 5.1 and 5.3) and the Czech society will also be challenged by the existence of a huge group of retired elderly, i.e. people with specific life-styles, specific needs in terms of consumption, housing, health care, etc.

There are two questions concerning aging and society which are important. First, aging is the consequence of low population growth, and there is no clear answer what the relation between population growth and economic growth is. Therefore, the intriguing question is to what extent the small supply of a young labour force on the one hand and aging of the labour force on the other may determine economic development. Data and ideas representing opposing camps of thoughts about this relationship are discussed. Colin Clark and Julian Simon are advocates of the positive effects of a growing population on economic devel-

opment. Spengler, Ehlrich, Meadows and Brown are defenders of the idea of negative consequences of population growth.

The projected growth rate of the Czech population for the 1990-2030 period is -0.07 in a rapid-aging scenario. In accordance with conclusions arrived from analyses of Espenshade, Easterlin or Cutler it appears for the changing Czech society the expected zero or slightly negative population growth could be beneficial to the Czech economy since its ability to provide the work force with capital is not very high. This could possibly inhibit the improvement of workers' productivity which is the core of economic development.

As far as aging of the work force is concerned, some hypothesis have been expressed that the aging work force is less productive, less skilled, less educated and less creative. The Czech work force will age in two waves: In the first wave, the proportion of old work force (50-59) will increase from 18% in 1990 to 23% in 2005. In the next wave after 2025, this share will increase to 28% (see figure 5.4). However, Espenshade discovered that the hypothesis about the negative effects of an aging work force did not have empirical support and we can expect that the future work force will be adequately educated. Consequently, there is no reason to fear such a development.

The second question concerning aging and society involves the size of the elderly population and system of social security. Czechs are transforming their welfare system and in this effort there are two conflicting demands. The first to create a modern system of social assistance on one hand side, and secondly to respect resources which the changing economy is able to create.

A pension scheme is the crucial element in any system of social policy because it affects everyday life of huge masses of people. The numbers of retired people are currently getting too big in the Czech republic (see table 5.6). The reason for this increase is not only the aging population but also the very low retirement age: 60 for males, 53-57 for females (childless women retire at the age of 57, women who gave birth to two children now comprise the majority and now retire at 55). The Czech pension system scheme is based on a pay-as-you-go scheme. There are many voices expressing worries about whether it will manage to finance the increasing numbers of pensioners.

One of the indicators for measuring the potential burden of the retired population for the economy is the old-age dependency rate (see figure 5.5). In 1990 there were 35 people at retirement age while in 2030 there will be 57. Another signal of possible difficulties for the economy in financing an economically non-active population is the dependency rate. The Czech level of dependency is very high (71 people aged 0-14 and retired per 100 work force) and it is projected to increase to an incredible number of 85 in 2030 (see table 5.7).

The possible ways of tackling this problem are discussed at the end of the chapter: a) a higher economic growth; b) reduction of pensions causing a decrease in standard of living of the elderly; c) an increase of retirement age. The third one is regarded feasible by the author.

Chapter 6: **When to Retire and How to Finance Pensions?**

The chapter reflects discussions of the governmental proposal of a new system which should take the form of a pension insurance instead of the former pension security. The proposal suggests two major changes: (1) An increase in the retirement age in such a way that from the year 1996 men would retire two months later each year, women four months later. This would result in a retirement age of 62 for males and 57-61 for females in 2007. (2) Change in the system of financing pensions by reducing pensions from the pay-as-you-go system (state budget) and by giving more opportunities for individual pension insurance schemes through private pension funds. Currently, the average pensions are about 45%-50% of the average income. Under the new conditions the state organized pensions would only be 35%.

These problems are further discussed. As far as the financing of pensions is concerned, arguments from foreign literature are presented showing that pension systems have created a critical situation in almost all of the welfare states. Solutions are being identified in the private funds. The view of the author is that in the Czech republic the combination of state and private funds will be a necessary solution. The author is rather reluctant, however, to evaluate pros and cons of newly established funds (thirty now exist) because they have existed only since 1994. The insurance policies are not very different and all lack a clear statement about how they will adapt to inflation and the increase of real wages.

An increase in the retirement age will be a necessary first step. However, the way it is proposed by the government is not, in the view of the author, the best one. Therefore, new models of how to increase the retirement age are suggested.

During the first step, it is deemed necessary that male and female retirement ages be equalized. The main reason is that a different retirement age may potentially discriminate against women in the world of work. Therefore, the suggestion is made that from the year 2005 both genders retire at the age of sixty. This is contrary to the proposal of the government which intends to start increasing retirement age immediately from the year 1996. The year 2005 has been chosen for various reasons. First, the population must be given some time to adapt to such a change. It is a very important psychological aspect of the change and it should be respected. Secondly, the demographic situation must be considered. The baby boom in the mid 1970s is now entering the labour force and creates conditions for a potential increase of unemployment rate which will be aggravated by an immediate retirement age increase. Thirdly, by the year 2000 life expectancy at the age of sixty will be further improved and it is expected that it will increase from males' 14.6 years and females' 19.4 to about 17.5 years for males and 22.5 for females by 2000 - hints that these figures are realistic have been supported by the mortality development in 1990-1993.

In the second step, from the year 2015 both the male and female retirement age should be increased to 65.

These measures will have positive effects on dependency rates and also an assumption is made that it could help make the Czech population mentally less old. The earlier the retirement age is, the older the population may feel because it takes the roles of pensioners at a relatively young age. The proposed increase might be also beneficial from this aspect.

The higher retirement age will have to be accompanied with several structural changes. According to Peter Uhlenberg they are as follows: a) changes in the organization of work - new formats of - job will have to be prepared to meet needs of the older work force; b) new forms of education for adults and the elderly will have to be arranged so that they are able to keep pace with the dynamic development of technologies; c) more attention will have to be paid to health conditions of the older workers. There is a potential threat that an increased retirement age would mean more people will be leaving the work force before the retirement age because of bad health and becoming disabled and unable to work; d) more attention will have to paid to life following retirement and structural conditions will have to be created to enable the elderly to spend the rest of their lives in a quality environment.

Chapter 7: **Is Population Policy the Solution to Aging?**

Because the aging of populations have pure demographic reasons, questions have been asked whether it is possible to avert it by means of population policy measures which motivate young people to have more babies. This would increase the proportion of the young in the age pyramid and decrease the proportion of the elderly. Possibilities of how to increase fertility are discussed and conclusions are made together with many authors (Day, Demeny, Westoff, Zinsmeister). Because of deep changes in the structure of human values, it is a task which would be foolish to attempt. Empirical experience tells us that effects of such measures which have been tried in various countries (the Czech republic included) are from minimal to zero.

Another possibility of how to influence the speed of aging is by means of immigration. Demographic simulations of Ad Vossen are presented which show that both increased fertility and immigration quotas cannot decrease so called "demographic pressure", i.e. costs of the public sector related to the part of the population which finances public spendings from their taxes or contributions to social insurance. According to Vossen, there is only one measure having possible positive effects on DEMPRESS which is higher participation rate of the population in the labour force, especially of women. In the Czech republic the female participation rate has been high since the 1950s (about 95% of women of working age have been employed); the only measure left is the increase of the retirement age.

At the end of this chapter suggestions by Paul Demeny on relating the number of children delivered by the family and their level of pensions are presented. The arguments are made that because Demeny's proposal implies a strong role

of the state and state bureaucrats, it is an especially difficult solution for the Czech population which has experienced state paternalism for about forty years.

Chapter 8: **The Elderly in Czech Society**

This chapter deals with the situation of the elderly in the Czech society. In the first part, the so called social problem of aging is discussed together with the meaning of age stratification. The status and roles of the elderly are also discussed. Basic theories of reasons for lost status of the elderly in modern societies are also presented.

In the second part of the chapter statistical Census 1991 data illustrating the living conditions of the Czech elderly are provided. The patterns as far as marital status, participation rate (see tables 8.1, 8.2, 8.5), and level of educational attainment (8.6) are discussed. It is concluded that as in other countries, the world of the Czech elderly is made up of widowed or divorced females living alone. Their role in an aging society is speculated and the danger of the "superwoman squeeze" concept is mentioned.

The level of education will be an important structural feature affecting the lives of the elderly. Data showing an increase in educational attainment of the elderly cohort (60 and over) from 1980 to 1991 and simple projection of the educational attainment for 2010 are discussed (see table 8.7 and 8.8). There will be a clear-cut educational shift by 2010 (elementary education having 53% of the cohort 60-79 will decrease to 22%, vocational education is expected to grow from 28% to 38%, secondary will rise from 13% to 29% and university graduates will have 11% by 2010 instead of 5% in 1991). It is very likely that we can expect a real value shift among the elderly population. Moreover, because the cohorts that will age after 2010 are the ones which have been socialized under the conditions of relatively affluence, we can expect the "postmaterialist shift" as conceptualized by Ronald Inglehart. These factors will contribute to the fact that the future generation of the elderly will be quite different from the present one. They will be people who have spent a great part of their lifes not under the conditions of communism but of democratic, market-economy society. They will become self-confident, active, and a not easily overlooked social and political force. This is a structural element with which the Czech society has not been familiar.

Chapter 9: **Public Policy and an Aging Society: (Nothing but Questions)**

In this final chapter some thoughts on formulating a special public policy for the aging society are presented. The concept of public policy could not be developed during the communist regime in the Czech society. Therefore, the basic principles of how public policy is formulated in democratic societies are discussed. The main problems of public policy for the aging society are also discussed. According to Alan Pifer, the problems are as follows: a) how to achieve the wisest possible use of resources in an aging and resource-limited society; b) how to use growing numbers of older citizens productively; c) who should be

responsible for meeting the new social needs population aging creates. Since we are only at the beginning of a rapidly aging process, these problems are only described and questions are being formulated, with a hope that they can become tools for our thoughts on future Czech public policy.