

2002 EDITION



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# 18th CEIES seminar Active ageing statistics

The Hague, 23 and 24 May 2002





A great deal of additional information on the European Union is available on the Internet. It can be accessed through the Europa server (http://europa.eu.int).

Luxembourg: Office for Official Publications of the European Communities, 2002

ISSN 1725-1338 ISBN 92-894-3296-9

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# **1st day 23 May 2002** (starting at 9:30 am)

### **09:00 REGISTRATION**

- 09:30 OPENING SESSION Welcome to the participants: Mr J. Lamel, Vice-chairman of CEIES Opening address: Ms I. Stoop, Social and Cultural Planning Office, The Netherlands Keynote speech: Ms M. De Smedt, European Commission, Eurostat
- 10:00 Mr W. Lutz, International Institute for Applied Systems Analysis, Austria

# **10:30** (1) CONDITIONS FOR ACTIVE AGEING AT INTERNATIONAL LEVEL Chair: Ms I. Stoop, Social and Cultural Planning Office, The Netherlands

- Mr B. Casey, Principal consultant, OECD and senior research fellow, London School of Economics
- Ms M. Fortuny, International Labour Organisation

### 11:00-11:30 Coffee / Tea break

- Mr A. Boersch-Supan, Mannheim Research Institute for the Economics of Aging (MEA) University of Mannheim, Germany
- Mr I. Drymoussis, European Commission, Directorate General Employment and Social Affairs
- Mr A. Laihonen, European Commission, Eurostat
- Ms I. Keller, World Health Organisation

### 12:15-12:45 OPEN DISCUSSION

# 12:45-14:15 LUNCH BREAK

# 14:15 (2) HEALTH OF THE AGEING POPULATION Chair: Mr J. Bonte, Belgium

# Views of the Producers

- Mr G. Bruckner, European Commission, Eurostat
- Ms A. Burgio, Istat, Italy
- Ms C. Lessof, National Centre for Social Research, United Kingdom

### Views of the Users

- Mr J.M. Robine, Institut National de la Santé et de la Recherche Médicale, France
- Mr M. Schneider, Beratungsgesellschaft für angewandte Systemforschung, BASYS, Germany
- Mr C. Fotakis, European Commission, Directorate General Employment and Social Affairs
- Mr C. Silva Santos, Centro Regional de Saúde Pública de Lisboa do Ministério da Saúde, Portugal

# 16:00 - 16:30 Coffee / Tea break

### 16:30 - 17:30 OPEN DISCUSSION

## **17:30** END OF THE FIRST DAY

### **19:00** DINNER OFFERED BY THE SOCIAL AND CULTURAL PLANNING OFFICE

Address: Humphrey's Restaurant, Molenstraat 8-10, 2513 BK Den Haag, +31 70 3648118

Thanks is given to the Social and Cultural Planning Office of The Hague for the organisation of the social

# programme

# **2nd day 24 May 2002** (starting at 9:00 am)

# 09:00 (3) ACTIVE PARTICIPATION TO SOCIO-ECONOMIC LIFE Chair: Mr P. Everaers, Statistics Netherlands

# **Views of the Producers**

- Ms I. Niemi, Statistics Finland
- Mr M. Olexa, Statistics Slovakia
- Mr A. Heyma, University of Amsterdam, The Netherlands
- Ms M. De Klerk, Social and Cultural Planning Office, The Netherlands

# 10:00-10:30 Coffee / Tea break

# Views of the Users

- Ms E. Daróczi, Demographic Research Institute, HCSO, Hungary
- Mr R. Mohedano-Brèthes, European Commission, Eurobarometer/Directorate General Press and Communication
- Mr L. Frey, Università La Sapienza, Italy

# 11:15 - 12:15 OPEN DISCUSSION

# 12:15-14:00 Lunch break

# 14:00 (4) PANEL DISCUSSION

# Chair: Mr L. Frey, Universita La Sapienza, Italy

- Ms E. Grundy, Centre for Population Studies, United Kingdom
- Ms I. Keller, World Health Organisation
- Mr J. Faik, Verband der Deutschen Rentenversicherung, Germany
- Ms Ch. Marking, European Older People's Platform, Belgium

# 15:00-16.00 OPEN DISCUSSION

# 16:00-16:30 Coffee / Tea break

- **16:30** Summing up by the chairperson of the subcommittee *Ms M. Epler*
- **16:50 REACTION FROM EUROSTAT** Ms M. De Smedt, European Commission, Eurostat
- **17:10 CLOSING UP BY THE CHAIRPERSON** *Mr J. Lamel, Vice-Chairman of the CEIES*

# END OF THE SEMINAR

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The proceedings are a collection of papers prepared by the speakers in advance of the seminar. They do not include the open discussions nor the discussions in the round table/panel session.

The papers presented and published herein only represent the views of their authors and do not necessarily reflect an official position of their institutions or organisations.

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# **DE SMEDT Marleen**

European Commission Eurostat ESTAT E3 BECH D2/719 Jean Monnet Building L-2920 Luxembourg Marleen.desmedt@cec.eu.int

The subject of this two days' seminar, 'active ageing', is a topic which has been put on the forefront of the EU political agenda. The ageing of our society has significant social and economical consequences. It has triggered an increasing interest to look at ageing to be seen not only as a challenge, but also as an opportunity, and as such, it has stimulated research and debate in a wider context of discussions on solidarity, employment, social protection and health and social services and on impact of ageing on eceonomic growth and on competitivity.

In 2000 in the European Union (EU), there were **61 million elderly people aged 65 and over** for a total population of 376 million inhabitants - compared with only 34 million in 1960. Today about 16 % of women and men in the EU – or **1 out of 6** - are aged 65 and over and two thirds of them are women. According to further projections, by 2050, 1 person in 3 will be at least 60 years old and 1 out of 10 will be over 80. And the vast majority will be women.

The demographic 'pyramid' is indeed quite different from some decades ago: the bottom of the pyramid is narrowing due to **lower fertility rates**, while the top of the pyramid is expanding and the latter is caused by a general **fall in mortality** – we are living longer - and by the fact that **baby-boomers are now approaching the retirement age**. We should well be aware that the changing frequencies (mostly shown as results of transversal measurements) reflect longitudinal changes. A relatively higher percentage of people in the ages 60-65 and over, is in fact the result of differences in birth cohorts and **cohort-mortality**. Each cohort has its own history of health, education and labour force experience. These facts as such, as well as the consequences in a changing socio-economic environment should be measured and studied with appropriate tools.

People are indeed living longer, and some studies also suggest that there are significant improvements in the health status of people of 55 and over, so living longer does not mean that the gained part of life is spent in bad health or disability. 'The ageing society' is often being portrayed as an alarming situation, but an 'ageing society' may also offer the prospects of a new model of life of a new society, where women and men can have new roles and new lifestyles, enjoy better health; a society which ages **'actively'**.

The variety of statistical data actually produced in the European Statistical System, and in particular through some of the larger European surveys, such as the Labour Force survey (LFS) and the European Community Household Panel (ECHP), but also more detailed data collections in a number of Member States give us the opportunity to study the ageing population and its implications. But do we give sufficient attention to measure the conditions and opportunities for 'active ageing'?

There is certainly a need to go more into detail because of the heterogeneity of the growing group of people of 65 and over, and even of 55 and over. Within this group there might well be a wide variety with respect to status of health, but also with respect to living conditions, social relations, actual participation and capacities for participation in the labour force, time use etc. We should give special attention to the fact that this diversity exists: there is a need for surveys with sufficient discriminating power to bring these differences at the surface so that it provides the relevant information in order to evaluate and measure the aspects and social and economic consequences of ageing and to bring possibilities to promote 'active ageing' at the forefront.

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# Some examples:

# What are the implications of ageing on the labour market and what are the opportunities given by active ageing ?

- According to the EU Labour Force Survey (LFS) the employment rate of the population aged 55-59 stands in 2000 at 52% while it is 23% among those aged 60-64. Beyond the age of 65, the employment rate decreases sharply: **some 7 % of men aged 65 to 74 in the EU in 2000 and 3 % of women were still working**, but also here there are large variations between countries with over 30 % of men in this age group and 18 % of women in work in Portugal, much higher figures than anywhere else in the EU, as compared with under 4 % of men and under 2 % of women in Belgium, France, Luxembourg and Spain. Around 40 % of men and 60 % of women who worked in employment in the age group 65-74 worked part-time (under 30 hours a week).
- For the Union as a whole and in most Member States, **the working age population (15-64 years) will stop increasing by 2010.** This demographic decline will last several decades. Virtually all Member States are concerned although the intensity and timing of the trend vary at both national and regional level. For example, in Germany, Greece and Italy, the decline has already begun. In contrast, the working-age populations of Ireland and Portugal are expected to peak in 2033 and 2023 respectively. No decline is expected in Luxembourg.
- So, a larger group of elderly people will depend on a relatively smaller proportion of 'active' persons. In 2000, the (so-called) **old age dependency ratio** has risen to 24%. All Member States are expected to see an increase in this ratio between now and 2010 (EU average 27%) although the extent of the rise varies considerably between Member States.

This means that there may be a shortage of workers and, together with the increased social costs this may affect the competitiveness and growth of EU economies. It will have a significant impact on the sustainability of pension systems in general and care systems in particular. There will be a larger part of people who are not at work and a smaller number of people contributing to the labour force and as such contributing to financing of social protection, in so far as these contributions come from earned income. To counterbalance the situation people could be kept longer at work, or even alternatives might have to be found to finance social protection.

Discussion at the level of the European Council, have led to an agreement, in March 2001 in Stockholm, of the EU political leaders to set an EU target for increasing the average EU employment rate among older women and men (55-64) to 50% by 2010: *active ageing*. To enable people to continue to be active and to contribute as they age. In March 2002, the EU's political leaders endorsed a new report on promoting active ageing in Europe, which includes a commitment to **create the opportunities for older people to stay in work for, on average, up to 5 years longer than today.** 

But how can these targets be made **concrete**? If people are indeed living longer and also health expectancies are becoming better - although at a slower pace than life expectancies - what are the specific characteristic of people of 55 years and over with respect to their capacities to contribute to labour ? We would need to take into account that their 'purely economic productivity' might be less, but we should be fully aware of the valuable experience and coaching capabilities they might be able to offer. Do we need another statistical measurement for 'productivity', e.g. 'knowledge productivity' and/or 'coaching capability'? So this also requires a good knowledge of the characteristics of this group of people, as of the needs and specific requirements in the different sectors of activity. So it may well require us to examine the specificities of job requirements: not only about the content of a job, but also about the different roles people fulfil at work: from executive tasks to advisory tasks and leadership tasks. Since work is performed more and more in teams, we may consider introducing in statistics a new unit of observation. Not only the person but also the team could be taken as an actor; including adequate differentiation according to roles and skills of the members and their working hours.

Some of these aspects were already recognised with the adoption of the Employment Strategy, where the EU political leaders have placed a **key emphasis on the skills, training and job needs of older workers**.

So a clear reversal of the past trend towards early retirement is underway, and improving the participation rate of the people aged 50-64 and beyond will become a first rank priority. In this context in statistics we may ask why the age of 65 is still taken as a 'golden' norm. This has lead to a kind of 'artificial' dependency ratio, because income' dependency starts before the age of 65 and partly income independency stretches beyond 65. Changes in the percentages of active persons between 50 and 75- and according to policy programmes more

are to come- will make a traditional dependency ratio more and more meaningless, certainly in an international context. Maybe we could think about an 'income dependency ratio', which could also reflect working incapacity and unemployment.

# What do we know about the health situation of people of 50- 64 years of age, of 65 and over and about their needs for care and what will be the implications of an ageing population for health care systems ?

• A major condition for allowing people to age 'actively', to stay longer at work, to stay actively engaged in social life is that they are in relative good health with sufficient capacities to move and behave in an autonomous way. So political efforts to keep people longer active after the age of 50 and beyond 65 require reliable data on the health capabilities of those people to remain active; health is a kind of a moving scale with increasing age and not every body is physically able to continue the job or to continue without adaptations in the working conditions.

Some longitudinal studies show that there are, also in the older age groups, **improvements** in the health status, so not only *life* expectancies, but also *health* expectancies are improving, although at a lower pace. Especially in this group, health status, morbidity and disability need to be monitored as well as the health determinants, so that action could be taken to keep people as long as possible in good health. Investing in health and in good health care and in appropriate health protection measures might well pay off: it creates employment and it could keep people longer active and in employment (so less costs for social protection).

- Still **disease prevalence multimorbidity and disability peek in the upper age groups,** and with the growing number of elderly people, the number of people with serious health problems has been constantly growing in the past and will continue to do so in the future at an even higher pace.
- The growing number of people with severe health problems will contribute to health care demand rising further. The detailed changes cannot be validly predicted, as there are too many different influencing factors, but still we need to do all efforts to have at least estimates.
- With increased recourse to community-based care (due to de-institutionalisation) ageing will also increase the demand in nursing and social care.
- The **increased demand for health care treatment and social care** has to be serviced by a constantly shrinking labour force and a decreasing supply of family carers. Health care will have to compete with the other economic sectors for increasingly scare manpower resources – while at the same time asking for high qualifications and providing below-average wages and salaries.

Good and reliable data on health status, disability and morbidity of elderly people is still scarce. It is hoped that the forthcoming programme of Community action in the field of public health, which has 'health information' as one of its three major strands, might provide more opportunities to fill this data gap.

But demography and health status are not the only issues here: other factors could create increasing pressures on health costs such as the rising expectations of people in relation to care coupled with the opportunities that new technologies and preventive approaches offer. In order to cope with the impact of ageing, reorganisation of the health care systems could be necessary in the EU. And statistics should better foresee how to respond to the new demands and needs for monitoring changes in health care delivery systems and the financing of it.

# A third area which I would like to highlight is the growing diversity among older people in terms of household circumstances, resources and social relations.

- Projections indicate that in 2010 around one-third (32%) of the Union's elderly population (aged 65 and over) on average, 45% of the 'very old' population **will live alone.** More than half (54%) will live with a partner (in a household that may also include children or adults). The remainder will live together with their children (or other relatives/friends) or in a home/institution. It is clear however that demand for housing and care changes considerably, as people grow older.
- Actually, in the age group aged 65 and over **many more women than men in the EU live alone** rather than with a spouse or partner or in a household with more than one other person. According to the European

Community Household Panel (ECHP), some 44 % women aged 65 and over lived alone in 1998 as compared with only 16 % of men.

- The figures of the ECHP, give some information about **social participation** of people such as being member of a club, or talking often to neighbours, or meeting regularly friends and relatives. While this gives us some general figures it might not give sufficient detail on the differences within this age group ....
- According to the ECHP, in almost all Member States, the **average income** of people of 65 and over in the EU was significantly less than that of people under 65, and the income of elderly tends to decline with age. It should also be noted that the **income of women was less than that of men** in all Member States, the extent of the difference ranging from just 4 % in Spain and 9-12 % in most countries to around 15 % in Finland and the UK. In all Member States the **average income of of women of 65 and over living alone** was significantly less (over 20% below) than that of those living in households with other people. For men in this age group, although those living alone had a lower income on average than others, the difference was much less. So women aged 65 and over are more likely than men to be at risk of **poverty** (when we would define poverty as having an income below 60 % of the median level in a country). For the whole of the EU this figure was in 1997 some 21 % for women opposed to 16 % of men and 15 % of people under 65.

But still many questions remain: what are the main daily activities of people when they have retired from the labour market ? What about their contribution to informal and voluntary work ? What about their aspirations, what are their specific needs and wishes and do they have a sufficient income to cover these needs ?

In statistics we may also think of showing better the economic force and money source of new cohorts of elderly persons. Changing life styles, e.g. travel and tourism, communication,.. stimulate whole parts of the services sector, e.g. hotels and cultural events and their supporting industries. A demand for higher quality of care may be reflected in a higher percentage of the GDP spent on health and social care; but is this always negative? A demand for higher quality generates demand for highly educated and trained professionals and sophisticated equipment and aids, e.g. glasses, implants,...

# How has the Community, as well the Commission as the EU's political leaders responded in terms of action plans and programmes ? And what are the requirements for statistics and research in the light of new policy needs and priorities ?

The social chapter in the Amsterdam Treaty has become the driving force for EU social statistics. The ageing of the population is a major challenge for the EU and over the past few years a range of objectives concerning ageing have been taken by the European Union, imbedded into a wider social dimension.

In its Communication "Towards a Europe for all ages - Promoting Prosperity and Intergenerational Solidarity" (COM **1999** 221 final), the Commission concluded that "the very magnitude of the demographic changes at the turn of the 21<sup>st</sup> century provides the European Union with an opportunity and a need to change outmoded practices in relation to older persons. Both within labour markets and after retirement, there is the potential to facilitate the making of greater contributions from people in the second half of their lives. The capacities of older people represent **a great reservoir of resources**, which so far has been insufficiently recognised and mobilised. Appropriate health and care policies and services can prevent, postpone and minimise dependency in old age and so reduce costs in social protection. Furthermore, the demand for these services will open up new job opportunities."

As mentioned earlier, special attention for older workers and employment was already imbedded in the **Employment Strategy** and more recently specific political objectives have been set on employment and active ageing.

It was at the Lisbon Council in March 2000, that the demographic evolution of an ageing population was identified as a trend that could hamper **sustained development.** Amongst the priority areas social and economic issues such as poverty, social exclusion and an ageing population were identified as major issues.

In response to the mandate from the Lisbon European Council in March 2000, the Commission adopted on 11 October 2000 a Communication (COM 2000-622 final) on the "Future Evolution of Social Protection from a Long-Term Point of View: Safe and **Sustainable Pensions**". It addresses the link between pensions sustainability, the Lisbon strategy and employment promotion: "Current pension systems tend to encourage early exit

from the labour market and are frequently used to reduce staff levels while avoiding redundancies. They often do not take into account differing individual needs. Some pension schemes offer insufficient coverage for the most mobile and flexible members of the workforce. More generally, the incentive structure of pension schemes needs to be reviewed to ensure that they become employment-friendly."

European Councils in Stockholm and Gotheborg (in the second half of 2000) as well as the European Parliament, proposed then the application of the open method of co-ordination with common objectives, agreed indicators, regular reporting and identification of best practices on the questions of pension reforms.

By September 2002, each Member State will have presented its national strategy report in which they have to explain how they intend to achieve the common EU objectives of safeguarding the adequacy of pensions, the maintaining of their financial sustainability and ensuring that pensions arrangements reflect the changing needs of individuals and the economy.

Before the end of 2001, the European Commission (EC) took up a key issue in its Communication on **health** care and health care for the elderly: the idea behind the communication is to help governments learn from each other how to best balance three broad objectives: accessibility, quality and sustainability.

Appropriate 'statistical information', is an important support for reviewing and monitoring the implementation of sustainable policies. Co-ordinating and reviewing EU and national policies to achieve the objectives set, requires **common targets** and **common indicators** to monitor progress made.

Together with its partners in the European Statistical System (ESS) Eurostat will actively contribute to provide the statistical data needed. And, through the EU's existing and forthcoming framework programme for Community research, Europe's research resources will continue to be mobilised to seek ways to improve the quality of life, autonomy and social integration of older people. Probably more than before statisticians should work together with academics and researchers in order to provide the required coherent sets of complementary quantitative and qualitative information required for policy preparation and planning, administration and evaluation.

Statistics and research on 'active ageing' may require **new viewpoints** and **new data sources** – and some examples have been given above - to help us in solving major questions such as: how do we reconcile the concern of all generations to sustain and share the costs and at the same time care for the basic aspirations of older people for a high quality of longer life. Part of them are a vulnerable group, but not all; some are a potential economic force. An active society for all ages needs a strategy, which enables and motivates older people to stay involved, to stay active in working and in social life as long as they wish and can.

I hope that this seminar might provide an opportunity to **discuss openly** with producers and users of statistical data, with administrators, researchers, stakeholders and politicians about the type and detail of data and other information needed to really assess the health, living conditions and needs of elderly people, to assess their contributions to a changing and ageing society, to monitor new policies targeting to promote 'active ageing' and to provide a sufficient basis for relevant forecasts.

# POPULATION AGEING IN EUROPE: DEMOGRAPHIC EVIDENCE AND FORECASTS

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Europe is often called the old continent and it deserves this name. Europe has been spearheading global demographic trends in the 19th and 20th centuries and it is likely to spearhead population ageing in the 21st century. Over the next 20 years the mean age of the European population is likely to increase by about four years; every five years the population gets one year older on average. The population above age 60 increases rapidly, and that below age 20 diminishes. But why are we interested in this trend? Does it make any difference whether half of the population is below age 15, as in some developing countries, or whether half is above age 40, as is already the case in several European countries? It is obvious that it makes a difference in demand for schools and for homes for the elderly. It is also evident that it significantly affects the balance of payments in a pay-asyou-go pension system in which those who are gainfully employed today pay for those who are entitled to retirement benefits. And it is expected to also have significant implications for the labour market. But one may even go beyond that and speculate about changing consumer demand and changing cultural preferences. It is also evident, that changing family structures are intimately related with both the reasons for population ageing (due to low fertility rates) and its consequences in terms of family networks. More generations are alive at the same time, while simultaneously there are fewer siblings. These changing quantitative relationships are likely to also affect the quality of the relationships.

The significant changes in the age structure make it necessary to rethink many of the social institutions and traditional behavioural patterns that we are so accustomed to and that large proportions of society do not want to change. If it is true – as some demographers project – that out of 100 girl babies born today in the EU 50 are likely to live beyond the age of 100 and quite a number may reach 110, then it seems odd to retire on average at age 58 (as in my home country, Austria) and enjoy more years of retirement than have been spent in formal employment.

The good news in all this is that the years of healthy disability-free life expectancy seem to increase as rapidly as total life expectancy. In other words, the additional years gained tend to be years in good physical and mental standing. Increasingly the elderly will be a highly active segment of the population, active in the support of young members of their families, in travelling, in shopping, in leisure-time activities of all sorts, and possibly even more economically active. We do not yet know enough about the way people tend to spend their time at higher ages and about the conditions for active ageing. This is why a seminar on active ageing statistics is very appropriate.

# **Population Dynamics**

As compared to other social and economic factors, demographic trends are very stable and have a great momentum. For this reason population dynamics can be projected with greater accuracy over a longer time span. Of course, such projections are not absolutely certain because human behaviour is not purely mechanistic and there can be unforeseen disasters. But since most of the people that will live in 2015 are already alive today, we know with a high probability what the age structure of the labour force is likely to be in that year.

Future population size and age structures are determined by the present age structure and the future trends in the three basic demographic components fertility (birth rate), mortality (death rate) and migration. Any change in the population must operate through one of these three factors. But even rather rapid changes in one of the factors may take quite long to impact on the total population due to the great inertia of population dynamics. If, for instance, smaller and smaller cohorts of women are entering the childbearing ages, even a possible increase in the mean number of children per woman may not lead to an increase in the total number of births. Similarly, the "baby boom" of the 1960s (and not a discontinuity in life expectancy gains) is the main reason why we expect the proportion above age 60 to increase sharply after 2020.

The fact that there are only three factors to be considered in population projection does not necessarily make the task easier, because the projection of each of the factors is difficult and associated with significant uncertainties. Even the future of **mortality**, which traditionally has been considered the most stable demographic trend with steady improvements over the years, has recently become more uncertain. Over the last 50 years, life expectancy in Western Europe has increased by about 10 years, implying an average gain of two years per decade. Despite this significant gain that has surpassed all expectations expressed in earlier years, most statistical offices producing projections assume a slowing of improvements over the coming years, in some cases even constant life expectancy. Eurostat assumes, in the medium projection, a gain in life expectancy at birth of about three years over a period of 20 years (European Commission 1998). But there is increasing scientific uncertainty about limits to human longevity and consequently about the future gains still to be expected (Vaupel and Lundström 1996). In contrast to the traditionally dominating view that we are already very close to such a limit (actually, the assumed limits are being constantly moved upward by projectors as real gains surpass their expectations (Bucht 1996)) alternative views suggest that such limits (if they even exist at all) might be well above 100 years. This scientific uncertainty about the future trends in old-age mortality also needs to be reflected in the population projections.

Fertility is the most influential of the three demographic components under a longer time horizon. Changes in fertility not only impact on the number of children but also on that of the grandchildren, etc. For this reason relatively small changes in fertility may have very significant consequences on future population size and age structure. Despite its significance we know rather little about the future trends of fertility in Europe. The history since World War II does not help us anticipate the future trend. During the so-called baby boom of the early 1960s most Western European countries had period fertility rates of above 2.5 children per woman. This was followed by a rapid fertility decline during the 1970s, bringing the Western European average down to about 1.6. Since then we have seen diverging trends, typically at levels well below replacement fertility. The most significant fertility declines were found in the Mediterranean countries, with Italy and Spain having below 1.2 children per woman. There are also significant regional differentials within countries. A further uncertainty is due to the fact that it is not clear to what degree these trends are caused by "timing" changes, i.e., a postponement of births, and how far they are reflective of the lifetime fertility of younger generations of European women (Bongaarts and Feeney 1998). There is no clear scientific paradigm to adequately anticipate future reproductive behaviour. The notion of a "second demographic transition" has been suggested to capture these trends, but it does not say where and when the endpoint of this transition should be reached (Van de Kaa 1987; Cliquet 1991). For this reason, again, population projections need to reflect the uncertainty through a range of fertility assumptions.

**Migration** is the most volatile of the three demographic components. The number of people entering or leaving a country can change from one year to the next due to political events or the enforcement of new legislation. The past 10 years have witnessed great ups and downs in European migration levels. The problem with projecting migration trends is not only the intrinsic difficulty of foreseeing such political events, but also the fact that net migration is the result of two partly independent streams (in-migration and out-migration) and that they depend on the conditions in both the sending and receiving countries. In this respect projections can do little more than demonstrate the impacts of alternative net-migration scenarios (Lutz 1993).

Policies to manage the future and meet the demographic challenges require the best available information about future trends. The standard way to project the future population path, which is considered most likely by experts, is a well-established methodology, the so-called cohort component method. The more difficult issue is

how to deal with uncertainty in future demographic trends. As indicated above there are significant uncertainties associated with all three components, fertility, mortality and migration. The usual way is to produce different scenarios or variants, which combine alternative fertility, mortality and migration assumptions. But here the users of projections are not informed about the likelihood of the different scenarios, whether they are very unlikely "horror scenarios" that may be dismissed immediately, or whether they are highly realistic trends that should be taken seriously. Only probabilistic projections can answer these questions.

Expert- and argument-based probabilistic projections are a rather recent methodological development (at IIASA, the International Institute for Applied Systems Analysis in Austria) and in the following we present such projections for the European Union (Lutz and Scherbov 1999) after earlier applications to Austria (Hanika, Lutz and Scherbov 1997), Germany (Lutz and Scherbov 1998), Greece (Lutz, Sanderson and Scherbov 2001b), and 13 major world regions (Lutz, Sanderson and Scherbov 2001a). The methodology has been extensively discussed elsewhere (Lutz, Vaupel and Ahlburg 1999; Lutz, Sanderson and Scherbov 2001a) and cannot be presented here.

The uncertainty distributions of population size, sizes of specific age groups, etc., can be presented numerically or graphically through selected fractiles as shown below. The probabilistic projections for the whole European Union (treated as one region) are based on assumptions as produced by Eurostat. There three scenarios have been defined to 2015 for each of the three components (European Commission 1998): Total Fertility Rate: 1.41 (low), 1.64 (baseline), 1.92 (high); Life Expectancy female: 81.5 (low), 83.1 (baseline), 84.4 (high); male: 75.0 (low), 77.2 (baseline), 79.2 (high). The assumed annual migration balances for 2010-14 are 398,000 (low), 592,000 (baseline), 788,000 (high). For each of the components specific paths have been defined between the base year 1995 and the target year 2015. For the extension to 2030 and 2050, which are presented in this study, constant rates have been assumed. Due to this correspondence of assumptions the median of the probabilistic projections is indeed identical to the baseline scenario of Eurostat. However, the quantitative uncertainty intervals around the median are new. For the set of projections presented here, they are based on the additional assumption that 90 percent of all future fertility and mortality paths fall between the stated high and low values. For migration only 67 percent has been assumed due to higher perceived uncertainty. Since annual migration flows are much more dependent on short-term political events than fertility and mortality, which are more difficult to predict, a significantly high degree of uncertainty has been assumed for migration.

Figure 1 shows the results of the probabilistic projections for the total population of the current 15 member states of the EU up to 2050. The median of these projections shows a slight increase from the current 375 million inhabitants of the EU to around 390 million in 2020, followed by a moderate decrease to 377 million (about the present level) by 2050. Hence population decline is not a likely medium term prospect for the European Union. The figure also shows the fractiles of the estimated uncertainty distribution. The inner 20 percent are represented by the black area, while the inner 60 percent are shown by the dark shaded area. Here the margin of uncertainty is still rather small, e.g., by 2015 (i.e., 17 years from now) 60 percent of all cases fall into a range of about 8 million up or down from the median. And even the interval containing 95 percent of the assumed future trends is less than 20 million (or 5 percent) up or down from the median. Of course, by the middle of the next century the trumpet will have opened further and the 95 percent interval in 2050 goes from 300 million to 413 million.

Figure 2 gives a probabilistic population pyramid for the EU for the year 2030. Again, different shadings refer to different fractiles of the uncertainty distribution. The figure clearly shows that uncertainty at the young ages is much greater than at higher ages. For those born before 2000, i.e. aged 30 or higher in 2030, the uncertainty given is primarily due to migration uncertainty in young adulthood. For the oldest age group, mortality uncertainty also plays a visible role, although the mortality assumptions chosen here are rather narrow, with the assumption of constant 2015 rates. As to those born after 2000, fertility uncertainty is the main factor. The graph also shows that for the coming five years (in the case of a higher fertility path) an echo of the large cohorts born 1970-1980 will produce a small "baby boom" to be followed by further declines in the number of births.

Figure 3 shows the proportion above age 60. Here, unlike in Figure 1 for total population size, the uncertainty is not whether it will go up or down, but by how much the proportion of elderly will increase. Presently 21 percent of Europe's population is above age 60. This proportion will certainly increase over the coming decades because the increase is already pre-programmed in today's age structure. By 2015 even the 95 percent intervals

show a very narrow range of between 24 percent and 27 percent with the median at 25.6 percent. Still in 2030 the range of uncertainty is rather narrow, with 95 percent of all future paths between 29 percent and 36 percent. In other words, it can be considered virtually certain that the proportion of the European population above age 60 will increase from its present 21 percent by 8 to 15 percentage points or on average to about 1.5 times its current level. This is a very significant increase by any standard. And the best thing about these probabilistic projections is that they cannot be simply dismissed as "horror scenarios" of unknown probability. This increase is virtually certain up to 2030. Thereafter, the range of uncertainty opens up more quickly because the influence of the already given age structure of today gradually diminishes, and uncertainties related to future fertility, mortality and migration gain importance.

This trend combined with a decrease in the number of children result in a significant and virtually certain increase in the mean age of the European population. It will increase from a present mean age of 39.3 years to between 42 and 48 years by 2030 and even 41 and 52 years by 2050. The median is expected to increase to around 46 years. It is important to note that these data not only reflect the increasing number of elderly and the shrinking number of children, but they also indicate significant changes of the age pattern of the working-age population. The average age of the population of working age (20-64 years) is also expected to increase from 40.5 years to 43 years by 2020. Expressed in yet a different way, the proportion of persons aged 50-60 will increase significantly, while the younger members of the work force aged 20-29 will decline strongly. This is certain to have significant implications for the labour market and it may also have consequences on economic productivity as some scholars and industrialists fear.

Another significant challenge will be faced by pension systems based on the transfer across different age groups. Figure 4 plots the so-called old-age dependency ratio, which is defined here as the population above age 60 divided by the population aged 20-60. Although the ratio does not reflect the true ratio of beneficiaries to contributors in the social security system, it still gives an important indication of the underlying demographic dynamics. This ratio is presently around 38 percent which means that there are still almost three working-age persons for one person above age 60. By 2040 this ratio is likely to almost double to more than 70 percent. Already by 2018, i.e., 20 years from today, there will only be two working-age persons for one person above age 60 in the European Union.

The mortality assumption in this projection, which extends some of the Eurostat assumptions, is rather conservative in the sense that only little improvements in life expectancy are assumed and the range is rather narrow. Another probabilistic projection to 2100 that was recently published in *Nature* (Lutz, Sanderson and Scherbov, 2001a) shows the incredible long-term uncertainties for the proportion above age 80, i.e., the highly aged population. By the end of this century the range with a 95 percent probability goes from an essentially constant proportion in the case of the otherwise highly undesirable stagnation of gains in life expectancy, to an incredible 40 to 45 percent of the total population being above age 80, if life expectancy increases by around four years per decade (see Figure 5). Given the recent progress in medicine and genetics, such a development can certainly not be ruled out, though an increase to "only" 20 percent of the population above age 80 looks more likely at the moment.

As mentioned at the beginning, population ageing is likely to have a wide range of economic and social implications. Population ageing means a higher absolute number of elderly citizens in our societies, who have special needs and require special attention. But it also means a changing quantitative relationship of the relative sizes of generations that requires significant adjustments (the pension problem is only one important aspect) and a special focus on intergenerational equity issues. Therefore, it is important to understand that ageing is not just about the elderly. Ageing is a *process* both at the individual level – every one of us is getting older – and at the societal level. Here, the process means that some age groups are shrinking and others are increasing, and it equally includes concern about the younger age groups as it does about the older age groups.

This paper has attempted to give some demographic background information for the consideration of ageing statistics. In the EU applicant countries, the demographic trends essentially go in the same direction and accession will not significantly change this outlook. Europe – both east and west – may soon be called the very old continent.

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Figure 2. Probabilistic population pyramid, European Union (EU 15). The different shadings refer to the fractiles of the uncertainty distribution.



Figure 3. Uncertainty distribution of the proportion above age 60, European Union (EU 15).



Figure 4. Uncertainty distribution for the old-age dependency ratio, European Union (EU 15).





Figure 5. Uncertainty distribution of the proportion above age 80 in Western Europe until 2100.

# ILLUSTRATING THE TRANSITION OF MEN FROM WORK TO RETIREMENT WITH MICRO DATA: A TALE OF "COUCH POTATOES"

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The paper presents the author's own opinions and should not be interpreted as representing the views of the OECD. Thanks for their comments are due to participants at the seminar, especially Iiris Niemi. In addition, the author would like to thank Klas Rydenstam and Anne Gauthier for helping with analysing time use data and Anne Gauthier for extracting the material from the MTUS. None of these people is responsible for any of the conclusions drawn.

Revised Version, 25 June, 2002

Twenty years ago, the term "active ageing" was largely the preserve of gerontologists and referred to post-retirement activities. For some, it reflected a concern with whether retirees engaged in social or cultural activities and to what extent years after work were used in a socially productive fashion; for others, with whether older people occupied themselves in ways that contributed to the maintenance of their physical and mental capabilities. More recently, the term has entered the parlance of economists and no longer reflects an interest in post-retirement activities but in the postponement of retirement and the substitution of unpaid with paid work. Perceived looming fiscal deficits consequent upon population ageing are seen to require not only changes in the generosity of public pension benefits (and a greater reliance on private pension benefits) but also a raising of the age of entitlement to these benefits and a consequent reduction in the length of time spent in retirement. "Active ageing" has come to imply "economically active ageing".

This paper seeks to summarise what actually happens to people as they pass from their early fifties to their late sixties. At the earlier of these ages, most men are in the labour market and the overwhelming majority of those are in paid work. At the later of these ages, most men are no longer economically active and very few of them are in paid work. The situation with respect to women is somewhat different. The proportion in their early fifties who are in work is substantially lower and of those in work the proportion who have been continuously economically active is yet lower. The role of women as mothers and home makers, in other words as major participants in unpaid work, makes it less easy to observe the transitions they experience as they pass through their fifties and sixties and, indeed, makes transition a less meaningful term at all. It also makes the concept of "activity" more difficult to employ, since women tend to have more varied portfolios of which paid employment is but a part. As a consequence, this paper concentrates primarily on what happens to men.

# The transitions that come with ageing

Passing from late middle age to old age involves a number of transitions. It can involve changes in living arrangements. These changes can be consequent on the further "de-merging" of households as any remaining children leave the parental homes. or they can be consequent upon older people moving house. The latter can occur either because older people are no longer tied to a location by the requirements of a job, or because they seek to adjust housing to their new incomes and household sizes or because they anticipate, or adapt to, changes in their physical capabilities. Passing from late middle age to old age normally involves, using a conventional dichotomy, a decrease in time spent in work and an increase in time spent in leisure. Related to this is an increase in the proportion of income supplied by transfers and a decrease in the proportion supplied by labour, and, in most cases, to a decrease in the overall level of income that is available to the people concerned. Lastly, passing from late middle age to old age can involve a change in the way both "work" and "leisure" time themselves are used. This paper concentrates upon the last issue. It draws from a wider set of studies undertaken at the OECD in the past three years which have looked at all of the above-listed issues.<sup>1</sup>

# The abruptness of the transition from "activity" to "inactivity"

It is widely recognised that, for men, over most of the last century, the proportion of later life that is "inactive" has been falling. The introduction of pension systems explains this and indeed one of the intentions of those who introduced them was to ensure that the end part of life could be spent in "leisure" but not in "poverty". Over the last half century, official pension ages have been static, but effective retirement ages have been falling.<sup>2</sup> Equally, life expectancies have been rising – currently by as much as a year every decade. Women have benefited from increased longevity but, in so far as the labour force participation rates of succeeding cohorts have been rising, the proportion of years in later life spent in work has tended to increase. However, women, much as men, have also been retiring early, in so far as a greater proportion of the greater proportion who do work have been leaving work before the "official" retirement age.<sup>3</sup>

With effective retirement ages falling and life expectancies rising, ageing seems to have become less "active". What is more, the transition from work to retirement appears to be an abrupt one. Most men work full time until they retire; thereafter, they do not work at all. Industrial gerontologists have long praised the concept of gradual retirement as helping individuals to avoid the "pensions shock" and to reduce their dependency on transfers, as helping the economy to retain productive capacity, and as helping companies to preserve experience and ensure the smooth hand-over of tasks and responsibilities. In practice, gradual retirement is limited. The first column of Table 1 shows the proportion of older men who work part-time varies somewhat between countries but is relatively low in most.

Three countries deserve some further comment, namely Finland, Sweden and Japan. The first two are countries that operate, or did operate, a partial pension system.<sup>4</sup> Japan has an "earnings rule" within the public pension scheme that that encourages part-time working for those taking benefit at 60. And in the Netherlands, Ssome one in three of older men in work in fact work part-time, but the Netherlands is a country in which male part-time work at all ages is high.

Although in most countries the number of older men working part-time increases with age (column 2), very few men switch from full-time to part-time work as they move into the final years of their working lives. Column 3 of the table shows that the share of an age cohort that changes from full-time to part-time working is around three percent in most countries.

<sup>&</sup>lt;sup>1</sup> These are, respectively, OECD, 2000; OECD, 2001; Yamada and Casey, 2002.

<sup>&</sup>lt;sup>2</sup> There is much debate as to whether this was "supply side driven", in so far as employees took advantage of provisions in public and private benefit systems that facilitated early retirement without unacceptable income loss, or whether it was "demand side driven" in so far as employers who were faced with labour surpluses and restructuring imperatives, sought to rid themselves of their least flexible or productive employees.

<sup>&</sup>lt;sup>3</sup> Calculating effective retirement ages over time for women is considerably more complicated than for men. For men, cross-sectional data can be used, for women, quasi-cohorts must be constructed.

<sup>&</sup>lt;sup>1</sup> The generosity of the Swedish partial retirement system was reduced considerably in 1994, and the share of part time working amongst 60-64 year old men, which had stood as high as 44 per cent in that year, fell substantially thereafter. The partial pension system was abolished entirely in 1998. However, the new Swedish notional defined contribution system, which has been in operation since 1998, does allow early (and reduced) age pensions to be taken on a part-time basis and further entitlements can be accrued from any continued part-time work. The Finnish partial pension system has, by contrast, been extended, so that the minimum age for entry is 56 rather than the previous 58. This was intended to improve the attraction of partial retirement relative to that of full early retirement.

	% aged 60-64 with a part-time job in 1998	% change in number of part-time job holders aged 60-64 relative to part-time job holders	percent point change in share of older male population that works part-time <sup>(2)</sup> aged 55-59 <sup>(1)</sup>
Canada	15.4	47	2
Finland	25.9	25	1
Germany	8.9	95	2
Italy	5.0	-8	0
Japan	22.7	54	4
Netherlands	35.4	-19	-2
Sweden	24.4	91	6
United Kingdom	18.5	89	4
United States	16.1	64	3



Source : Eurostat and national labour force surveys (see OECD, 2000)

Source : Eurostat and national labour force surveys (see OECD, 2000)

<sup>(1)</sup> adjusted for size and mortality of sex-specific age group

<sup>(2)</sup> share of population 60-64 working part time in 1998 minus share of population 55-59 working part time in 1993

The table is to be read as follows. Col 1 shows that c15% of 60-64 year-old men in Canada worked part time..; col. 2 that the number of 60-64 year-old part-time workers is 47% grater than the number of 55-59 year old part time workers five years previously; col. 3 that this meant that the increase in the proportion of the older population that was working part-time rose by 2 percentage points.

A second way in which gradual retirement might be affected is by switching from dependent employment to self-employment. Self-employed people might be argued to have greater disposition over the timing and intensity of their effort, and a simple measure of input based upon hours will not capture this. However, although older workers are disproportionately self-employed in most countries, with the exception of Japan, there is no indication of people moving into self-employment toward the end of their working lives. Table 2 (columns 2 and 3) show that there is, in fact, a net outflow from self-employment. Remarkably, of all the countries in the Table the USA has the lowest level of self-employment amongst older men. Given the extensiveness of the discussion of "bridge" in that country, a different outcome might have been expected.

	% aged 60-64 who were self-employed in 1998	% change in number of self-employed aged 60-64 relative to self-employed aged 55-59 <sup>(1)</sup>	Percent point change in share of older male population that is self-employed <sup>(2)</sup>
Canada	30.8	-19	-4
Finland	44.4	-33	-5
Germany	27.7	-28	-3
Italy	57.1	-27	-7
Japan	30.3	6	1
Netherlands	42.7	-17	-2
Sweden	26.3	-4	-5
United Kingdom	26.0	-14	-2
United States	17.7	-21	-3

Table 2: Level of self-employment and importance of shifts from dependent to self-employment, men, late 1990s

Source : Eurostat and national labour force surveys (see OECD, 2000)

<sup>(1)</sup> adjusted for mortality of sex-specific age group

<sup>(2)</sup> share of population 60-64 self-employed in 1998 minus share of population 55-59 self-employed in 1993

The table is to be read in the same way as Table 1.

# The disappointing characteristics of "inactivity"

If the transition from economic activity to economic non-activity tends to be an abrupt one, the next question is whether economic non-activity implies activitynon-activity in any other sense. In other words, what is of interest is how people use the additional "leisure" time that they have as a consequence of ceasing to engage in paid work. Whilst labour force surveys and their equivalent are quite rich sources of information about work, and about leaving work, they are, almost by definition, less complete in describing non-working status. They allow some form of self-classification of different forms of non-activity – for example, "retired", "long term-sick", " not seeking because believes no work is available", "looking after family and home" – but for those studying "active ageing", this categorisation is not especially helpful. Most suggest that that the person in question is <u>not</u> doing something rather than doing something. Only the person "looking after family or home" appears, in the broader sense of the term, to be "active", and those who have retired might or might not be enjoying an "active" old age.

There do however, exist in a number of countries data sets which throw more light on the nature of economic non-activity, although many of these are one-off sources and make comparisons across time scarcely possible, particularly with the somewhat remoter past when early retirement was not such a widespread phenomenon. These are time use surveys, which can be analysed in a standardised fashion across a number of advanced industrial countries.

Using time use surveys on a standardised basis for a sample of OECD countries, it is possible to break people's activities other than paid work into six broad categories. Two of these are indisputably *active*, namely "unpaid work" (which includes undertaking child- or elder-care or taking part in voluntaryeer work) and "active leisure" (which includes engaging in sport, reading, and gardening). The third (which bears a close relation to the first two since it, too, is about "unpaid work") is "housework". The fourth is "socialising" (which includes visiting, entertaining, religious and political activities). The last two are indisputably *passive*, namely "passive leisure activities" (which includes watchingtelevision, watching sport)television) and "personal care and rest" (which includes everyday necessities such as washing and eating, but also sleeping).

A comparison of how time is spent by men in their early fifties – when most are working – and men in their late sixties – when most are retired – shows how the time that used to be spent at work is used when they are in retirement.<sup>5</sup> On average, men gain in excess of 30 hours per week – an average which takes into account that a few were already not working and that some continued to work. From Table 3, it can be seen that in five of the seven countries men use at least half of their additional "leisure" time in one of two ways. Either they use it on "passive leisure activities" or they use it on "personal care and rest". Putting it bluntly, they use it either watching television or sleeping. of This explains the sub-title to this paper.

In general, only a small amount of men's additional "leisure" time – about one eighth – is spent assisting in housework. Men in Japan and Finland are the least likely to do more housework. The findings for the first of these two countries are, perhaps, accordance with one's presuppositions; those for the second,<sup>6</sup> paper.perhaps less so. "Active leisure activities" and "unpaid work", the most identifiable components of an "active" retirement, account for approximately one third of the additional "leisure" time gained by men in Canada, Finland the Netherlands and the USA, but less than a tenth of the time gained by men in Japan.

<sup>&</sup>lt;sup>5</sup> Unlike the analysis carried out for Tables 1 and 2, this is not based upon "quasi cohorts". The men aged 65-69 are men born some 15 years before the men aged 50-55. Younger cohorts might behave differently as they age.

<sup>&</sup>lt;sup>6</sup> The data from the Multinational Time Use Survey that were available in 2000 were from 1985 for the Netherlands and the USA and from 1987 for Finland from 1987/8. The newest were from 1995 and 1996 for the United Kingdom and Japan respectively.

	Canada	Finland	Germany	Italy	Japan	N'lands	USA
sleep and personal care	24	17	28	36	30	23	25
passive leisure	16	36	20	23	52	11	25
housework	13	9	17	12	9	17	14
socialising	7	3	4	3	1	15	5
active leisure	28	33	28	23	7	32	31
voluntary work	11	2	4	3	1	1	-1
hours gained	34	31	38	23	28	30	35
hours worked at start	39	36	44	31	56	34	46
sample aged 50-54	216	451	1044	1173		70	138
sample aged 65-69	180	135	697	740		69	105

Table 3: Reallocation of men's activities following their reduction of time spent at work

Note. The charttable shows the additional time devoted to each activity expressed in relation to the total additional time available because less time is devoted to paid work. Each column adds up to 1.0,100, which represents the total amount of time gained by working less. Negative numbers mean that less time is devoted to a given activity than was the case earlier.

devoted.

Source: OECDAuthor's calculations from data supplied by Multinational Time Use Study (see also OECD, 2000).

# Some implications for policy and for some needs for better data

This rather discouraging picture of the extent of active ageing raises a number of policy questions and a number of questions for data gatherers. These will be addressed in turn.

With respect to policy it appears that, attractive though the model of gradual retirement is, it has, to date, seldom been realised. An overview of labour market and pension policy initiatives in OECD countries over the last quarter century suggests, first, that in many cases, gradual retirement programmes have been swamped by the simultaneous existence of full early retirement programmes. These have offered scarcely inferior benefits without the requirement to work at all, and it is not surprising that they have been given precedence. In the case of Germany, the "old people's part-time law", whilst nominally promoting part-time work, allows non-worked and worked time to be "blocked" so that worked time is allocated to the first years, non-worked time to the later years, with the result that this programme, too, serves as little more than an early retirement scheme. The overview also suggests that part-time working requires substantial changes to work organisation. These changes are not impossible to achieve, as some sectors – particularly services – show. However, in many parts of the economy, and for many jobs, part-time working is alien. Until part-time working becomes generalised, parttime working in old age is unlikely to be widespread. Thirdly, the overview shows that pension schemes themselves often discourage part-time working combined with a part-pension. This is particularly the case with respect to company-based schemes, under the rules of which a person cannot be simultaneously both the recipient of a pension and an employee of the company sponsoring the scheme. Recent legal reforms in the Netherlands seeking to overcome this set an example that deserves attention. Rules that tie benefits to earnings in the last years, as do many company and some public pension schemes, also require reform. Lastly, such an overview indicates that too few pension schemes offer any incentive to people to work later than the normal retirement age and that, in many cases, any augmentation of benefits that can be achieved by doing so is less than notions of "actuarial fairness" would imply. Partial retirement schemes should encourage part-time working after, and not only before, normal retirement age and, thus not leave themselves open to the criticism that they merely reduce effective labour supply.

Moving beyond the more technical questions of how "active ageing" might be promoted through better-constructed opportunities for gradual retirement, the findings reported in this paper raise two more fundamental questions. First, it is widely acknowledged that the coming decades will, all other things being equal, bring with them demands that an increasing share of output be transferred to older people through public or private pensions, and that the coming decades will also bring with them a stagnation or even a shrinkage of the size of the labour force. At the same time, not only life expectancies, but also disability-unimpaired life expectancies are rising. Against such a background, it seems odd that resources are being allocated to support not merely economic inactivity, but even passivity. Such findings are bound to add impetus to demands that effective and actual retirement ages be raised.

Second, even if society could afford to support a larger number of non-economically active persons, it might well be concerned that they spend their time in a fashion that is so unproductive socially. The reason for their lack of social productivity might well lie in people's pasts. What evidence there is about the extent to which people are "active" in old age suggests that they were also "active" before they retired. In other words, few people took up volunteering, started to engage in politics or became avid readers of books once they ceased working. Rather, those that did volunteer, did engage in politics or did read books had done so earlier. They merely continued and sometimes extended or changed the form of their previous pastimes. The same applies to housework. The reason why few men undertake an increasing share of the housework when they retire is that few did much housework before they retired.

For social statisticians who wish to monitor the extent to which active ageing does occur, and if so where and how, current data sources are less than adequate. The particular time use surveys to which reference has been made were often one-off. There have, in the last three decades, been substantial changes in retirement patterns and in life expectancies. It is unclear how representative data from the early 1990s or even before that is representative of the rather more distant past when people retired earlier and when health status in old age was less satisfactory.<sup>4</sup> Equally, it is uncertain whether even the behaviour of a decade and more ago represents that of today. The Harmonised European Union Time Use Surveys might throw more light upon the current situation as and when they are fielded and become available, but researchers will still have to wait for some time before they will be of help.<sup>8</sup>

Eurostat and the national statistical offices might, however, consider short-cutting some of the waiting period and obtaining a large and quite rich set of data by adding a limited number of time use questions to a more frequently conducted survey such as the labour force survey. This would require more attention being given to people who are often routed out of a questionnaire at an early stage – either because they are over a certain age or because they deem themselves, or are deemed to be, economically inactive. This would not necessarily be particularly burdensome – an analogy might be made to the adding of income questions to labour force surveys such as occurred in the early 1990s. Questions on whether such people undertook certain activities and approximations of the amount of time spent on them could be highly revealing. Some examples of what is possible, and also of the ways in which such data are to be interpreted, can be found in descriptions of the CERRA survey carried out in the Netherlands in the mid 1990s.<sup>9</sup>

Both labour force surveys and time use surveys, such as have been exploited here are cross- sectional data sets. An understanding of ageing cannot be complete if it relies only upon comparisons of cross sections. Longitudinal data sets are *prima facie* superior. However, as well as advantages these have some disadvantages as well as advantages. They are expensive; it takes along time before data covering a long period areis available; and, unless they are topped -up., they cover only one cohort. This paper has shown what applying quasi-cohort analysis to labour force survey data can do. A similar procedure has yet to be applied to time use data, partly because surveys are fewer and not necessarily consistent. However, such an analysis is not impossible and is worth carrying out. Eurostat might well encourage this.

Lastly, with respect to data already collected, it would be helpful if that presented by age range did not tend to collapse all older people into a single age group. Too often, tables produced by national statistical offices and international organisations merely show an age group labelled "65+". However, it is well known that the characteristics and behaviour of the "older old" are different from those of the "younger old". Giving more breakdowns when publishing the results of existing surveys would be an easy way to provide a better understanding of "active ageing".

<sup>&</sup>lt;sup>8</sup> The current status of the ETUS suggests recent – end of the 1990s or later data will be available for Belgium, Denmark, Finland, France, Germany, Norway, Portugal Sweden and the United Kingdom. Surveys are scheduled for Italy and Spain. In other countries, the situation is less clear and appears to be dependent on financing and priorities. Amongst candidate countries, Bulgaria, Estonia Romania and Slovenia have recent surveys or surveys in the field.

<sup>&</sup>lt;sup>9</sup> A description is given in Heyma and Theeuwes, 2002, especially section 4.

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# OLDER WORKERS AND POPULATION AGEING: THE EMPLOYMENT CHALLENGE<sup>1</sup>

# **FORTUNY Mariangels**

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# 1. The need for social inclusion

The primary goal of the ILO today is to promote opportunities for women and men to obtain decent and productive work, in conditions of freedom, equity, security and human dignity. Poverty and social exclusion are the main problems that people face. Employment is in large part the solution to these problems. Employment is the source of inclusion. It is participation, income, realization and self-esteem. It is also voice, if you are organized and represented, and it is security. However, employment only plays this role of inclusion under the right conditions. That is why the ILO talks about *decent work* -work which meets people's basic aspirations, not only for income, but for security for themselves and their families, for a safe working environment, without discrimination or harassment, with equal treatment for women and men. It is having your rights respected, and a sense of belonging to something that makes sense. Social protection is part of decent work. In modernizing our social security institutions, we need to maintain the underlying values of solidarity, security and participation and devise systems which can reach everyone.

Older people are an increasingly growing group for whom the need for social inclusion is especially crucial. For older workers, social inclusion means, first, a decent income from work or retirement and, second, the possibility of participating in the life of the community through employment, volunteer work or other activity according to their capacities and preferences.

# 2. Demographic Trends

The number of people aged 60 and over is growing faster than all other age groups. Between 1950 and 2050 it is expected to increase from 200 million to 2 billion.

Ageing trends vary between countries and regions. Developing countries still have a relatively young population while populations in industrialized countries are relatively old. However, the speed at which populations in developing countries are ageing is faster than in industrialized ones. Therefore, old age dependency poses an increasing problem in the developing world. This demographic change is attributed mainly to the general decline in fertility rates and to improved health, which has lengthened life expectancy and reduced the share of newborns in all parts of the world.

<sup>&</sup>lt;sup>1</sup> This paper (draft, unedited version) is based on the ILO's contribution to the Second World Assembly on Ageing (Madrid, 8-12 April 2002)

## Population Pyramid in 2000 and 2050<sup>2</sup>



# 3. Social and Economic consequences of ageing

The increase of life expectancy has been one of the most precious achievements of humanity. However, in **industrialized countries**, longer life expectancy and better health have not been accompanied by longer working lives. These countries are facing serious concerns about the viability of social protection systems. A central challenge is to mitigate the effects of a drop in the working age population by prolonging and increasing the options of participation of older people in the labour market. However, a genuine solution to deal with the financing of social protection systems is to be sought by increasing participation in the labour force not only of older people but also among other population groups such as women, young people and people with disabilities. Therefore employment creation, will be key to the future financing of social protection.

The extension of working life presents equity issues that need to be addressed. First, there is the issue concerning those persons who spend their working life in difficult working conditions or with long contribution periods. Second, there is the dilemma of intergenerational equity since the current generation may not enjoy the same rights as the generation of their fathers and mothers.

When talking about extending the working life a common misperception is that given the shortage of jobs in the labour market the old should make room for the young. In some countries, early retirement has been encouraged hoping that it can improve job prospects for the young. However, entry and exit flows in the labour market do usually not occur in the same sectors or companies –eg. early retirement schemes have been popular in the industrial sector while entries have been more concentrated in the service sector and smaller firms.

Whether young and older workers are interchangeable is doubtful and further research is needed. However, youth unemployment problems (or unemployment problems of any other population group) should not be addressed at the expense of another group, e.g. older workers. The ILO's Older Workers Recommendation, 1980 (No. 162), adopted the principle that policies should ensure that employment problems are not shifted from one group to another.

The challenges facing older workers in **developing countries** are very different. In most developing countries, where less than 20% of the labour force is included in regular social security systems, retirement is a luxury few older people can afford. Even if the formal sector requires them to retire, insufficient transfer incomes force many older workers to continue working in the informal economy as long as possible. About 40% of people above 64 in Africa and about 25% in Asia are still in the labour force, mostly in the agricultural sector. This rate in the more developed regions is less than 10%<sup>3</sup>.

<sup>&</sup>lt;sup>2</sup> Source: World Population Prospects. The sex and age distribution of the world populations: The 2000 revision (United Nations, New York, 2001).

<sup>&</sup>lt;sup>3</sup> ILO: *World Labour Report*, 2000, Geneva.

# 4. Employability of older workers

# The importance of education and skill development

Many current employment problems of older workers are rooted in their low levels of basic or core skills such as literacy and numeracy. A disproportionate share of older people with disabilities have less education and lower skills than the workforce at large. While there are many education and literacy programmes, these tend to be targeted at children and younger people. In many countries, educational attainment is strongly correlated with employment. Educational level provides the basis for workers to acquire skills throughout their working life, and thus enter their older age well equipped. For older people with disabilities, longer lives should mean greater opportunities for constructive training and life experience and more time to achieve self-determination. Empirical research<sup>4</sup> foresees that future older workers will be better educated than today. Although this trend is likely to occur for developed countries, large international differences in the distribution of education levels will persist.

The demand for new skills and knowledge places many older workers at a disadvantage, as their training earlier in life is likely to be obsolete. Older people with disabilities face additional barriers in accessing employment and training opportunities. Age discrimination underlies many of the difficulties faced by older workers in the labour market. Participation in training declines in general with age. Research undertaken in 11 developed countries shows that young adults in the 25-34 age group are almost twice as likely to undergo training as older people aged 55-64<sup>5</sup>. Evidence shows that prejudices towards the abilities of older workers are unfounded. The conclusion drawn from research is that the average difference in work performance between age groups tends to be significantly less than the differences between workers within each age group<sup>6</sup>.

Older workers do not represent a significant proportion of the recipients of public employment and training programmes, but they are an increasingly important target group. In Europe, one of the more integrated policy programmes to promote the employability of older workers is the Finnish National Programme for Ageing Workers (FNPAW). The programme aims to build a wide consensus at the policy level, both to value the experience of the ageing workforce and to raise the actual age of retirement.

# The Finnish National Programme for Ageing Workers, 1998-2002

- The main goal of the FNPAW is to promote the employability of the over 45s and to reduce their exclusion and premature retirement.
- FNPAW is led and run in an integrated way. The Ministry of Social Affairs and Health, the Ministry of Labour and the Ministry of Education, in cooperation with major labour market organizations, are responsible for its implementation.
- FNPAW believes in the importance of skill development for older workers. For this purpose, regional training pilot projects are organized, embracing, for example, the need to update skills due to information technology progress as well as to discover innovative methods for training older workers.
- Specific measures to prevent displacement and discrimination of older workers are also being promoted.

Source: Ageing workers and changing working life, Ministry of Labour and Institute of Occupational Health, Helsinki, 1999.

The ILO's resolution concerning human resources training and development, adopted at the 88th International Labour Conference in June 2000, noted the crucial role of high-quality education and training to prevent and combat social exclusion and discrimination, particularly in employment and that, in order to be effective they must cover everyone, including older workers. The Resolution also stresses the importance of training as one of the instruments that, together with other measures, can address the challenge of the informal sector where many older workers are concentrated.

<sup>&</sup>lt;sup>4</sup> OECD Employment Outlook, June 1998, OECD, Paris.

<sup>&</sup>lt;sup>5</sup> ILO: Lifelong learning in the twenty-first century: The changing roles of education personnel, April 2000, Geneva, www.ilo.org/public/English/dialogue/sector/techmeet/jmep2000/jmepr1.htm

<sup>&</sup>lt;sup>6</sup> ILO: World Employment Report 1998-99, Geneva.

### Resolution concerning human resources training and development International Labour Conference, 88th Session (Geneva, June 2000)

"Training can be one of the instruments that, together with other measures, address the challenge of the informal sector. The informal sector is not a sector in the traditional sense of economic classification but a name given to the economic activity of persons in a variety of situations, most of which are survival activities. Informal sector work is unprotected work that is, for the most part, characterized by low earnings and low productivity. The role of training is not to prepare people for the informal sector and keep them in the informal sector; or to expand the informal sector; but rather it should go in conjunction with other instruments, such as fiscal policies, provision of credit, and extension of social protection and labour laws, to improve the performance of enterprises and the employability of workers in order to transform what are often marginal, survival activities into decent work fully integrated into mainstream economic life. Prior learning and skills gained in the sector should be validated, as they will help the said workers gain access to the formal labour market. The social partners should be fully involved in developing these programmes."

Source: www.ilo.org/public/english/standards/relm/ilc/ilc88/resolutions.htm#III

# The role of lifelong learning

Lifelong learning is a long-term preventive strategy far broader than just providing second-chance education for those adults who did not receive quality education and training earlier in life. For those adults –many of whom are older women with insufficient initial education and training –lifelong learning is about delivering job-relevant learning and building the foundation for further learning.

The inclusion of older workers relies on equipping them with the skills that they need and the knowledge on how to renew them. The trend to lifelong learning is an important cultural asset as well as an economic need. Implicit in the concept of lifelong learning is the rejection of a society structured on the basis of age in which education and training are one-off undertakings experienced early in life. At the level of the individual, as well as the organization, an attitudinal shift toward the expectation of lifelong learning could in itself be a powerful tool in propagating the fact that lifelong learning applies to all workers of all ages. Only in a learning society will all workers, women and men, be able to continually upgrade their skills and knowledge needed to maintain employability.

# Information and communication technologies (ICT)

The overall importance of investment in education and skills is underscored by the structural changes societies and economies are undergoing. Rapid technological developments call for a continuous renewal and updating of skills. At the same time, new technologies can contribute to extend working lives, allowing older workers to maintain their ties to the labour market. ICT is also helping to open employment possibilities for older people with disabilities at all skill levels. On the other hand, stereotyped attitudes against older workers often prejudice the discussion on new technologies and older workers. The next box presents some examples of European companies that undertake training in ICT for older workers.

Beyond older workers, the inclusion of older people into the information society is the broader challenge. If there is one risk that older people are likely to experience, it is isolation and, thus, marginalization. The Internet and other ICT offer possibilities for overcoming isolation among older people. The next box presents the

### Training older workers and ICT

Hellas Can (Greece): Participation and involvement. Older workers participate in all training programmes offered by this organization, including training in the use of ICT. Management values older workers' experience and they are frequently involved in providing on-the-job training. Also, workers with particular skills may remain with the organization past the normal age of retirement.

**Computer Service Dienst (Germany): Integration of older employees by expanding into new business areas and training with others of a similar age.** This organization has developed an alternative strategy to enable older employees to remain within the company. It has expanded into a new area of activity and opened a "repair service centre". The centre has provided alternative work for about 30 per cent of its older service engineers, who have been trained to work on new computer systems. In addition, approximately 20 per cent of the older service engineers have been transferred to consultancy and customer care functions within the sales department.

**Fontijne Holland (Netherlands): Training of production workers aged 40 and above.** This company has set up a refresher course in workplace technology for staff aged 40 and over. The course is intended for older employees who have not attended a course on the production process for some time, feel less involved in the production process, want to study new techniques or expand their knowledge. Two-thirds of the course takes place in employees' own time.

Source: Combating age barriers in employment: A European portfolio of good practice, European Foundation for the Improvement of Living and Working Conditions, 1998.

### *eEurope Action Plan 2002* Objective 2c: Participation for all in the knowledge-based economy

The accessibility challenges of the Internet faced by the disabled and older persons can to a large extent be solved by means of appropriate coding when constructing web sites and content, and the application of some simple rules of layout and structure when designing web pages.

The European approach to ensuring the availability of accessible information on public web sites is encapsulated in the *eEurope Action Plan 2002*. Under objective 2c, the Action Plan includes five targets for promoting "Participation for all in the knowledge-based society"; the Action Plan emphasizes that, "… Public sector web sites and their content in member States and in the European institutions must be designed to be accessible to ensure that citizens with disabilities can access information and take full advantage of the potential for e-government".

 $Source: europa.eu.int/information\_society/eeurope/action\_plan/actionplantext/index\_en.htm$ 

# Combating stereotypes and age discrimination

Attitudes towards older people are the principal obstacle to opening up employment opportunities. The stereotypes are numerous such as, older workers are less productive, physical capacities decline with age, older workers are slow to learn etc. Much of them are myths and even those that have some foundations are often irrelevant to job requirements. The key to progress in this field is in the hands of employers.

An impressive example is the Employers Forum on Age (EFA) whose purpose is to provide employers with info and services aimed at promoting age diversity and overcoming age related stereotypes and age discrimination. The EFA promotes the realization of an all-inclusive workforce across age groups and stresses the clear advantages for business. An all-inclusive workforce brings into the company a wider and more diverse range of skills and abilities and contributes to avoid skills vacuums caused by a number of skilled and experienced employees leaving the business. It can also help companies adapt successfully to new markets, and keep them aligned with evolving legislation and social trends. The next box presents some of the advantages for employers of having an "age diverse" workforce.

Therefore, legislation to prohibit age discrimination is crucial to building equality of opportunity especially for women. For older women, socio-cultural factors play a significant role in determining when a woman worker is considered "old". Older women tend to experience double discrimination in the form of sexist and ageist stereotypes.

	Employers Forum on Age: The business case for age diversity
According to t "smart" compa	the Employers Forum on Age, by abandoning their prejudices about what makes a "younger" or "older" worker, anies are gaining competitive advantage and financial benefit:
Employee	Reduced costs as a result of improved employee retention Access to a wider labour pool
Market	Increased focus on new opportunities in their marketplaces Opportunities to get closer to customers and reflect their interests and needs
Reputation	Exemplary corporate citizenship helps build commitment from all stakeholders and supports and encourages brand loyalty
"Prepare for c themselves to	hange" would be a good motto for the twenty-first century, at a time when businesses are constantly reinventing cope with the fast-moving global economy.
In such an env sent as a mean	vironment, where every opportunity for commercial advantage must be seized, age diversity would seem heaven- us of coping with change.
Businesses that pen: the workf efficiently, wh	It undergo periods of rapid and frequent evolution make rigorous demands on the people employed to make it hap- orce. Senior executives need to recognize opportunities for competitive advantage and to exploit them quickly and ile their employees must have the experience, flexibility and imagination to turn opportunity into reality.
Source: Employ	ers Forum on Age, www.efa-agediversity.org.uk/

Source: europa.eu.int/information\_society/eeurope/action\_plan/actionplantext/index\_en.htm

# Adequate and safe working conditions

The ability and willingness of older workers to continue working depend also on their personal state of health, conditions of work and motivation. The ILO's Older Workers Recommendation, 1980 (No. 162), aims to identify and eliminate the occupational health hazards and working conditions which hasten the ageing process and which reduce the working capacity of older workers. The growing concern over the increase in the number of older workers leaving the labour force prematurely owing to disability or rather inability to cope, has aroused considerable interest in examining how age relates to work demands.

Employability of older workers is strongly influenced by individual and occupational factors which are essential to a person's ability to cope throughout their working life. That is the individual's workability. Workability is the result of the interaction between the individual's resources, working conditions and work organization. A person's individual resources include health, functional capacity, basic and professional education and skills. The resources are also influenced by the person's values and attitudes, motivation and job satisfaction. Promotion and maintenance of workability have to be regarded as an active strategy for coping with the challenge of demographic change in the labour market, particularly with the rising age-related health risks. Improving workability is also a tool to prevent both a premature loss of functional capacities and disability.<sup>7</sup>

The Finnish model of workability encourages the implementation of flexible working hours and job rotation. Reorganization of working hours offers opportunities to reduce work-related stress on the elderly. Rotation on the other hand is an integral part of the principle of lifelong learning. Some companies have already started development of measures that aim at full-scale exploitation of the work contribution of the ageing workers with an emphasis on management and work organization.

# 5. Concluding remarks

The vitality of our societies increasingly depends on active participation by older people. Therefore, a central challenge is to promote a culture that values the experience and knowledge that come with age. We must foster economic and social conditions that allow people of all ages to remain fully integrated into the economy and society, to enjoy freedom in deciding how to relate and contribute to society, and to find fulfilment in doing so.

The chance to prolong one's working life is a promising alternative for society and deserves to be an option for older persons who wish to do so. Retirement should not be brought forward artificially without taking individual circumstances into account. It is important to ensure that older people have the opportunity to pursue productive activities, whether paid or unpaid, which keep them connected and provide them with a sense of usefulness to society.

<sup>&</sup>lt;sup>7</sup> Active Strategies for an Ageing Workforce, Conference report, Turku, 12-13 August 1999, European Foundation for the Improvement of Living and Working Conditions, http://www.eurofound.ie/publications/EF9962.htm

# SHARE: SURVEY OF HEALTH, AGEING AND RETIREMENT IN EUROPE

An introduction to this interdisciplinary and cross-national project

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The present design of pension systems in Europe and the United States is under attack. The ageing of our population poses major challenges to the pension systems. Many industrialized countries have understood this challange and prepare reform towards multipillar pension systems. However, there are many open questions concerning the accumulation and deccumulation of private wealth that need to be answered in order to make any potential pension reform efficient. We still lack essential knowledge of why and how people accumulate their wealth. Therefore, better and more complex data is needed.

There is a great variety of pension system designs in the world. In most of the European countries, major part of the pension benefits of elderly people is delivered through the public pillar of pension systems. On the other hand, the United States and also the Netherlands and Switzerland put much more emphasis on private schemes and the pension system is multipillar. The UK can be considered as an intermediary case. In the United States an important part is secured by the third pillar – the wealth accumulation through private households savings. Whereas, the Netherlands relies on employer-provided pension schemes.

If European countries decided to redesign their pension schemes and move towards the multipillar systems there would be considerable side effects, which would affect not only the pensions provisions but also the saving behaviour in general. However, lack of precise knowledge of how people will change their savings behaviour prevents us to predict them safely.

It is essential to know how much wealth will be accumulated if people will be induced to save themselves for their retirement. Will people voluntarily fill the pension gap? Economic theory would suggest that they will. It assumes that people smoothen their consumption over their life-times. During the active working period they save and accumulate wealth which then they draw down during their retirement. As an implication, the decrease in public pension provisions should be compensated by proportional rise in private savings. Consequently, there would be little repercussions on other wealth. However, this is only valid under extremely binding assumption that individuals are far-sighted and not constrained.

However, evidence from various countries shows that although individuals indeed save most between 30 to 60 years of age, the saving rates remain positive for at least some period of retirement. The cross-sectional look at German data suggests that private wealth starts decreasing at certain age. However, such conclusion would be rather misleading as longitudinal view clearly demonstrates that people actually build up their wealth. More-over there are important differences in saving behaviour between countries.

It leads us to realise that accumulation and deccumulation of private wealth is far more complicated than standard economic theory suggests. In order to see correct pattern there is a need for longitudinal dimension in the analysis. If we do not understand basic saving behaviour, how can we understand substitution and the effects of pension reform? Comparison of different pension systems and the replacement rates shows that they arrive to roughly same results. For both single-pillar and multi-pillar system the replacement rates are close to 80%. However, the case of the UK, where people after retirement obtain just 69% of their former income suggests that the gap caused by transition to private pension system might not necessarily be filled. Then one has to raise a question what kinds of incentives are required to solve this problem. Unfortunately, we still know very little in this respect.

Further questions should also be answered: If people save more for retirement, will they save less for everything else? If people save for their own retirement, will they leave smaller bequests for their children? How will the distribution of wealth at retirement change in the wake of pension reform?

In order to understand these questions that have far-reaching impact on whole society we need to have much more data than on wealth and income. Accumulation and deccumulation of wealth depends on many factors. For example it is influenced by the health status of individuals. But in turn, it is also likely to influence health (including mortality). The same mutual influence can be traced in the case of kinship and social networks, in particular living arrangements.

Therefore, the data covering all these three broad areas (income security and personal wealth; health, disability and mentality; kinship and social networks, living arrangements) are necessary to understand these dynamic relationships. If one analysis just one of these areas the results are bound to be biased and fail to provide the whole picture. The data should be interdisciplinary, longitudinal and cross-national.

Collecting such data is the puropse of SHARE, the new Survey of Health, Ageing and Retirement in Europe. It aims at filling in some of the gaps in data needs in the research of ageing. It is a new project financed by the European Commission under the Key Action on Ageing Populations.

The objective of SHARE is to develop longitudinal data sets. The contract for a design study has been funded by the Directorate General for Research of European Commission. It is currently involving about 120 researches in various disciplines : demography, economics, epidemiology, sociology, social psychology and statistics. Participating countries are Sweden, Denmark, Belgium, the Netherlands, France, Germany, Switzerland, Greece, Italy, and Spain, plus UK (ELSA) and US (HRS).

The following data will be collected:

- Health variables : Self-reported health, physical functioning (ADLs and IADLs), psychological health, cognitive functioning, health behaviours (in the longer run : bio-medical data?)
- Economic variables : Current work activity and job characteristics (job demands, flexibility, hours worked, opportunities to work post-retirement age), employment history, pension rights, sources and composition of current income, wealth and consumption, housing and education
- Social supports : Assistance within families, transfers of asset, social networks, volunteer activities, time use
- Data links : In several countries, one may hope to use administrative earnings, social security, and/or tax records. Linkages may also be developed to employer provided information

These data sets will consequently be useful for finding answers to questions such as :

- Institutions and retirement patterns : How secure is income during retirement ? How do social security rules influence retirement ? How do different routes to retirement interact ? How much uptake of flexible retirement provisions ?
- Interaction between private and public pensions : How do the elderly accumulate and deccumulate private wealth ? Which incentives are needed to encourage saving for old age ?
- Health and labour market participation: Will improving health status induce (or allow) the elderly to work longer?
- Disability: Disability insurance and the prevalence of disability. Interaction with other forms of social insurance.
- Health care costs: Institutional variation and cost of health care provision.

# AGEING IN THE EU 15 AND IN THE 12 CANDIDATE COUNTRIES

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# 1. Introduction

The aim of this paper is to look at the ageing process of two blocks of countries: The present EU Member States and the 12 Candidate Countries, which will probably be members within the foreseeable future (Bulgaria, Cyprus, Czech Republic, Estonia, Hungary, Latvia, Lithuania, Malta, Poland, Romania, Slovak Republic and Slovenia).

The description is based on Eurostat population statistics and Eurostat population projections for the EU 15 and on UN population scenarios for the 12 Candidate Countries.

First, the demographic backgrounds and present trends of those tho countries are being described and then the process of ageing over the next 50 years in the light of the latest population projections (Eurostat 1999 and UN 2000).

Impacts of enlargement on the ageing process of the "New Union" will be discussed.

Finally, impacts of the accession to the structure and ageing of the potential labour force will be looked at.

# 2. Demographic background of the EU 15 and the 12 Candidate Countries

The European Union has had a number of demographic surprises over the last 30 years. Fertility levels have dropped dramatically, life expectancy has continued to increase strongly and most Member States of the EU have become immigration countries.

Consequently, the number of young people has declined significantly (by around 20%), whereas both those of working age and the elderly continued to grow in number.

The 12 Candidate countries have, however, had not less surprising but partly different demographic past. Before 1990s population growth was quite high (about +0.6 % per year during the 20 previous years), due to relatively high fertility levels, almost continuously increasing life expectancies and barely any (out) migration.

During the 1990s, most of the 12 countries experienced unexpected demographic events. Fertility levels dropped drastically, life expectancies went down and significant net outflows were reported. Therefore, population growth has rapidly become negative in this region of Europe: in less than 10 years, these countries have lost 1.3 million people, which is 1.2 % of their 1990 population.

At present, on 1 January 2000, the 12 candidate countries with which EU membership negotiations have started had a combined population of 105.7 million people. At the same time, EU-15 had 376.4 million inhabitants. This means that the enlargement of the EU to include these countries would increase its population by 28%, to a total of about 482 million inhabitants

However, due to a dramatic and continuing population decline in most of these 12 candidate countries, instead of reversing the population decline of the EU expected over the coming decades, their accession would, on the contrary, hasten it.

Not all candidate countries have experienced these trends with the same intensity. Eight out of the twelve countries reported population losses during the 1990s.

Deaths outnumbered births in half of the countries and only the Czech Republic, Malta and Cyprus recorded positive crude net migration rates during the period 1990-1999. Especially in Latvia and Estonia, net outflow of people has been significant.

The two Mediterranean island states were the only countries with both higher crude net migration rates and higher crude rates of natural increase than the EU-15. The trends in these two countries were markedly different from those other 10, but because of their small size it does not show in the trends of the whole block.

# 3. The process of ageing in the EU 15 and in the 12 Candidate Countries over the next 50 years.

The process of ageing of these two country blocks is shown by population pyramids in the annex. The pyramids show the expected sex and age structure of these two country blocks in years 2000, 2010, 2020, 2030 and 2050 according to Eurostat population projections 1999 (baseline) for the EU 15 and to UN population scenarios 2000 (medium variant) for the Candidate countries.

In the EU 15, the decline in births, which has been taking place over the last 2-3 decades, is without any doubt the main cause for the continuing ageing of the population. However, the ongoing decrease in mortality rates at higher ages is a factor which is rapidly gaining importance.

Figure . Population by broad age groups , as a percentage of total population, 1950-2050 - EU-15

Besides, the numerous baby-boom generation born between 1946 and 1965 will enter the age group of 60 and over during the period 2006-2025. Out of this generation comes the much smaller baby-bust generation born in the 1970s, 1980s and 1990s, which are currently still in the age group 0-19 or entering the working age population. These strong changes in generation sizes have a wave-effect in the future on the future age structure of the population of the EU 15.

In the European Union as a whole, the number of persons aged 65 years and over has grown with well over 40% during the last 30 years reaching the share of 16 % of the population in 2000. In the next 40 years the share will almost double to 28 %. Thereafter, this growth will level off and even start to decline, as the smaller baby-bust generation starts entering this age group.

As a result of prolonged life expectancies, the percentage of the very old (80+) is also expected to increase substantially: from 4% in 2000 to about 10% in 2050. In absolute terms, 38 million people are expected to be aged 80 and over in 2050, which almost triples the number in 2000.

Similar processes operate in the twelve countries concerned. However, unlike in the EU-15, no decline in the elderly population is expected for these countries within the foreseeable future.

Given that the candidate countries have a younger age structure, the current share of the elderly of 13% now can be expected to rise to 18% only in 2020 (as compared to 21% in EU 15) and then move rapidly towards EU-15 levels at the end of the projection period.

The percentage of very old (80+) was 2% in year 2000 (as compared with 4in EU). This share is expected to rise to 7% in 2050 (as compared with 10 in EU).

The share of women in the elderly population was markedly greater than that of men in year 2000 in both country blocks (60% in EU and 61% in the Candidate Countries). The share of women and men is expected to converge towards 2050 and faster in EU (share of women 54% in EU and 58% in the Candidate Countries in 2050). The convergence is even stronger in the populations aged 80 and over (69 and 70 in 2000 to 60 and 67 in 20509) especially in the EU 15.

In general terms the development of the age structures of these two country blocks are as follows: in year 2000 the Candidate countries have proportionally more young people aged 0 to 24 and les the oldest old (80+); in year 2050 the Candidate countries are expected to have proportionally slightly more children (0 - 14 years),
slightly less working age population up to 54 years, clearly more "young elders" (from 55 to 74) and less oldest old (80+), especially men. Enlargement of the European Union with these twelve countries would therefore lead to a slower ageing of the population in the short and medium term but hasten it in the long run.

## 4. Impact of enlargement on the potential labour force of the EU

The potential labour force, the population aged 15-64, of EU-15 is expected to reach its largest size of about 255 million around 2010. In the candidate countries studied, the number of 15-64 year olds will probably peak a few years earlier.

Because of the combined impact of dejuvenation and the expected future decline of the working age population, the ongoing trend of ageing is obscured in the total dependency ratio (number of 0-14 and 65 and over as a percentage of the population between 15-64). In the EU-15 countries this ratio was more or less stable over the past ten years and will increase slightly in the next few years.

There was, however, an underlying shift from fewer young towards more old dependants. Once the less numerous generations born in the 1980s and 1990s enter the work force, the total dependency ratio will change rapidly for EU-15.

From around 2010 onwards, the share of the population of working age is expected to decline from around two-thirds to about 58% in 2050.

Trends in the candidate countries considered are somewhat different. Nearly all the candidate countries have a total age dependency ratio that is not only lower than the EU-15 average but also declining faster. This decline will continue for some years (until approximately 2010). Only when the small birth cohorts from the 1990's enter the working ages will there be a rapid increase in the total dependency ratio.

Therefore, although enlargement of the European Union by these twelve candidate countries would in the medium-term lighten the demographic burden on the working population of the Union, it would hardly alter the longer-term decline in this age group.

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#### EUR-15 and CEC-12 on 1-1-2000



EUR-15 and CEC-12 on 1-1-2010



#### EUR-15 and CEC-12 on 1-1-2020



EUR-15 and CEC-12 on 1-1-2030



#### EUR-15 and CEC-12 on 1-1-2040



EUR-15 and CEC-12 on 1-1-2050



## ACTIVE AGEING: A POLICY FRAMEWORK INTRODUCTION TO THE CONTRIBUTION OF THE WHO AGEING AND LIFE COURSE PROGRAMME TO THE SECOND WORLD ASSEMBLY ON AGEING, MADRID, SPAIN 8-12 APRIL 2002

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Population ageing raises many fundamental questions for policy-makers. How do we help people remain independent and active as they age? How can we strengthen health promotion and prevention policies, especially those directed to older people? As people are living longer, how can the quality of life in old age be improved? Will large numbers of older people bankrupt our health care and social security systems? How do we best balance the role of the family and the state when it comes to caring for people who need assistance, as they grow older? How do we acknowledge and support the major role that people play in caring for others as they age?

The policy framework paper is designed to address these questions and other concerns about population ageing. It targets government decision-makers at all levels, the nongovernmental sector and the private sector, all of whom are responsible for the formulation of policies and programmes on ageing. It approaches health from a broad perspective and acknowledges the fact that health can only be created and sustained through the participation of multiple sectors. It suggests that health providers and professionals must take a lead if we are to achieve the goal that *healthy older persons remain a resource to their families, communities and economies,* as stated in the WHO Brasilia Declaration on Ageing and Health in 1996.

## Active Ageing: The Concept and Rationale

If ageing is to be a positive experience, longer life must be accompanied by continuing opportunities for health, participation and security. The World Health Organization has adopted the term "active ageing" to express the process for achieving this vision.

#### What is "Active Ageing"?

# Active ageing is the process of optimizing opportunities for health, participation and security in order to enhance quality of life as people age.

Active ageing applies to both individuals and population groups. It allows people to realize their potential for physical, social, and mental well-being throughout the life course and to participate in society according to their needs, desires and capacities, while providing them with adequate protection, security and care when they require assistance.

The word "active" refers to continuing participation in social, economic, cultural, spiritual and civic affairs, not just the ability to be physically active or to participate in the labour force. Older people who retire from work and those who are ill or live with disabilities can remain active contributors to their families, peers, communities and nations. Active ageing aims to extend healthy life expectancy and quality of life for all people as they age, including those who are frail, disabled and in need of care.

"Health" refers to physical, psychological and social well being as expressed in the WHO definition of health. Thus, in an active ageing framework, policies and programmes that promote mental health and social connections are as important as those that improve physical health status.

Maintaining autonomy and independence as one grows older is a key goal for both individuals and policy makers. Moreover, ageing takes place within the context of others—friends, work associates, neighbours and family members. This is why interdependence as well as intergenerational solidarity (two-way giving and receiving between individuals as well as older and younger generations) are important tenets of active ageing. Yesterday's child is today's adult and tomorrow's grandmother or grandfather. The quality of life they will enjoy as grandparents depends on the risks and opportunities they experience throughout the life course, as well as the manner in which succeeding generations provide mutual aid and support when needed.

The term "active ageing" was adopted by the World Health Organization in the late 1990s. It is meant to convey a more inclusive message than "healthy ageing" and to recognize the factors in addition to health care that affect how individuals and populations age.

The active ageing approach is based on the recognition of the human rights of older people and the United Nations Principles of independence, participation, dignity, care and self-fulfilment. It shifts strategic planning away from a "needs-based" approach (which assumes that older people are passive targets) to a "rights- based" approach that recognizes the rights of people to equality of opportunity and treatment in all aspects of life as they grow older. It supports their responsibility to exercise their participation in the political process and other aspects of community life.

## A Life Course Approach to Active Ageing

A life course perspective on ageing recognizes that older people are not one homogeneous group and that individual diversity tends to increase with age. Interventions that create supportive environments and foster healthy choices are important at all stages of life.

As individuals age, noncommunicable diseases (NCDs) become the leading causes of morbidity, disability and mortality in all regions of the world, including in developing countries. NCDs, which are essentially diseases of later life, are costly to individuals, families and the public purse. But many NCDs are preventable or can be postponed. Failing to prevent or manage the growth of NCDs appropriately will result in enormous human and social costs that will absorb a disproportionate amount of resources, which could have been used to address the health problems of other age groups.

In the early years, communicable diseases, maternal and perinatal conditions and nutritional deficiencies are the major causes of death and disease. In later childhood, adolescence and young adulthood, injuries and non-communicable conditions begin to assume a much greater role. By midlife (age 45) and in the later years, NCDs are responsible for the vast majority of deaths and diseases. Thus, it is important to address the risks of non-communicable disease from early life to late life, i.e. throughout the life course.

Research is increasingly showing that the origins of risk for chronic conditions, such as diabetes and heart disease, begin in early childhood or even earlier. This risk is subsequently shaped and modified by factors, such as socio-economic status and experiences across the whole life span. The risk of developing NCDs continues to increase as individuals age. But it is tobacco use, lack of physical activity, inadequate diet and other established adult risk factors which will put individuals at relatively greater risk of developing NCDs at older ages.

#### **The Policy Response**

The challenges of population ageing are global, national and local. Meeting these challenges will require innovative planning and substantive policy reforms in developed countries and in countries in transition. Developing countries, most of whom do not yet have comprehensive policies on ageing, face the biggest challenges.

The ageing of the population is a global phenomenon that demands international, national, regional and local action. In an increasingly inter-connected world, failure to deal with the demographic imperative and rapid changes in disease patterns in a rational way in any part of the world will have socioeconomic and political consequences everywhere. Ultimately, a collective approach to ageing and older people will determine how we, our children and our grandchildren will experience life in later years.



The policy framework for active ageing shown above is guided by the *United Nations Principles for Older People* (the outer circle). These are independence, participation, care, self-fulfillment and dignity. Decisions are based on an understanding of how the *determinants of active ageing* influence the way that individuals and populations age.

The policy framework requires action on three basic pillars:

*Health*. When the risk factors (both environmental and behavioural) for chronic diseases and functional decline are kept low while the protective factors are kept high, people will enjoy both a longer quantity and quality of life; they will remain healthy and able to manage their own lives as they grow older; fewer older adults will need costly medical treatment and care services.

For those who do need care, they should have access to the entire range of health and social services that address the needs and rights of women and men as they age.

*Participation*. When labour market, employment, education, health and social policies and programmes support their full participation in socioeconomic, cultural and spiritual activities, according to their basic human rights, capacities, needs and preferences, people will continue to make a productive contribution to society in both paid and unpaid activities as they age.

*Security.* When policies and programmes address the social, financial and physical security needs and rights of people as they age, older people are ensured of protection, dignity and care in the event that they are no longer able to support and protect themselves. Families and communities are supported in efforts to care for their older members.

## Conclusion

With the *"Active Ageing Policy Framework"*, WHO offers a framework for action for policymakers. Together with the newly-adopted UN Plan of Action on Ageing, this framework provides a roadmap for designing multisectoral *active ageing* policies which will enhance health and participation among ageing populations while ensuring that older people have adequate security, protection and care when they require assistance.

WHO recognizes that public health involves a wide range of actions to improve the health of the population and that health goes beyond the provision of basic health services. Therefore, it is committed to work in cooperation with other international agencies and the United Nations itself to encourage the implementation of active ageing policies at global, regional and national levels. Due to the specialist nature of its work, WHO will provide technical advice and play a catalytic role for health development. However, this can only be done as a joint effort. Together, we must provide the evidence and demonstrate the effectiveness of the various proposed courses of action. Ultimately, however, it will be up to nations and local communities to develop culturally sensitive,

gender-specific, realistic goals and targets, and implement policies and programmes tailored to their unique circumstances.

The active ageing approach provides a framework for the development of global, national and local strategies on population ageing. By pulling together the three pillars for action of health, participation and security, it offers a platform for consensus building that addresses the concerns of multiple sectors and all regions. Policy proposals and recommendations are of little use unless follow-up actions are put in place. The time to act is now.

For the complete Active Ageing Policy Framework, please consult: <u>www.who.int/hpr/ageing/publication</u> or order a copy (English, French or Spanish) from <u>activeageing@who.int</u>.

## EUROPEAN HEALTH STATISTICS IN THE AGEING SOCIETIES: AVAILBALE DATA VERSUS UNSATISFIED NEEDS

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## SUMMARY

This paper deals with the implications of the ageing populations in the European Member States on health and health-related topics from the producer's perspective of European Health Statistics.

It focuses mainly on determining whether or not EU Health Statistics are sufficiently prepared to meet the challenges of the ageing societies in EU Member States. It will deal with the following topics on a one by one basis:

- Presentation of the results of the health statistical data collections, which are currently performed on a routine basis and which obviously relate to the topics of ageing;
- general description of the European System of Health Statistics, which has been developed for more than five years now and which is currently implemented in the EU Member States, with a special focus on the topical areas covered thereby;
- potential criteria for determining the work sharing between Eurostat and the National Statistical Institutes (NSI) in dealing with health statistics on ageing populations.

Based on the results presented, the participants are invited to identify potential gaps and shortcomings of European Health Statistics. With respect to the overall health-statistical framework, participants may determine whether possible alterations or other forms of improvements of topics or subjects

- can be completely dealt with within the existing statistical framework,
- require existing statistical data collections to be further detailed along existing variable dimensions,
- · require completely new variable dimensions to be inserted into existing statistical data collections, or
- require completely new statistical data collections to be developed and implemented.

From the perspective of a producer of health statistics we are particularly interested to learn about information needs which currently are not sufficiently or not at all supported. Such information needs may originate from health policy, from providers of health care, from patients or patients' organisations or from the general public.

The scientific community may enlarge the society's knowledge on determinants of healthy ageing. The findings made may add to the list of topics, which need to be constantly monitored.

## LIFE EXPECTANCY

Fore some decades Europe experiences a steady increase of life expectancy (LE). This holds true for all Member States (MS) within the last 40 years for both men and women. LE growth rates vary substantially both across MS and over time. Diagrams 1 and 2 summarise this life expectancy development in Europe for men and women respectively. Identical scales have been used deliberately to ease relative comparisons. Highest and lowest LE values observed in Member States (MS) are identified by triangular and circle markers, respectively, and a trend line is added for the EU 15 average identified by the diamond marker.







Today, a newly born boy can expect to life for more than 75 years in the majority of European countries, close to 8 years more than 1960. LE for men increased by 11,3% from 1960 to 2000, the highest rate was observed in Portugal (16,2%), the lowest in Denmark (5,7%). From 1960 to 1990, the range between the MS with highest and lowest LE values decreased by more that 50%. Thus, MS were becoming more and more homogeneous – the "regional life expectancy gap" was narrowing. Thereby, the overall ranking of countries with respect to LE values below and above European average did not change substantially in the last 40 years.

In 12 out of the 15 European MS, the growth of male LE progressed over time, i.e. the annual growth rates in the period 1980–2000 exceeded those of the period 1960–1980. As all MS with above-average LE belong to this group, there is little indication for LE growth rates to change substantially in the very next future.

LE pattern for women show more variation across MS than the ones for men. The main results indicate, that female LE exceeded male in all MS and all years; furthermore, it increased at a slightly higher rate for EU 15 in the period 1960-2000. Also here, the range between MS with highest and lowest LE values decreased by more than 50%. The absolute range value here is constantly lower than the one observed with men, indicating a slightly more homogeneous situation across the EU countries.



Diagram 2: Development of female life expectancy in Europe from 1960 to 2000

Source: EUROSTAT New Cronos database, WHO HFA and OECD Eco-Santé.

With respect to female LE, there is more change in the ranking of MS over time – both with respect to how many different countries hold the highest/lowest value and to which countries have LE values above and below European average.

From 1985 onward, homogeneity of male and female LE is decreasing again, which can be seen by the widening gap between highest and lowest LE value presented in diagrams 1 and 2 respectively. In-depth analysis will be necessary to learn about the reasons for this development. Valid and reliable European mortality statistics may substantially contribute to understanding and controlling the factors influencing this development.

## **Eurostat Activities Relating to Life Expectancy**

Eurostat does routine data collections covering population, and disease-specific mortality data at sub-national level (NUTS 2), in particular:

- mid-year and end-year population by age, gender, and region;
- number of deaths by age, gender, 65 different causes of death, and region.

In addition, Eurostat together with the MS launched efforts to improve the validity, reliability and comparability of disease-specific mortality data by

- making recommendations for common modules for death certificates in all MS,
- using common procedures for certifying death and for compiling mortality statistics, and
- making available unified software for automated coding of causes of death statistics.

The new and improved data will enable MS to better analyse regional mortality differentials within and across countries. Policy actions based on this additional knowledge may contribute to further increase LE in Europe and to lower the respective inter-country variation.

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#### Summary

The results presented can be summarised as follows:

- Life expectancy has been growing for more than 40 years in Europe and it can be expected to continue in the near future.
- Existing European statistics on causes of death provide a rich source now for studying and analysing factors which influence LE changes in MS, as the data quality and comparability has been improved recently and will further improve in the future.
- MS have always differed with respect to life expectancy and they still do. After 30 years of narrowed LE gaps, the inter-country variation recently started to increased again. This may initiate a growing interest into the reasons of mortality pattern differences.

## **HEALTH EXPECTANCIES**

Health expectancies (HE) have been developed as a tool for adding information on quality of life to the purely quantitative data used in life expectancy analysis. It was argued that the value of life expectancy data was limited, as it would not at all reflect the quality of life, i.e. whether a person spends his life in favourable or less favourable health conditions.

Health expectancy analysis applies life expectancy instruments to a more detailed data set. The added details refer to the health status of the population by age and gender classified with respect to health status categories. Although in theory both registers and population surveys can be used to obtain the health status information needed, the majority of data are currently taken from surveys.

Two different methodologies are used to calculate health expectancies:

- The first concept defined health expectancies as the specific life expectancy with a pre-defined health status level. All these specific life expectancies i.e. the disability-free LE (DFLE) together with the life expectancies for mild, moderate and severe disabilities add up to the total (classical) LE value.
- The second concept of health expectancies *adjusts* raw life expectancy by properly taking into account given health status limitations. Health expectancies are calculated as a weighed average of life years spent in different health statuses. Disability-adjusted life expectancy (DALE) for example summarises the years spent without disabilities and with mild, moderate and severe disabilities accordingly. The weights express in relative terms, how favourable the respective health status is judged as compared to complete health.

Health expectancies have been published for most Member States with respect to both concepts described above. The health status information used thereby refers to disabilities, to handicaps, and to specific diseases. "European" health expectancy data are increasingly becoming available, although both concepts and underlying data need to be improved further, before they can provide fully comparable data.

Most of the current health expectancies are still compiled based on health status information from non-harmonised national data sources, however. This situation substantially limits the inter-country comparability of results. With respect to this data comparability, the European Community Household Panel (ECHP) is the best data source currently available, although the data comparability in some areas is limited as well.



Diagram 3: European Population 1996 by age, gender and disability prevalence

Source: EUROSTAT New Cronos database.

Diagram 3 presents the results of the 1996 European Community Household Panel<sup>1</sup> on the European population by age, gender, and disability – characterised as having to live with no, with moderate, or with severe disabilities. Unfortunately, the ECHP does not provide disability data for persons up to 16 years.

Prevalence of both moderate and severe disabilities increases with age. At an age of 35 years, 90% men and women report to live without disabilities, at age 55, the percentage is still around 75%, while for men and women of 80 years and above it drops to below 50%. Diagram 3 indicates also, that in all age groups disabilities are more frequent with women than with men.

<sup>&</sup>lt;sup>1</sup> ECHP disability data refer to men and women of 16 years and above in all European countries. Swedish data were not available when the analysis was made. Missing German disability data for population of 70 years and above were replaced by the respective average prevalence rates in EU 15 without Germany and Sweden.

Diagram 4: European Health expectancies at Age 16 in 1996



Source: EUROSTAT New Cronos database, based on calculations made by Équipe Démographie et Santé – Montpellier – France (under contract of Eurostat).

In 1996, the total life expectancy for men and women at age 16 in Europe (except Sweden) was 58,8 and 65,1 years, respectively. For men, 47,1 years are estimated to be free of any disabilities (80,1% of further LE), whereas 7,3 and 4,4 years will be spent with moderate and severe disabilities (12,4% and 7,5% of further LE). Women can expect to spend 49,8 of the total 65,1 life year without any disabilities (76,5%), whereas 9,6 and 5,7 years will be characterised by moderate and severe disabilities (14,8% and 8,8%).

In general, female life expectancy without disabilities (DFLE) exceeds male DFLE in terms of absolute life years, but it does not in percent of further life expectancy. These findings are also backed by existing longitudinal data in Member States: DFLE in percent of life expectancy tends to go down, when life expectancy (and DFLE) is increasing. In cross-sectional data, this relation between DFLE and LE is less pronounced: Countries with high LE values often report high ratios for DFLE in % of LE and *vice versa* (as can be seen for Greece and Finland in diagram 4, respectively). It may be fair to conclude, therefore, that health expectancies can be expected to increase like life expectancies, but they will do so at lower pace.

The detailed results for the individual countries in diagram 4 show, that health expectancies vary more across countries than life expectancy. The percentage share of true health status differences in Member States in the overall observed variation is currently unknown. This limits the quality and usefulness of the available data and it indicated the importance of further efforts aiming at harmonised health status data.

## **Eurostat Activities Relating to Health Expectancy**

There are various current Eurostat activities aiming at providing better health expectancy data. In particular, Eurostat started to

- collect, compile and disseminate health-related data from national health surveys and from harmonised European surveys,
- improve the comparability of survey-based health data by among other things developing and implementing "harmonised instruments", and to
- actively support initiatives on using a unique concept for health expectancies in Europe.

#### Summary

The results presented can be summarised as follows:

- There is indication that health expectancies in Europe are increasing, but are doing so at slower pace than life expectancies. It is reasonable to assume that this process will continue in the next future.
- Current European statistics on prevalence of disabilities, diseases or other health limitations do not allow a precise calculation and compilation of European health expectancies. Eurostat has launched effort to harmonise health surveys in EU Member States, which will substantially improve both quality and comparability of regional HE data. With more and more harmonised survey instruments becoming available, substantial progress can be expected, if MS agree to implement these harmonised instruments their national health surveys.
- HE analysis is still prototype work, hampered by the simultaneous use of different instruments yielding different, even contradictory results. More methodological work is needed to add to the reliability and policy relevance of HE data.

## AGEING AND OCCUPATIONAL HEALTH

Eurostat activities in the area of health and safety at work primarily focus on occupational diseases and on work accidents. At first sight, these seem to be fairly irrelevant for the ageing population, given the current age structure of the labour force and the actual retirement age in Europe.

It has to be mentioned, however, that in the area of work accidents, age has a strong impact on occupational health in Europe: The risk of fatal work accidents substantially increases with age.

Diagram 5 describes the incidence and fatality of work accidents in Europe by age. To ease comparisons, the age-specific incidence of fatal and non-fatal work accidents are expressed in percent of the respective overall incidence rates. This rate is 3,4 per 100 000 persons in employment for fatal and 4 089,0 for non-fatal work accidents.

# Diagram 5: Standardised\* incidence rates of work accidents in Europe by age and severity in 1998: Age-specific incidence rates in percent of over-all incidence rates



Source: EUROSTAT New Cronos database.

\* As the likelihood of work accidents differs substantially across the economic sectors, the number of accidents cannot be directly compared across regions with different economic structures. Standardisation eliminates the influence of different economic structures by in all regions applying constant weights to the percentage share of each economic sector in the overall economy.

Diagram 5 shows clearly, that the risk of fatal work accidents steadily increases with age, while less severe accidents primarily endanger the age group 18–24 years. Fatal work accidents are a major subject of occupational health statistics. The policy relevance of this subject will increase even further, should plans for postponing retirement age be followed more closely.

## Eurostat Activities Relating to Ageing and Occupational Health

Eurostat will continue to collect routine data on occupational health. Furthermore, it will continue to improve quality and comparability of the existing data.

## Summary

Currently, occupational health does not directly link to the problems of ageing. This situation may change quickly, however, should the framework conditions of labour force participation and working age be reconsidered.

## HEALTH CARE AND AGEING

Over the last 30 years, health care has established itself as an important economic sector in all European economies. In some MS, health care nowadays provides up to 15% of all jobs and contributes more than 10% to GDP. Still, health care is primarily associated with Government, with regulated markets and administered prices in most countries. This may have fostered the long and heated political debates on various facets of health care ongoing everywhere in Europe in the last decades. Ageing and health care, however, was not among the most discussed topics until just recently.

Surprisingly little data is routinely made available on the determinants of health care demand and the resources needed to supply "adequate" services. Existing statistical data on health expenditures or on health care services provided typically do not offer links to the characteristics of the patients served or the diseases treated.

Existing scientific studies on ageing and health care can be classified into two different groups. A first set of studies focuses on the statistical relation between life expectancy and health expenditure dynamics.<sup>2</sup> They report both life expectancies and health expenditures to be growing in all developed countries, and based on cross-sectional data, they conclude health expenditures to be increasing with population age.

A second group of studies denies the direct link between health expenditures and to population age and states, that health expenditures – more precisely "lifetime health care costs" – are related to proximity to death rather than patient age.<sup>3</sup> Based on US data presented these studies estimate 50% of an individual's total health care costs to be incurred during the last 60 days of life, and 40% during the last month.

The results of both studies should be used with great care, but for different reasons. Currently available macrodata do not support methodologically sound comparisons across countries or over time, and the available individual longitudinal data may not be sufficiently representative for general conclusions.

In the future, the European health care data will improve substantially. MS have agreed to implement the new system of health care statistics based on the System of Health Accounts (SHA). This system will – for the first time ever – provide comparable health care statistics by using common borderline definitions and country-independent classifications. The new system is flexibly defined and thus allows further analytical dimensions to be added freely. The Eurostat project on the feasibility of routinely presenting health expenditures by age and gender may serve as an example – with promising first results.

Diagram 6 provides a preview on the results to be expected. The graph – based on the data of the German Public Sickness Funds<sup>4</sup> – shows how the total person-attributable health expenditures in Germany 2000 relate to

<sup>&</sup>lt;sup>2</sup> Jacobzone, S.; Chambois, M.; Robine, J-M. [2000]: "Is the health of older persons in the OECD countries improving fast enough to compensate for population ageing?" OECD Economic Studies 30: 149-190.

<sup>&</sup>lt;sup>3</sup> Lubitz, J.D.; Beebe, J.; Baker, C. [1995]: Longevity and Medicare Expenditures. New England Journal of Medicine 332: 1092-1096.

<sup>&</sup>lt;sup>4</sup> Data refer to expenditures of Public Sickness Fund (PSF). PSF expenditures represent 60% of total person-attributable health expenditures; PSF members represent 88% of the German Population. Expenditures for nursing care included refer to "health-related nursing". Expenditures for general nursing care – ambulatory nursing and nursing home care – are not included.

age and gender. In such an age profile, age-specific health expenditures are presented in percent of the overall averages, i.e. the total *per capita* expenditures for men and women. Men and women over 65 and under 2 years of age experience above-average expenditures, and maternity-related expenditures explain the heap in the age-bracket 25–35.



Diagram 6: Per capita health expenditure profiles by age and gender in Germany 2000

Source: Bundesversicherungsamt and own calculations.

In-depth analysis is supported if age profiles are broken down further by functions of health care. Diagram 7 present data for ambulatory medical and dental care (labelled "physicians" and "dentists"), for stationary care ("hospitals") and for pharmaceuticals ("pharmacies"). With respect to these four functional categories, there are no gender-specific differences, which would require separate profiles for men and women.

The category "other providers", however, which encompasses paramedical care (e.g. physiotherapy), individual prevention, maternity care, health care goods (e.g. wheelchairs), and health-related ambulatory nursing, does significantly vary with gender, and thus does require separate graphs to support meaningful data presentation. The graphs referring on "total health expenditures" are for comparison purposes only; they coincide with the ones resented in diagram 6.

Diagram 7 shows how the individual health expenditure categories vary with age. Some peak at early ages (dental care at age 14, hospital care at age 0), the others increase throughout with age, but do so with different intensity. Home nursing, health care goods, and ambulatory services of non-physicians are the main reasons for the high "other" expenditures at age 90 (800% for men and 750% for women).



Diagram 7: Per capita health expenditure profiles by age and health care categories in Germany 2000

Source: Bundesversicherungsamt and own calculations.

## Eurostat Activities Relating to Health Care and Ageing

Eurostat, together with Member States and OECD, completely revised the system of health care statistics. Based on the Systems of Health Accounts (SHA) concept, health statistics are now defined in a consistent and nonetheless flexible way, which allow meaningful comparisons and more in-depth analysis. In the future Eurostat will

- collect, compile and disseminate health expenditure data by health care functions (e.g. curative care, rehabilitation, nursing care, ancillary services supporting activities, pharmaceuticals and other health goods etc.), by providers of care and by financing units,
- collect data on health care manpower by profession (physicians, nurses, other health professionals, other occupations, etc.), qualification, by providers of care and – for part of the personnel – by age and gender,
- collect data on selected health care health care functions (e.g. hospital cases by age, gender and main diagnosis) by provider of care, and
- explore the feasibility of routinely disseminating health expenditure data by age and gender of the patient.

#### **Summary**

The results presented can be summarised as follows:

• There is clear indication that health expenditures are – in one way or the other – related to age and gender of the patients treated. The exact relation will only be known, if more and better data than the current ones become available.

- The general demand for high-quality data on health expenditures by age and gender is likely to increase in all countries, because the demographic situation will put new challenges on the national health care systems.
- The new health care statistics, based on the System of Health Accounts (SHA), will provide more and better health care data in Europe and, for the first time, will allow meaningful inter-country comparisons and support more sophisticated analysis.

## AGEING AND THE DYNAMICS OF POPULATION CHANGE

All above results for the implications of ageing societies on European health statistics may present themselves in a more or less different perspective, if they are adjusted for the influences of the *dynamics of population change*.

Active ageing is primarily associated with men and women in Europe expecting to live longer and being likely to enjoy more years free of diseases, disabilities, or handicaps. Increased life expectancy may put additional burden on the health care system, because more people are supposed to reach those age groups, which are usually associated with multi-morbidity and increased needs of medical treatment.

The *dynamics of population change* in Europe are best described as a combination of accelerated ageing, low fertility and increased individualisation. This mixture results in fertility rates below replacement level, in people of all ages living in more and smaller households, in the number of young labour market entrants dropping and, subsequently, the overall size of the labour force falling, in the number of pensioners rising, and in the number of very old and the total of frail and dependent people growing.

Diagram 8 presents the development of the European population in the last 30 and the projected development in the next 15 years, the latter based on the results of Eurostat "low scenario" forecast variant. It is fair to conclude from its contents, that Europe is subject of a dramatic and historically unparalleled change of population structure and will continue to be in the next decades.

In 1970, the most densely populated age group was 5-9 years, in 2015 it will be 45-49 years. In 1970, there were more than 11 very young persons (0 to 4 years) on each person 85 years and above, in 2015 it will only be 2 with the clear tendency to drop further.

In the next 15 years, the number of persons older than 80 years is expected to increase by 25%, whereas the number of persons younger than 15 is projected drop by more than 18%. The old age dependency ratio – the ration of people in retirement age (60+ years) to those in working age (20–59 years) – will rise to 45%. In 2000, there were 6,2 million Europeans older than 80 years reported to live in 1-person-households, in 2015 this number is projected at 8,7 million – 49% of all persons in this age and an increase of 41%.



Diagram 8: Population in European Member States by age and gender in 1970, 1985, 2000, and 2015

Source: EUROSTAT New Cronos database. Data for 2015 are taken from the 1999 EUROSTAT projections for the "low scenario" case.<sup>5</sup>

The effective population structure in 2015 may deviate to some degree from the one presented, depending on the accuracy of the assumptions made. Higher life expectancy gains will further add to the number of old and very old, while increased fertility rates will raise the number of newborn. The effects of immigration will solely depend on the number and age structure of the immigrants. The main characteristics will remain unchanged, however, and so will the challenges emerging thereof.

How will these population dynamics affect the possibilities of healthy ageing? How does the structural change influence the health status and the health care needs of the future population? What information is needed to match the challenges to come? How well is European health statistics prepared?

The dynamics of population change are first and foremost expected to affect the health care system: Demand for health care services will increase, and the supply of services will become more difficult and more expensive.

- The number of persons needing professional health services is extremely likely to increase, because
  - longevity will allow more people to reach age groups, which are known for high morbidity and for intensive treatment needs,
  - longevity will make people spend more years in age groups, which are known for high morbidity and for intensive treatment needs,
  - multi-morbidity prevailing in upper age groups will influence the frequency of per capita treatment needs, and
  - with people increasingly living on their own in single households, family help in assisting frail elderly with activities of daily living will have to be increasingly substituted by professional services.

<sup>&</sup>lt;sup>5</sup> For 2000–2015, the "low scenario" case assumes limited changes in life expectancy (+0,9 years), roughly constant total fertility rates ((1,45) and an annual average net migration of 350 000 people.

- Health care is a labour-intensive economic sector, and labour-saving technical progress is unlikely to occur. Additional demand for health care services will primarily raise the need for additional health care manpower. In the future, it may become more and more difficult to satisfy this demand on the labour market, because
  - due to population changes, the labour market will shrink, and manpower will become an increasingly scarce resource, for which all economic sectors compete,
  - the health care sector needs highly qualified labour,
  - the jobs in health care are known as physically and emotionally challenging, and
  - wages and salaries in the health care sector are often below national average.
- Health expenditures are likely to increase independent of the factors mentioned already, because
  - technological progress will make available new (and more expensive) treatment techniques which can be expected to outperform existing techniques because of being associated with smaller risks, less pain, quicker recovery or likewise,
  - scarce manpower resources will raise the wage rates and thus may increase the health care production costs, and
  - new or additional health risks from environment and life style may add to treatment needs.

So far, none of the consequences of population dynamics on health mentioned above has already led to establishing new subjects of statistical monitoring or to starting specific statistical development work. The recent efforts undertaken to develop and implement the new European system of health statistics have, however, taken into close consideration some, if not all of the topics mentioned.

## **Topics Covered by European Health Statistics**

The following variables are covered by routine data collections, which Eurostat performs together with Member States in the framework of European health statistics, and the type of data sources makes typically used thereby are indicated in brackets.

- Population and household structure; main demographic, social and economic indicators (registers, comprehensive data compilation systems);
- General and specific health status (health interview surveys, health examination surveys, sentinels);
- Health risks environment and life style (health surveys, environmental monitoring systems);
- Incidence and prevalence of diseases (registers, administrative data, sentinels, provider surveys);
- Health care services by type, provider, patient or disease treated (integrated multi-source compilation systems);
- Health care resources (registers, administrative data, integrated multi-source data compilation systems),
- Health expenditures and financing (integrated multi-source data compilation systems).

In recent years, Eurostat and MS have invested substantial resources into improving quality and comparability of European health statistics. The new system, which is currently to be implemented, can be characterised as consistent, flexible and user-friendly. From the very beginning, all participants agreed to constantly adapt the system to newly emerging information needs. "Health of the ageing population" may well be a subject defining such newly emerging information needs.

The seven categorical areas of European health statistics – after being fully implemented in all European MS – may be completely able to provide all "ageing"-related information needed. It cannot be excluded, on the other hand, that there will be the need to add new analytical dimensions or new statistical variables to existing data collections or even to introduce completely new statistical data sets.

European tas the producer of statistical information for the European Commission, the other EU institutions, and the Member States needs the input from all the different user groups – health politicians, scientists, health care providers, patients and patients' organisations and the general public – and from research to evaluate whether European health statistics will be able to meet the future challenges or where adjustments have to be made in order to do so.

#### Key Publications on More Detailed Eurostat Health and Health-Related Data

• "Key Data on Health 2000", 1999 edition. Eurostat. 2002 edition in preparation.

- "The Social Situation of The European Union 2001", 2001 edition. Eurostat. 2002 edition in preparation.
- "Key Figurers on Health Pocketbook", 1999 edition (out of print). 2002 edition in preparation.
- "European Social Statistics Demography", 2001 Edition. 2002 edition in preparation.
- "Atlas on Mortality Statistics", 2002. Eurostat. In preparation.

"Health" refers to physical, mental and social well being as expressed in the WHO definition of health. Thus, in an active ageing framework, policies and programmes that promote mental health and social connections are as important as those that improve physical health status.

> Active Ageing: A Policy Framework WHO - Madrid, Spain, April 2002.

## NEW ELDERLY, NEW DATA NEEDS: THE EMERGENCIES OF STATISTICAL DATA ON HEALTHY AGING.

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## The elderly: a complex, ever-changing population

Nowadays, discussing topics related to the elderly implies facing the problems and capabilities of a mixed and complex population, which is too often defined with reference to age only.

There are two mistakes when different individuals, with different social, biological and professional stories are classified under the same heading: being older than an established age. There is a methodological mistake, because differences among people in this age class are not acknowledged, and a political mistake because efforts and resources are not allocated to solve the problems and fulfil the needs of that share of population which needs support and help (Egidi, 1999)<sup>1</sup>.

Another mistake is related to the immobility of elderly people affecting our perception of the deep changes occurring in this group of population.

From a demographic point of view the age structure of the elderly is changing. In Italy, during the last century low birth rates first and the decrease of mortality rates later determined the ageing of the population. In the first

<sup>&</sup>lt;sup>1</sup> Egidi V. (1999) "Health status of older people" presented to ECE seminar on ageing, Sion, December 13<sup>th</sup> 1999.

decades of this century owing to the reduction of numerousness of generations we can expect that the yearly increase rate of elderly will decrease. But at the same time the percentage of elderly out of the total population will continue to rise (Table 1).

From an epidemiological and social point of view elderly are often considered synonymous of disability and no-independence. This commonplace too is wrong if we consider that large differences can be found in the health status of the elderly, contrasting the myth which regards old age an illness in itself.

For instance considering general measures like life expectancy and disability free life expectancy, results are comforting since both indicators are rising (Table 2). In Italy in a period of five years life expectancy at 65 increased of about one year in both sexes. In the same period life expectancy at 75 increased less in absolute terms but meaningfully in terms of relative variation.

Looking at disability free life expectancy data are even more interesting, showing a higher increase with respect to life expectancy in all cases, above all when we consider older ages.

Then it seems that elderly can expect to live longer, with a higher proportion of years lived without disabilities, even at older ages.

Year	%Pop.65+	%Pop.80+
2000	18.0	3.9
2010	20.4	5.8
2020	23.2	7.1
2050	32.3	11.9

Table 1 – Percentage of population aged 65+ and 80+. Italy. Years 2000, 2010, 2020, 2050

Table 2 – Life expectancy and disability free life expectancy at 65 and 75 years old by gender. Italy. Years 1994, 1999

	Males			Fen		
	1994	1999	%Var	1994	1999	%Var
e65	15.4	16.3	5.8	19.2	20.3	5.7
DFLE65	12.7	13.8	8.7	14.2	15.1	6.3
e75	9.2	9.9	7.6	11.5	12.4	7.8
DFLE75	6.6	7.4	12.1	6.9	7.7	11.6

These first remarks lead us to reconsider the current concept of old age, as it is anchored to age registry. Age can no longer effectively represent the functional age of individuals and their actual capacity to participate actively in social life.

Using "age" to classify people means to assume that time has the same effects on every individual, regardless of their experiences, background and life.

This approach has been questioned by common sense and recent researches, since there are large social, biological and professional differences among individuals.

Several analysis began to explore the issue of *equivalent ages*, that is different ages that may acquire the same biological, physiological, cultural and social meaning for different individuals, in different contexts and with different life-stories.

In 1975, Ryder suggested that the threshold of old age should be defined as ten years of remaining life expectancy. This is not an arbitrary suggestion if we think that in Italy at the beginning of the last century, when life expectancy at birth was 42 years for men and 43 years for women, a ten year remaining life expectancy meant age 67 for men and women, which was a reasonable threshold for old age (Figure 1). In the mid-centu-

ry the threshold raised at 70 years old for men and 71 for women and in 2000 at 75 for men and 79 for women. Thus, today men would be considered elderly 8 years later and women 12 years later than at the beginning of the last century. In 2020, if the current trend of life expectancy continues, the threshold of old age would be 2 years later for men (77) and 1 years later for women (80).





The same approach can be used to calculate similar thresholds in several ECE countries. In EU countries, ten years of remaining life expectancy is 73-74 for men and 77-78 for women. EU countries have similar levels as North America and Norway while in Central and Eastern transition countries, there is a less positive scenario and ten years of remaining life expectancy is still 70-72 for men and 74-75 for women.

However, even this indicator, as age, is an approximation because it is based on quantitative data (the years to be lived). Qualitative changes should be considered as well, to get information outlining the relation between health status and the other aspects of daily life, the actual living conditions of elderly, and to assess the economic and social effects of population ageing.

For instance considering the results of an Italian social survey carried out on 1983 and 1998 about care-givers and people receiving help from persons living outside their own household, we understand how elderly are not anymore only a group of population needing help, but they play an active role in the society as care-givers (Table 3).

	Males		Females	
Age	1983	1998	1983	1998
60-64	20.4	25.0	28.4	32.4
65-74	18.8	18.9	20.9	23.1
75+	9.4	13.2	9.3	10.9
All	18.6	20.3	22.8	24.5

Table 3 – Percentage of care-givers by gender and age. Italy. Years 1983, 1998

In a period of fifteen years the percentage of households with at least one member aged 65 and over receiving help decreased from 30.7% to 16%. At the same time, the percentage of care-givers raised meaningfully among elderly and above all among people aged 75 and over.

## Health information in Italy

The current state of statistical information on health and aging in Italy can be deduced by leafing through the "National Statistical Programme", which fully shows the relevant sources. What strikes one most is the high number of "producers": besides ISTAT, many ministries (starting with the Ministry of Health), bodies and regions produce information on health<sup>2</sup>. The various corresponding information flows, sometimes sub-products of administrative activities, were set up in different moments, with varying philosophies and on different technological platforms<sup>3</sup>.

Today, the greatest commitment is towards making the sources talk to each other and to have them interact with the targets and resources. The most consistent experience from this point of view, concerning language, classification, methods and structures, is that of the Ministry of Health with its health information system, conceived as a common vision and set up by a plurality of findings aimed at integration. This system has been continuously compiled since the mid nineteen-eighties.

ISTAT too has promoted and increased the information about health and its social determining factors, starting mainly from the eighties, placing them alongside traditional epidemiological findings<sup>4</sup>, which, in the meantime, have been significantly renewed.

In those years ISTAT has carried out a common point of view and a degree of integration concerning the social survey system on households, planned harmoniously in order to provide information on the population and on society. The system set-up is a simple one: a yearly survey, which forms a basic information picture on the quality of life and on the daily behaviour of our citizens, is periodically supplemented with surveys in greater depth.

One of the most important is the Health Interview Survey (HIS) carried out every five years.

The latest HIS (1999-2000), for the first time since it was set up, has been carried out in collaboration with the Ministry of Health and with the Regional administrations: a clear sign that is worth thinking about considering that the Italian health system has invested in a non-traditional source in order to have the necessary data for planning and managing at a government, mostly regional, level.

The sample was large enough to allow estimations on health and lifestyles on a sub-regional level (60,000 households and 140,000 persons). For the first time, some aspects of well-being (SF12), of social autonomy (IADL - instrumental activities of daily living – type questions) and of use of some health services (homecare, day-hospital etcetera) were studied in more depth. These aspects play a strategic role in interpreting the social-health conditions of the elderly. This was a considerable task which cost millions of Euros but it gave results for a multitude of users.

However, this is still not enough or perhaps is no longer enough.

From the law no. 833/1978 (Italian health reform) to date, the main problem of health data has been the information content. Other sources have been added to the traditional ones (demographic and epidemiological). These new sources allow analysis of how the health system functions and of the social care services provided and expand on information about lifestyles and social conditions among the populations, contributing to redi-

<sup>&</sup>lt;sup>2</sup> In the National Statistical Programme planned for the three-year period 2002-2004, the following institutions were indicated for the health matters: IS-TAT, Ministry of Health, Ministry of Home Affairs, Ministry of Defence, Ministry of Justice, Ministry of Economy, Ministry of Industry, National Health Board (ISS), INAIL, INPS, and some regions. If information were extended to a social-health context, the Department of Social Issues would also have to be taken into consideration.

<sup>&</sup>lt;sup>3</sup> To give an example, it can be recalled that the National Health Programme 1998-2000 paid great attention to the subject of inequalities in health, but the main source on hospital morbidity (hospital discharges) didn't include the level of education among the socio-demographic characteristics reported, which, it has now been proved, is one of the most important explanatory variables in the issue of health inequalities.

<sup>&</sup>lt;sup>4</sup> Traditional does not mean static or immobile. The "oldest" of these sources, the one regarding mortality, that goes back to the 19<sup>th</sup> century, has undergone a radical modernisation in the last two years, changing from manual coding of causes of death to automatic coding. This is a historical change that determines better comparability, higher quality, a drastic reduction in processing times and an exceptional increase in the information heritage. For instance for the first time, data on the concomitant cause of death will be available and information on the pathological history will also be available.

recting attention from the illness to health. Social conditions on the edge of health services, that dwell in that still undefined area between cure and care have taken on a strategic central importance in this context. It is yet an other reason for moving towards an integrated information approach: health cannot be understood if we do not analyse and understand the social networks that exist around the elderly, in particular the elderly who are no longer autonomous.

So, to fully understand the quality of life and "healthy ageing" and to answer the questions coming from the health and social care services we have to face some new information emergencies.

## The new information emergencies

#### About methods

The first problem to face is a problem of methods.

Surveys that are usually carried out today in almost all countries are cross-sectional surveys on health or disability.

Can this type of information help us to understand the changes currently in progress?

We know that some of the qualifying changes in living conditions of the elderly populations do not arise solely from the change in the social environment but also from the generation change. The new elderly generation who will come onto the scene will have little in common with the current or past generations. The next generations will be with a higher level of education, different working histories and with vastly differing cultural attitudes from those of their parents.

Will this generation of elderly people have the same needs as the generations that went before them?

We believe that many things will have changed in the way that one reaches and then lives through old age. Current sources will not be sufficient for documenting this type of change. We will need more and more longitudinal data that allow us to split the period effect from the cohort effect.

Alongside the need for instruments for carrying out longitudinal surveys, there is also a need for health examination surveys. On one hand these can provide an accurate framework of some important pathologies that characterise the epidemiological evolution of the nation (especially of psychiatric pathologies in senility and in mental illness); on the other hand they constitute an excellent tool for understanding the level of awareness of the population about the presence of some important health problems.

In reality, problems such as those deriving from high blood pressure or from diabetes that have no visible symptoms up to a certain health-affecting threshold, can only be faced with the collaboration of the patients and their general practitioners. As many people have stated, about 60% of the elderly are affected by high blood pressure, but only 30% knows about it; of this 30%, only half takes measures to cure the illness, and only half of them again probably use efficient therapies. The conclusion is that 7 elderly people out of 100 take serious care of high blood pressure problems, while 60% should do so. This is only an example, but it is necessary to show that there is a need to understand the real "knots" in the chain of health care and where interventions must be made. The health service needs to have detailed information, not just for organising awareness and prevention campaigns but also to be able to give answers to the key points of the system, for example, in general family healthcare.

#### About contents

Another information emergency is related to contents.

Many information on health status and health determinants generally come from subjective data like those obtained by health interview surveys.

Even if it has been demonstrated the strong relationship between subjective and objective health status, speaking of active ageing and of elderly with a better health status with respect to the past, it is becoming of greatest importance to know more about the actual health conditions of elderly.

In this context General Practitioners may play a very important role: they are the reference doctor for most elderly (in Italy more than 90% of elderly consults the GP in case of health problems), in many cases they follow patients for a long time, they are pivot elements in the health system being the contact point between the demand and the supply.

To implement health information systems by GP's gives the opportunity to have most elderly covered, to set up longitudinal information and to know more both on diseases but also on the use of health services.

Again about contents, one of the areas to be investigated in the near future is above all the relationship between the types of assistance and the elderly, especially the disabled elderly.

In light of the on-going de-institutionalisation policies in almost all countries, the careful analysis of living and health conditions and the services set-up can no longer ignore the institutionalised population. This sub-population, in fact, has characteristics and needs that are completely different from the populations living within a family.

#### About territory

From a political and administrative point of view, today we are witnessing a progressive move of the power of intervention from a national level to a regional and sub-regional level. In Italy, many intervention areas are now, planned, managed and monitored locally. Both the health system and, more recently, the social assistance system are now under the responsibility of the regional administrations.

Consequently, the third information emergency, which is certainly one of the most urgent, is that of having data available that is nearer to the level of territorial government.

This emergency does not only become a problem of availability of data on a local level but also a problem of accessibility.

In many cases, it is not only necessary to collect new data, but also to set up sharing systems for the already existing data so that all the new subjects involved (institutions and local authorities) can access the existing information easily. This also gives rise, indirectly, to a matter of privacy. As we proceed to lower levels, the reduced size of the reference territory (boroughs, local health authorities) bring about growing risks of the violation of privacy.

#### About information systems

The last but not the least information emergency regards the implementation of information systems, that means to move the information paradigms from a view by problems to a view by subjects and then from a view by flows to an integrated view.

We have seen that current policies have been much inspired by integration, in all senses of the word, of elderly people. Such an explicit political formulation calls for a stringent need to set up "integrated information systems" and no longer single databases.

Why? Because it is not from the analysis of single dimensions of health conditions, or from cultural participation or from the receipt of monetary benefits and other matters concerning elderly people's lives that we will have the possibility to judge the extent to which they are integrated or socially supported by our countries, but from an overall vision. This means that a framework model must be proposed on which to base the design of an information system. No suitable information exists without a suitable planning of the implicated regulations, relationships and concepts.

## Conclusions

In a changing world the concepts and measures of aging are changing as well.

During his speech given on World Health Day in 1999, Kofi Annan stated that as good health is necessary to remain active, it is also necessary to keep healthy to stay active.

As a consequence we need new statistical data systems that at the same time consider all the different aspects of social and health conditions and allow to monitor in time the quantitative and qualitative progress of the aging process.

The availability of systems of this type must serve also to fight the tendency to promote actions (not only in the area of health, but also in the area of social services since, from a practical point of view, these fields often interact quite intensely) in the absence of a wider outlook and prospects.

In addition, these systems are also a channel of "democratic" information available to all, that allow the community as well as experts to grasp a sense of the basic dynamics and issues, that support public and private decision-makers as well as private citizens.

## THE ENGLISH LONGITUDINAL STUDY OF AGEING<sup>1</sup>

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The English Longitudinal Study of Ageing (ELSA) is a major new study of people aged 50 and over living in private accommodation in England. It will collect data about a range of topics including health, economics and social networks. The issued sample consists of about 16,000 individuals living in 9,000 households and interviews are planned at two-yearly intervals. As far as possible, the data will be comparable to that collected in other studies, particularly the Health and Retirement Study in the United States, and the planned Survey of Health and Retirement in Europe. The study will make it possible to carry out a detailed examination of ageing from a multi-disciplinary perspective and to explore how relationships, for example between health and economics, change over time. It will also make it possible to study the extent to which observed patterns are constant between countries or are system specific. It will require high methodological and scientific targets and rigorous implementation. ELSA is being developed and carried out jointly by the Department of Epidemiology and Public Health at University College London, the Institute of Fiscal Studies and the National Centre for Social Research.

#### Introduction

The potential effects of population ageing on public policy are well known. Changing population age structures and dependency ratios will clearly have an impact on the provision of state pensions and health and social services. This has been the subject of wide debate. On occassion, however, this has involved representing ageing as an undifferentiated experience of increasing physical and financial dependency that starts at the point that the individual relinquishes work and parenting roles. For several reasons, this is an oversimplification.

First, it is no longer adequate to equate old age with either a specific biological age or a statutory social or economic transition such as eligibility for a state pension. For example, there are now large numbers of people choosing to retire at earlier ages and there can also be a phasing of redundancy into retirement. Though this trend may be changing once again, this has lessened the impact of what was once a phenomenon of mass retirement at statutory ages.

In addition, we should not understimate the diversity of economic circumstances of older people or their importance to the economy. Certainly, many older people experience poverty and social exclusion in old age. However, it is also true that people in Britain who are aged 50 and over now account for half of the nation's spending and three-quarters of its wealth.

Similarly, it is an oversimplification to directly equate increasing life expectancy with increasing physical dependency. The association between morbidity and advancing age depends on both the rate at which the onset

<sup>&</sup>lt;sup>1</sup> ELSA is conducted jointly by the Institute for Fiscal Studies, the Department of Epidemiology and Public Health at University College London and the National Centre for Social Research. The principal investigator is Professor Sir Michael Marmot. We are grateful to the National Institute on Aging and to the UK government departments who support this research.

<sup>&</sup>lt;sup>2</sup> Any queries should be directed to Carli Lessof at the National Centre for Social Research, Tel +44 20 7549 9513, c.lessof@natcen.ac.uk. More information about the English Longitudinal Study of Ageing can be found at the study website at <a href="http://www.ifs.org.uk/elsa/index.shtml">http://www.ifs.org.uk/elsa/index.shtml</a>

of disabling conditions increase and the rate of survival with these conditions. While the debate about the compression of morbidity is controversial, the evidence suggests that there is a reduction of disability over time.

Taken together, these factors have led to the recognition that ageing is far from uniform. While some older people are experiencing long periods of economic and physical decline, others could be living in what has been called a 'third age', a period of self-fulfilment, or could be experiencing 'successful' or 'active' ageing.

## Overview of the English Longitudinal Study of Ageing

For all these reasons, a good understanding of the effects of ageing is needed to ensure that policy in many areas is developed appropriately. Despite this, the high quality data that will allow analysts to explore key questions in depth is relatively scarce. The English Longitudinal Study of Ageing (to be referred to as ELSA in this paper) has been designed to fill this gap and to allow for a comparative analysis of the dynamics of ageing over time.

The study involves a longitudinal survey of a representative sample of of individuals aged 50 and over who are living in private accommodation. The primary objective of the survey is to collect data on health, economics and social networks. This will provide a crucial resource for exploring issues relating to ageing that will be important both for scientific understanding and for the development of policy.

The key research questions that ELSA will allow us to explore include:

- Health trajectories, disability, healthy life expectancy and compression of morbidity;
- The relationship between economic position and health including the social, economic and psychosocial determinants of health and inequalities in health;
- The determinants of economic position in older age;
- The timing of retirement;
- Post-retirement labour market activity;
- Social networks, support and participation;
- Household structure and the transfer of assets.

Clearly, health issues are one important part of the overall study but to appreciate the value of ELSA as a tool for examining the health dimensions of active ageing it is important to first understand the study as a whole. In the following sections we set out the key characteristics of the study and its general coverage before describing the coverage of its specific health sections. We then look at the key measurement challenges that ELSA has faced, focussing particularly on health issues once again.

## Key characteristics of the English Longitudinal Study of Ageing

There are five key features of ELSA, each of which is discussed in turn here. In brief, ELSA:

- gathers micro-level data about a large sample of older people within a representative sample of households using personal interviews,
- is multi-disciplinary,
- has a longitudinal panel design,
- is designed to provide data that will be comparable to other national and cross-national studies, and
- is scientifically driven and policy relevant.

## Micro-level data

ELSA gathers micro-level data about a large, representative sample using interviews carried out face-to-face<sup>3</sup>. The sample has been selected from two separate years of the HSE (1998 and 2001) to provide sufficient sample size<sup>4</sup>. The issued sample consists of around 16,000 individuals living in about 9,000 households. (About 66

<sup>&</sup>lt;sup>3</sup> ELSA involves a Computer Assisted Personal Interview which lasts, on average, 70 minutes plus a 10 minute self-completion questionnaire.

<sup>&</sup>lt;sup>4</sup> These years were selected because they were the latest studies available in which the whole sample was potentially eligible (in intervening years the HSE sample was split to allow for sub-populations to be investigated fully).

per cent of the issued sample of individuals are part of a couple.) Our estimates of mortality and response rates suggest that we will conduct in the region of 11,000 interviews with these informants at Wave One of ELSA data collection, and around 10,000 at Wave Two. This will be supplemented by interviews with partners who are not defined as core sample members, either because they appeared in the HSE but were aged under-50, or because they had joined the household since that time. Where appropriate, proxy interviews will be carried out with key informants.

The great value of micro-level data is that it allows us to collect detailed information that cannot be obtained from other sources and allows us to examine associations and causal pathways in a way that is impossible using aggregate level statistics. ELSA collects detailed information about individuals (and their partners) within the household. This will allow us to examine how couples and households make decisions and the factors that impact on them.

## Multi-disciplinary

A key feature of ELSA is that it is multi-disciplinary. The survey covers

- · household and individual demographics
- physical, mental and psychosocial health
- cognitive function
- · economic circumstances including work and pensions, income and assets and housing, and
- social participation and social support.

During the ELSA interview, respondents are also asked to give their consent for the research team to gather individual level data about them from various health and economic administrative sources. This will add to and subsequently update the data that is already available.

This broad coverage means that the study offers significant opportunities for research within a number of single disciplines. Though separate, these analyses should benefit from the framework provided by the larger study, which means that different conceptions of ageing and different approaches to its study have, to some extent, been harmonised. Of course, the multi-disciplinary coverage will also allow us to examine the relationship between different aspects of people's lives and to see the way in which they change and interact over time. For example, it should be possible to see how reductions in health or cognitive function affect an individual's ability to lead active lives.

#### Longitudinal panel design

A further key feature of ELSA is that it is longitudinal. We plan to interview our sample of respondents approximately every two years. The first wave of face to face interviewing will be completed in 2002 and we hope to report on early findings in September 2003. The second wave of data collection will take place in 2004 and will involve both a personal interview and a nurse visit. In time, we hope to introduce fresh samples of the youngest age groups into the survey.

Building a longitudinal design is a major undertaking, but it is essential so that we can see how people's circumstances change over time and so that we can begin to unravel the dynamics of ageing. For example, while we know that socioeconomic position before retirement will influence health and economic position in later life, it is only possible to untangle the relationships between these and other factors if we observe individuals repeatedly. ELSA will also allow us to investigate issues emerging from other longitudinal studies which throw light on the ageing process, such as the 1946 birth cohort and Whitehall II study. The rationale for developing the study as a panel is that by introducing fresh cohorts at the youngest ages we will be able to look at the behaviour of successive cohorts as they age. This will allow us to separate age, cohort and period effects.

#### Comparative

A strong motivating factor in the development of ELSA has been the desire to collect data that can be compared with the Health and Retirement Study in the United States. In addition, the development of SHARE (the Survey of Health and Retirement in Europe) offers the possibility of future comparison to survey data collected in a number of other European countries. Cross-national comparisons of this type are valuable insofar as they expand the variation of outcomes, individual resources and institutional systems that are being investigated. It becomes possible to evaluate what common outcomes and effects emerge despite differences in systems. The corrolary is that these comparisons also offer extended possibilities for the evaluation of policy reforms.

The issue of inequalities in health provides a good example. A starting hypothesis for the observation of social inequalities in health in Britain might be that it is somehow related to the class system. A starting hypothesis in the US might be that it is related to inequalities in access to medical care. The finding of a similar social gradient in health in countries where the history of social stratification differs markedly and where one has a national health service free at the point of use, and the other does not, provides greater insight into likely causes than could a study in one country alone. Comparisons between Britain, the US and Europe offers extensive possibilities for increased variation in individual resources and institutional systems, with wide difference in health care systems, retirement provision and retirement incentives.

#### Scientifcally driven and policy relevant

Over time, ELSA will provide a wealth of data that can be examined in relation to many different policy areas. We have been careful, however, to avoid including questions that have a solely short-term focus on an immediate policy question. Instead, ELSA is driven by a scientific agenda and is being developed around a set of long-term research and policy questions.

## The Study Sample

The ELSA sample has been drawn from the Health Survey for England (HSE). This is an annual cross-sectional household survey that collects a wide range of health data and biometric measures through a personal interview and nurse visit.<sup>5</sup>

The main disadvantage of using a completed survey as a sampling frame is the possible loss of representativeness due to a combination of non-response in the original study and attrition between that survey and the baseline interview<sup>6</sup>. That said, the HSE also has major advantages as a sampling frame, which make it too valuable to ignore. For example:

- it provides a sampling frame from which we can draw a representative sample of households containing older people at relatively low cost
- future rounds of the HSE may be used to boost particular sub-populations of interest, and to 'refresh' the sample as it ages, and
- eligible individuals will have (on the whole) participated in a previous survey so are expected to be more likely to take part in this new study.

Most importantly, however, the HSE provides extensive data that has already been collected about respondents' health and their socio-demographic, employment and housing circumstances. Even before the first ELSA interview, this provides us with a set of pre-baseline health measures including:

- General health
- Use of health services
- MRC respiratory questionnaire, chest pain, CVD
- Physical activity
- Eating habits, smoking, drinking
- Height and weight
- Waist and hip, demi-span (during nurse visit)
- Parental history

<sup>&</sup>lt;sup>5</sup> The HSE is conducted jointly by the Department of Epidemiology and Public Health at University College London and the National Centre for Social Research, on behalf of the Department of Health.

<sup>&</sup>lt;sup>6</sup> However, data is available at both stages to help us understand non-response

#### • GHQ12

- Blood pressure and blood sample (during nurse visit)
- Prescribed drugs; vitamins; nicotine replacements (during nurse visit)

## General coverage of the ELSA questionnaire

As mentioned earlier, ELSA is a multi-disciplinary study. Although questions about each subject area are limited in number, their value is enormously increased by the availability data from other topic areas. Here, we set out the broad coverage of the study and in the next section identify the content of those sections specifically related to health.

## Household and indiivdual demographics

At the household level, the survey covers basic demographics such as sex, age and relationships. We include individuals who have entered the household since the HSE interview and if anyone has left the household since that time, we ask whether they have died or moved away<sup>7</sup>. The interview also collects an inventory of children living outside the household to get a fuller picture of family networks. Each respondent is also asked their marital status and information about any siblings, grandchildren and parents (including parents' age or parental age and cause of death). In addition, questions are included about family and economic circumstances during childhood, ethnic origin and education.

## Work and pensions

The initial ELSA interview collects data from each individual about their current employment status, hours and pay, and job characteristics. We attempt to gather data about all activities, for example where an individual is combining part-time work and voluntary activity. The questionnaire also gathers detailed information about current and past pension contributions and retirement experiences.

#### Income and assets

The interview collects information from each financial unit about the last twele month period. It covers various components of wealth (both financial and real assets), household income (including earnings, pensions, other annuity income, benefits, transfers and income from wealth) and debt. In addition, the module collects a summary measure of the income and assets held by other household members.

#### Housing

The interview collects information from one repsondent in each household. Data is gathered about house characteristics and quality, tenure and housing related benefits. For those who own or are buying their home there are questions about house purchase price and house value aswell as details about mortgages and equity release. For others, it collects other relevant information such as rent. All households are also asked about the ownership of durable goods and cars and about expenditure on food.

#### Expectations

We ask a number of questions about peoples' expectations for the future to help us explain their current behaviour (for example their decisions about work, retirement and spending) and to see whether they evaluate their future prospects accurately. For example, we ask respondents what their chances are of surviving to particular ages, their chances of working in the future and their chances of giving or receiving an inheritance. We also ask what the chances are that they will not have enough financial resources to meet their needs at some point in the future. We hope to observe the ways in which people's expectations are adjusted over time and to explore the way in which people react (or do not) when their expectations are awry.

<sup>&</sup>lt;sup>7</sup> If they have moved away, in most instances we try to interview them at their new home

#### Social participation and social support

This module is primarily concerned with mapping the extent to which the respondent participates in certain types of social activity and whether they are limited from, or excluded from doing these activities. There are also some questions in this section about care-giving and use of public transport. Many of the questions about people's social circumstances are included in a self-completion questionnaire.

Finally, the respondent is asked to give permission for the research team to obtain health and economic data from various administrative sources.

#### Health coverage of the ELSA questionnaire

As stated earlier, we already have some data about our sample members' health status from the pre-baseline HSE interview. In addition, the initial ELSA questionnaire collects further health information in five main areas. These are health outcomes, psychosocial health, cognitive function, functioning and disability, and health behaviours.

#### Health outcomes

The measures of health outcomes used in the study include a self-reported assessment of general health plus questions about cardiovascular disease, chronic lung disease, other chronic conditions, cancer and psychological health.

Respondents were also asked whether they had any longstanding illness or disability and, if so, how this affected them. In identifying health outcomes, respondents were asked about both symptoms and about diagnoses where possible.

#### Psychosocial health

A module of questions is including on psychosocial health. This is primarily concerned with recording how the respondent views his or her life across a variety of dimensions.

#### **Cognitive function**

Cognitive function is an essential element of any study of the ageing process. This is because poor cognitive function, or loss of it, can impact on people's ability to make complex decisions (for example about retirement, housing choices or saving) and on their ability to carry out daily activities (and so live independently). The module of questions included in the first wave ELSA interview contains a series of exercises which measure different aspects of the respondent's cognitive function. It includes various measures of memory (meta-memory, remembering the day and date, ten-word list learning and two separate tests of prospective memory). It also covers speed and mental flexibility, combined with verbal fluency (naming as many animals as possible in one minute) and visual search (using a letter cancellation sheet). Finally the module includes a set of numeracy questions which test the ability to cope with everyday problems.

#### Functioning and disability

The ELSA wave one questionnaire also includes questions on functioning and disability. Respondents are asked about their eyesight, hearing, various disabling conditions or events such as arthritis, falls and fractures (asked to people aged 60 and over) and non-specific symptoms associated with limited function and disability such as pain. In addition, all respondents are asked whether they have difficulty with a range of activities of daily living (ADLs and IADLs).

It has been shown that there are cultural differences in the way people answer questions about their levels of disability. As a result, a key aspect of ELSA is that it includes an objective measure of disability. During the development stage of the study, we piloted the use of a set of measures, which were a timed walk, chair stands, peak-flow and weight. In the mainstage study, we chose to carry out the first of these with all respondents who are 60 or older. The timed walk involves recording the time taken by the respondent to walk a distance of 8 feet (244cm). This measure will make it possible to compare people in England with individuals elsewhere.

#### Health behaviours

Finally, respondents were asked summary questions about three aspects of their health behaviours. These were smoking, alcohol use and physical activity. More detailed questions about smoking and alcohol use were included in the Health Survey of England, providing a more detailed, pre-baseline measure.

## **Challenges for ELSA**

Getting data of good quality is, of course, paramount and there are a number of factors that we need to address in order to achieve this. Although a comprehensive list is impossible here, it is worth mentioning some important considerations.

First of all it is important to ensure that we have high initial response rates and subsequently maintain the panel to limit attrition between waves. We have pursued various strategies such as offering £10 gift vouchers as an incentive and have started to implement various ways of keeping in touch with respondents (for example using a study web site, thank you letters, and bulletins).

ELSA also faces challenges because of the fifty-year age span of its respondents. The interview must be relevant both to a fifty-year old and a centenarian and must provide a positive experience to respondents while addressing end of life issues. We have made efforts to address these issues and to ensure that interviewing practice is suitable for interviewing the oldest old.

Finally, although balancing interview content and length is a challenge for all surveys, it seems particularly problematic for an ambitious longitudinal and multi-disciplinary study such as ELSA. Clearly we need sufficient data to test our hypotheses, but if we are insensitive to the effect that a long interview could have on respondents then we run the risks of poor data quality, survey non-response and attrition between waves.

To address these issues we have

- insisted that each topic module is paired down to the "irreducible minimum". No question survives unless it is hypothesis-led and is agreed to be vital to a longitudinal, comparative study about ageing
- ensured that the questionnaire flows well, is varied and wherever possible is relevant to respondents
- attempted to control the variation in interview length so that the number and duration of particularly long interviews is kept to a minimum
- where possible, allowed two co-resident individuals to be interviewed concurrently (where the questionnaire is administered in blocks, first to one respondent and then to the other)
- introduced flexibile interviewing where interviews can 'manage' the length of the interview by using various facilities such as varying the point of the interview at which they administer the timed walk
- where possible, asked HSE interviewers to return to the households they originally interviewed for the prebaseline study so that we build on the interviewer-respondent relationship that had already been established
- where practical, used dependent interviewing to improve the flow of the interview and data quality
- introduced a twelve-sided self-completion booklet to ask some more sensitive questions and to collect data about social support and social participation.

#### Key issues for the measurement of health in ELSA

In addition to these general issues, each subject area included in ELSA has brought its own particular challenges. Since the focus of this session of the conference is health, it is worthwhile drawing attention to some of the main issues we face about how best to measure respondents' health in a face to face survey.

An early challenge was how we should collect data that is equivalent to the information collected in the surveys we want to use for comparison. Different studies use at least two different scales for their basic measure of self-reported health status. The table below shows how the questions used in the SF12 and the Health and Retirement Study (HRS) differ in wording and response categories from surveys employing the World Health Organisation (WHO) classification, such as the Health Survey of England. While both questions and response sets offer advantages, we cannot expect the answers to be the same.
SF12/HRS	WHO/HSE
Would you say your health is	How is your health in general. Would you say it was
1.	Excellent
2. Very good	1. Very good
3. Good	2. Good
4. Fair	3. Fair
5. Poor	4. Bad
	5. Very bad

For the purposes of ELSA we need to be able to compare our data using both questions, and to be able to understand the relationship between responses to one and the other. As a result, ELSA asks all respondents both questions with one (selected randomly) at the beginning of the health module and one at the end. In time, we will be able to provide some data about the differences between them and this should build on existing research into this issue, for example by Mike Hurd and Arie Kapteyn.

A second set of issues was achieving the right balance between objective and subjective measures of health. For example, as well as collecting self-reported health status as described above (which is clearly subjective), we also wanted to capture self-reports for specific objective measures (such as dizziness) and self-reported doctor diagnoses (in the form "has the doctor ever told you that you have condition x"). We know from previous studies that individual responses are varied and culturally specific and that while each has genuine value, none provide an objective measure. Because of this, we decided to include an objective test and, after discussion and piloting, agreed on the timed walk for individuals aged 60 and over. In fact, administering the timed walk reliably and systematically in a household interview raised its own challenges and we devoted considerable attention to the protocols, interviewer training and quality control.

A third set of issues was whether to focus on collecting diagnoses or symptoms. Ultimately, we aimed to achieve a balance, for example measuring symptoms associated with undiagnosed conditions (angina, claudication and respiratory conditions). And we focussed on diagnoses that were considered reasonably prevalent and reasonably disabling. Because of time constraints, we were limited in depth.

Similarly, a balance was needed between questions relating to functioning and those addressing disability. We included questions about specific functions, ADLs and IADLs as well as our direct measurement of disability, the timed walk.

Other difficult decisions were made about coverage. For example, we were able to include tests for cognitive function and numeracy but ultimately excluded literacy (though a measure may be introduced in future waves).

Finally, health service utilisation is a particularly challenging area to measure across countries but without it our ability to explain differences in health experiences will be limited. Although some information is available for the HSE pre-baseline survey and will be collected from administrative data, we agreed that this subject could not be successfully covered in the ELSA baseline survey. Health service utilisation needs to be examined in the context of quality of care and we will consider including it in future waves by identifying the onset of specific condition and then asking detailed questions about the quality of care received, based on 'best practice' scenarios.

While statistical information is already available about many of the topics covered by ELSA, a detailed, longitudinal study of the kind we are undertaking will add considerably to the information upon which future policy can be decided.

- It will provide micro-level data rather than aggregate statistics and so allow for far more detailed analysis than would otherwise be possible
- Its multi-disciplinary nature will allow the relationships between different aspects of people's lives such as health and economic circumstances to be examined aswell as allowing for a detailed examination of separate topics

- Since the survey is longitudinal it will be possible to explore how these relationships change and to examine the different routes or trajectories that people take over time
- The data will also be comparable to that collected in other surveys. In particular it is designed to offer direct comparability with the Health and Retirement Study in the United States and the Survey of Health and Retirement in Europe which is currently being developed. Because of this it will be possible to examine the extent to which observed patterns are constant between countries, and the extent to which they are system specific.

## AGEING AND HEALTH CARE: DEMANDS ON EUROPEAN STATISTICS FROM THE PERSPECTIVE OF USERS

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#### SUMMARY

The possible impact of ageing on the financial sustainability of health care systems and their implication for individual welfare raises concern, both at the side of citizens and the side of financing agencies. This paper deals with the implications of the ageing populations in the European Member States on health-care delivery from the perspective of users of European Health Statistics, e.g. health-policy makers, providers of health care, patients or patients' organisations, the general public or employers. Users want to know how to cope with the effects of ageing. The paper, therefore, will deal with the following issues:

- Problems in estimating the impact of ageing on health care and long-term care delivery and expenditure based on existing statistics; which models are available and what techniques are applied by researchers to estimated the impact of ageing?
- Additional demands on health care statistics by the ageing of the population within the existing statistical framework and for new variables as well as new instruments for data collection. What new statistical data should be collected at EU level with emphasis on health care? What can research contribute to better EU statistics on health care dealing with ageing issues? What should be provided in the public domain at the European level? What should be in private disposition?

The paper will not deal with aspects of measurement of health and the effects of ageing on health. Furthermore, the paper will not tackle the relation of ageing and health care financing.

#### Introduction

The relation between age, health and health care utilization as well as health care expenditure is widely discussed in economic literature (Gertham 1993, Zweifel/Breyer 1997, Jacobzone 2001). Also, governments of the Member States and successive European Councils have recognised the need to address the profound policy implications of ageing populations at the European level. The European Commission recently investigated the impact of ageing on health care and long-term care. However, there are gaps between statistics and demands of theoretical models to give answers on the effects of ageing. Particularly, the dynamic aspects between health care on the one hand and health on the other hand need more attention.

The view of users of statistics differs by their involvement in the care process. The patient perspective is that of the consumer and investor into health. The producer perspective might be different between profit and non-profit providers. However, both, profit and non-profit providers, are expecting returns of scale of their investments in the health sector. Employers are engaged in the financing of health insurance and securing safety at work. The insurers' task is to raise money and to pay health care bills. The policy makers' responsibility is to balance the various interests and to create the institutional framework for efficient resource allocation and se-

cure financial stability (see Zweifel 1992). From the different perspectives different questions arise on the impact of ageing. As all Member States deal with the issue of ageing the question is: what can be learnt from each other? How can European organisations help Member States to disentangle problems of ageing?

What are these problems?

- Demographic projection shows that ageing is a common issue; however, Member States are unequally affected by demographic changes.
- Ageing affects the various types of services differently. Not only the utilization of services is changing but also the variation by age cohorts.
- Health care and prevention have positive effects on the ageing process by reducing mortality and morbidity. However, the impact varies with medical technologies implying high expenditure.
- Ageing affects the structure and productivity of health manpower. There are already shortages in manpower reported in Member States that might escalate in the future.
- The capacities of the informal sector are changing and probably diminished to provide care for sick family members and dependent elderly.

#### Age and health care expenditure

#### Health status and health care utilization

In health economic literature, the starting point of the analysis of the demand for health care is the classical health economic model which derives the demand for medicals care as a derived demand for health (Grossman 1972, Muurinnen). By this framework, good health has a negative impact on the demand for health care and age a positive effect on the demand for health care, while health capital depreciates with age and requires increasing investments. In this model, the critical direct impact of ageing on health care depends on the effects of ageing on health. The improvements of health are critical for the future demand, however, there are also indirect impacts as income of the elderly, social capital and institutional structure of the system (see fig 1).

#### Figure 1: Interdependencies between ageing and health care



Most models dealing with the relation of ageing and health care do not consider the complex relationships expressed in Figure 1. The standard approach is based on the following linear framework: if the average health status of people in age group a in year t is  $h_a(t)$ , the average use of medical services conditional on health status is  $m_a(t)$ , and the average price of these services is  $p_a(t)$ , then the total medical expenditure summarized over the age cohorts  $N_a(t)$  is therefore:

 $M(t) = \sup p_a(t) * m_a(t) * h_a(t) * N_a(t)$ 

Often this equation is used for forecasts of medical expenditure keeping  $h_a(t)$ ,  $m_a(t)$ ,  $p_a(t)$  more or less constant only varying the distribution of population by age cohorts. But in reality also the three factors - services utilization, prices and health status - will vary over time. Approaches which describe the variations of the health status of age cohorts over time have already been discussed by Robine. Therefore, I will focus on health service utilization and prices.

Time series analysis exhibits an income elasticity more than one for the demand of health services. Forecasts on expenditure are usually linked to income. For example, the recently published report of the Commission on the budgetary challenges posed by ageing populations assumes an income elasticity of 1.2. However, more sophisticated approaches are trying to split utilization into different medical technologies and diseases. Obviously, such approaches require also detailed information on health by types of diseases. In the Netherlands, demographic projections of the required annual increase in the volume of health care (in terms of costs) produce an increase of 0.9-1.0% in the period 1994-2015 (RIVM 1998, p. 154), ranging from an annual rate of growth of about 1.7% for health care sectors used mainly by the elderly (homes of the elderly and nursing homes) to -1.0% for obstetrics and midwifery. Considering 'other developments' of costs including adjustments and prices, the annual rate of growth is 2.4%.

Increases in the age of death will have effects on utilization. People in the last year of life will utilize services more than those further away from death. Thus, increases in the average age of death will increase the average healthiness of the population, and thus reduce utilization.

#### Acute and long-term care

There is wide agreement that ageing influences aggregate health expenditure insignificantly (Gerdtham et al. 1995, Mahieu R. 2000). However, the results differ by type of services, and small impacts might accumulate to large amounts in the long run. Projections of the Economic Policy Committee show that the impact of ageing is approximately four times higher on long-term care than on the demand for health care (see Annex Table 1).

The Economic Policy Committee starts its introduction to health care expenditure projection with the phrase: "The expenditure projections were produced by using a common methodology, a common demographic projection and commonly agreed macroeconomic assumptions" (p. 33). But there is no common methodology! The methodology used works with stable age health expenditure profiles. Analysis of health expenditure profiles shows a steeping as well as a shift of profiles. However, the Committee recognizes the limits of this method: in some countries, although not all, analyses of profiles over time reveal changes in the pattern of spending across age groups across time.

Importantly, some countries – France, Germany, United States – have seen greater increases in average expenditure levels for older age groups than for other groups – i.e. the steepness of the age distribution has increased over time in the past (Jacobzone 2001). Data for Germany show the steeping effect for the population of private insured particularly for pharmaceuticals and medical aids (Buchner 2001).

In fact, contrary to the impression created by age-specific profiles of average expenditure, empirical research reveals that population ageing has not been an important driver of aggregate levels of expenditure on health care - Jacobzone (2001) notes that at the aggregate level, no link exists between levels of spending and the relative demographic situation of countries.

Expenditure on health care grew substantially in Europe over the second half of the last century, with total public and private expenditure on health roughly doubling as a share of GDP over the period 1960-1990. Levels of public expenditure on health grew even more rapidly over this period as a result of increased coverage by public insurance. However, ageing was not a significant driving force of the increase in health expenditure. Empirical evidence on the evolution of health expenditure between the 1960s and the 1990s suggests that other factors such as income development were more important. Further factors are increased coverage of public provision of health care or health insurance, and supply-side factors such as the increased use of new and more expensive technology as well as medical price inflation.

One reason for the limited effect of population ageing on health care expenditure is that health care expenditure over the lifetime of an individual tends to be concentrated at the end of life, irrespective of the age of death (these expenditure at the end of life are sometimes called "death costs"). Since mortality rates are higher in older age groups this concentration of expenditure at the end of life leads to an upward bias in the distribution of health expenditure by age for these groups. Thus, to the extent that future population ageing in the form of increased numbers of elderly persons reflects increases in life expectancy (i.e. decreases in age-specific mortality rates), projections based on the static age-related expenditure profiles are likely to overestimate the impact of ageing on future aggregate expenditure levels.

The general linear model described above can also be used for the analysis of long-term care expenditure, although the determinants for the utilization of long-term nursing care are different to determinants for the utilization of health expenditure. Jacobzone (2001) notes on long-term care that changes in expenditure tend to be driven by trends in disability, institutionalization, changes in social models (which determine the extent of provision of care in an informal setting as well as health behaviour), and changes in policy on the provision of care. Results for OECD countries reveal reductions in disability, and some reduction in institutionalization of elderly persons, which may have some (limited) impact on public finances. There is no evidence that institutionalization rates will increase with ageing population (Jacobzone 2000). Some countries have frozen the supply of beds in long-term care institutions while the number of older adults has increased.

In summary, whilst at any given point in time a large share of the overall resources of health and long-term care systems is devoted to elderly people, this does not necessarily mean that ageing is or will be a key driver of expenditure increases. A simple combination of age-related expenditure profiles with future demographic projections, as done in the expenditure projections reported here, gives a very simplistic view of the impact of ageing on health and long-term care expenditure. Notably, this ignores a number of underlying causes of increases in health care expenditure. Jacobzone (2001) notes that projections carried out in this fashion cannot be considered to be "real numbers" for the future, but more a snapshot of the simple effects of demography. Moreover, to the extent that health expenditure are concentrated at the end of life, and future demographic shifts reflect increased life expectancy, these simple projections are even likely to overestimate the importance of ageing for expenditure.

The large variation of programs and health expenditure among Member States suggests that there is sufficient space for further developing our knowledge. What can we learn from each other? What are the effects and costs of de-institutionalization policies?

#### Disease management and co-ordination of services

Similarly to the splitting of mortality into its various disease components, the breakdown of services by the various types of services provides helpful inside in disease management. With managed care, more emphasis is put on technologies, which either save money or avoid large expenses. Disease management programmes are playing an increasingly important role in cost management, but also in quality assurance. High technical quality consists of "doing the right thing right". For the treatment of several chronic diseases, e.g. diabetes, asthma, myocardial infarction, practice guidelines and protocols describe best professional practice. Process indicators as retinal examination by an eye specialist or administration of beta blockers are used for comparisons of quality. The OECD, e.g. has started to collect the indicator "Inhospital mortality due to AMI" in Ageing Related Disease Project (Hurst and Jee-Hughes 2001). Some countries even started to build up quality registers for their providers (Rehnquist 2002).

The treatment of chronic diseases cannot be discussed without their determinants, particularly the risk factors of life-style, physical and social environment. Preventive activities have a strong impact on risk factors, and by this on health status, health episodes, and treatment patterns, and form an essential part of quality of health services.

For any performance measurement of health care quality indicators and measurement of outcomeare required. However, for implementation in practice for European wide comparisons statistical concepts have to be developed. Furthermore, on the input side the measurement of performance needs the measurement of cost of diagnostic services and treatment. The wide application of DRGs will facilitate comparisons of costs of treatment at least in the hospital sector, although the use of different DRG-models will limit their use for European comparisons.

#### Proximity to death versus age

Analysis of the US Medicare program exhibits that spending among the younger elderly, those aged 65-69, rose by 2% annually in real per person terms. In contrast, spending for those over age 85 rose by 4% (Cutler and

Meara 1999). The reason for this large increase in spending on the oldest elderly in comparison to the younger elderly is the rapid increase in use of post-acute services among the oldest old – home health care and skilled nursing care in particular. However, there are several studies showing that total expenditure caused by an individual is compressed to the last period of life (Lubitz and Riley 1993).

Zweifel et al (1996) showed that increasing health expenditure is not caused by age itself but rather by the proximity to death. Among patients aged 65 and older high expenditure accumulate during the last two years of life (irrespectively of the actual age). This implies a shift of costs into a higher age group due to increasing life expectancy. However, one has to emphasize that specific research on the group of the oldest old is lacking in almost all countries. This field should be subject to increased attention and effort of the research community (Bundesministerium für Familie, Senioren, Frauen und Jugend, 2002).

Another aspect is how to deal with behavioural aspects. In the simple life-cycle model the only difference among persons of different ages is their proximity to death. Most analyses adopt this simple model of ageing, neglecting other factors such as age related declines in flexibility, imagination, strength, or other potentially job-related capabilities. One way to distinguish empirically between ageing effects and proximity to death effects would be to compare, with the respect to choice of activities, elderly people on the one hand and young or middle aged people who have truncated life expectancies but are in apparent good health, on the other.

The reverse last period problem: The accumulation of knowledge and insight of an old person constitute a valuable source of information to a young person. The main problem is here the communication to the young to codified information. This holds particularly for health issues.

#### Groups of elderly

Health conditions among the elderly are varying more than among young people. There is a common approach to distinguish between elderly according to their dependency ratio and the form of institutionalisation. However, Kane and Kane (2001) refer to the way older and younger individuals are approached regarding to long term care by pointing out that many older persons need long term care because of cognitive impairment, but the differences in the societal approaches to seniors with dementia and younger persons with cognitive impairment due to developmental disability suggests that ageism, not dementia, is at the root of this distinction.

Health Expenditure in the future will depend on the underlying health of the elderly, the availability of technologies, and the organization of health systems. Several analyses suggest that changes in the underlying health of the population can help restrain the growth of health care spending in the future, although they do not undo the effects of continued rapid growth in health costs (Cutler and Sheiner 1998).

What is increased health spending buying? Do growing expenditure reflect more intensive use of services or price effects of unbundled services? How do disease treatment patterns differ between high and low cost users?

#### Health Life Expectancy and Health Care

There is an opposite view on the relation between health status and health care, which health policy makers are facing, whether the increasing sums of money devoted to health care are yielding commensurate value in terms of improvements in health status. Essentially, health status is considered to be the output of a transformation process where the inputs are the medical system, as well as a range of non-medical factors. There are several studies which explored the effect of variations in the volume of health care on mortality across countries, after controlling for certain other determinants of health status and characteristics of health systems (e.g. Or 2001).

Variations in health status across countries and over time are often explained using the following general equation: H = f(M, E) where H is a measure of the health status of the population, M an indicator of medical resources, and E is a vector of non-medical social, economic and life-style indicators. This approach differs somewhat from the one adopted in the *WHO World Health Report 2000* where health outcomes are modeled only as a function of total health expenditure and human capital (educational attainment). The WHO approach also involves estimating a health "frontier" rather than a standard production function as described above.

Although there is a broad consensus in literature- based partly on research published 20 or 30 years ago, using cross sectional data - that the marginal impact of health care on health is low in industrialized countries, newer studies account for higher estimates. The results of these studies exhibit different results when considering life expectancy at different ages. For older people, medical care appears to be the most important determinant of health for both sexes. For example, the results by Or (2001) suggest that a 10 % increase in doctors, all else being equal, would increase life expectancy at 65 by 1 % (i.e. 1.8 months for men and 2.4 months for women). There has been enormous progress in medical technology over the past 30 years. In the United States, a recent study suggests that a third of the reduction in cardiovascular diseases can be attributed to the improvements in medical care (Cutler and Richardson 1997, Cutler and Kadiyala 1999). Similarly, examining the evolution of specific causes of premature mortality, numerous studies in Europe have consistently found that the causes of death for which there are effective medical treatments have fallen at a faster rate than other deaths (Poikolainen and Eskola 1986, Mackenbach et al. 1988, Jougla et al. 1987).

The theoretical and empirical framework of these estimates can be further developed at several dimensions. For example, few attempts have been made to improve model specifications and functional forms or to recognize dynamic effects, such as allowing for lags in the impact of various explanatory factors on health. Further work is also required to incorporate quality of life aspects into health status measures, and to refine the explanatory variables representing not only the medical system, but also life style, social and environmental factors. For example, income inequalities have been shown to be associated with health inequalities. Also, it would be interesting to examine variations in medical-care consumption, education, life-style, etc. for men and women separately. Finally, a more thorough analysis of the impact of different institutional factors would also be of direct relevance to health policy.

#### Social capital

Because of the important role of non-health variables, further analysis might put particular attention on the role of social capital. The concept of relational human capital or social capital discusses the costs and returns of relationship-specific human capital. For example, loneliness can be expected to accelerate in extreme old age. The loss of friends will be increasing rapidly at the same time the net utility from forming new friendships is declining.

The allocation of public resources requires information on the rate of social return as compared to private return. Social subsidies should supplement private resources for only those activities where social returns exceed private returns. In the literature on educational returns social externalities are often neglected because their quantification is controversial and there is no agreement on how to value them equivalently to the opportunity costs and the market production gains (Schulz 1995, 31). There are European studies already emphasizing this aspect.

Social quality represents the outcome of a fair and inclusive society (Fotakis 2000). Therefore, particular attention is already devoted on equity issues and the situation in relation to the most vulnerable age and income groups. In analysing these themes the commission intends to pay emphasis in the main trends and how each of them affects social quality in terms of its main constituents (socio-economic security, social inclusion, social cohesion and individual autonomy). The analysis will take account of both, the statistical evidence (mainly from the European Community Household Panel) and subjective indicators of intentions, preferences and satisfaction levels expressed by the EU citizens in the context of recent Eurobarometer research.

#### Technological change

As it was pointed out by Zweifel/Breyer (1997) the success of modern medicine reminds one of Sisyphus, the hero of the Greek mythology who was condemned to roll up a lump of rock up a mountain, only to see it to slip out of his grasp just before reaching the summit, forcing him to start all over again. Inasmuch as technological change in medicine lengthens human life, it may also increase the number of elderly who exert their influence in favour of costly medical innovation in health care. As a result of this process, a growing share of the public budget might be devoted to health care.

In this context, two aspects might be of interest:

(1) *Productive ageing*. It realizes that older people are an asset, that they are relatively healthy and that they have the capacity to be involved and the potential to make social and economic contributions. Productive ageing assumes that older people represent an opportunity rather than a crisis, a solution rather than a problem, an asset rather than a burden, and a resource rather than a drain on resources. On the other hand, statistics on the behaviour of the old, particularly the very old are limited.

(2) Low and high cost technologies. There is hope, that low cost technologies will replace high cost technologies. Prices of most technologies haven fallen rapidly. For example, the replacement of brand names by generics had considerable impact on the development of pharmaceutical expenditure. In this context, further research on the role of the structure of medical systems in using medical technologies might be of interest.

#### Productivity in the health and long-term care sector

#### Health Manpower

There are various studies raising concerns about the future development of manpower in health care (Pacolet 1996, Schneider et al 2002).

Economists treat human capital analogously to physical capital as an asset that yields earning over time rather than immediately. Earnings can be pecuniary or non-pecuniary. Formal education and training on-the job are examples of activities that create human capital. Like physical capital, human capital depreciates. If the minimum pay-back period for some investment in human capital is twenty years, a rational person will not make the investment if expected to be living for only ten more years. Because of the age-related increase in costs of investing in human capital or the age related decrease in expected return (or both), the rate of investment in new human capital or the age related decrease in expected return (or both) and the rate of investment in new human capital eventually decline with age below the rate of depreciation of the existing human capital. This will impart a downward thrust to the component of earnings that represents repayment of human capital. Most Member States have introduced some limits to practice medicine, which were nationally justified by several reasons, however, which will not help to increase investments in human capital by older workforce and will not overcome the deterioration in imaginative power with increasing age (Aristotle).

Presently, measuring future supply and requirement of medical workforce has potential inaccuracies in the estimates of the number of practising physicians and nurses. Furthermore, existing gender and age differences in productivity of health labour force require time-equivalent statistics. Because of the potential of substitution between different professions, there is a need to consider the whole health workforce planning of health systems.

#### Productivity in services and variation of productivity

The increase of productivity in health services is dominated by improvements in diagnostic services, surgical methods and pharmaceutical innovations. Following standard economic argumentation it can be expected that productivity growth in long-term care will be lower than in medical services (Baumol 1985). This 'cost disease' requires higher expenditure cet. par. in long-term care than medical care.

The potentials of productivity growth in the health sector are not very much investigated. Two important aspects of productivity in the service sector need more research: One is the co-production by consumers (Bensahel 1997), the second is price measurement.

#### Formal and informal care

In most Member States, care of the elderly is approached by the principle that it is better and cheaper to help the aged to live in their communities than to provide for them in hospitals or other institutions. Statistics, therefore, must be able to distinguish between the several actors in the care of dependent elderly people – their families, members of voluntary agencies and professionals working for statutory agencies (Working Party on the Services of the Elderly 1988, Social and Cultural Planning Office of the Netherlands 2001). In terms of the number of elderly receiving care, families are making by far the largest contribution. There are many questions with respect to ageing and informal care. Will the prolongation of life-span in combination with the reduction in fertility lead to lower capabilities of the informal sector? What can be managed in the informal sector in the future? How is the variation of informal care among different groups of the population and among countries?

Because of the difficulties of measuring and valuing non-market production, economists focus on the marketable component of income and families and individuals. Especially in health, the non-market production form is an essential part of mitigating the effects of sickness. There are few statistics on informal care. One important approach is time budget analysis.

#### **Statistical Aspects**

#### Macro and micro-level

At the macro level health accounts will provide basic information on the structure of health care expenditure in the near future. However, these accounts will not give insight into the variation of utilization among different groups among countries and the micro-efficiency of the production of services. The comparison at the micro level is more complex. And obviously additional data at micro level are needed to be able to describe these variations. An European business survey on health care and long-term care providers could help to give insight into the variation of delivery structures, productivity, needs and satisfaction of health care providers.

An additional instrument is needed to describe health care consumption in monetary terms among population groups. Usually, the distribution of health care expenditure shows high variation coefficients, which means that we are not able to follow the changes of the mean of expenditure or the total by using small samples. The situation becomes more complicated by the fact that health care statistics in the Members States are based on national terminologies with different boundaries and structures. Further research on how to build up European statistics that can describe health expenditure by population groups seems to be helpful.

Falcão (1999) supports the idea of addressing individuals as sources of health information in addition to current means of data allocation. Member States should adopt a number of large, methodologically sound survey instruments aimed at collecting routine health data on probabilistic samples of populations (e.g. health interview surveys, health examination surveys) and to improve their quality and comparability.

#### Statistical discrimination

Age, like gender, is one of the first facts we notice about a person and to "place" her or him. By this we often operate with a strong presumption that activities, capabilities and positions in life go with particular ages. This presumption that age matters in these ways is rational. But there is a great deal of variance in the capacities, behaviours, and attitudes of persons in particular age groups and, partly as a result, great overlap between capacities. People age at different rates and from different levels of capacity.

Attributing to all people of a particular age, the average characteristics of the average person means statistical discrimination. Age-discrimination might be the consequence (Posner 1995, p. 322)

There is evidence that the variance in earnings increases with age, so does the variance in productivity and health care utilization. One explanation for this is that older workers are not intrinsically more or less productive than younger workers, but they are more likely to be matched to the appropriate jobs (Medoff, Abraham 1981). Shorter histories of job turnover are nevertheless taken as signal for lower productivity. Older members of the workforce, therefore, find it harder to obtain a new job, particularly at wage with their previous hiring (Disney 1996, p. 188).

#### Research agenda

From the above discussions we might derive some conclusions with respect to further research:

- the interface between formal and informal care in the context of financial consequences of ageing
- the variation of health care utilization by different age groups with the same disease and the variation and quality of treatment patterns among countries
- · the variation of preventive activities related to chronic diseases among countries
- the steeping of expenditure profiles in general and with respect to type of care
- the skill mix of manpower and variation of productivity (do we expect a general shortage of health professions in Europe?)
- Appropriate indicators for the method of open co-ordination (access, quality and financial sustainability).

The analysis clearly demonstrates the need for continuing effort to develop more detailed comparable data on various inputs into the health sector. In order to carry out comparative analysis of health systems, improving the scope of data on and indicators of the social, economic and physical environment as well as on life styles is equally important. Further work is called for to investigate the nature of the relationship between gender-specific, medical-care patterns and the health status of men and women. For example, it would be interesting to examine whether women have a greater propensity to consume preventive care compared with men.

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#### Annex

#### Table 1: Total Public expenditure projection 2000 - 2050

	Public health expenditures as % of GDP	Health Care expenditures as % of GDP	Long-term care expenditures as % of GDP	Increase in Health Care as % of GDP per capita	Increase in Long-term care as % of GDP per capita	Increase in Health Care in \$	Increase in Long-term care	Increase in long-term care as compared to increase in health care
	in 2000	in 2000	in 2000	between 2000 and 2050	between 2000 and 2050	between 2000 and 2050	between 2000 and 2050	between 2000 and 2050
В	6,1	5,3	0,8	1,3	0,8	25%	100%	4,1
DK	8	5,1	2,9	0,7	2,1	14%	72%	5,3
D		5,7		1,4		25%		
EL		4,8		1,7		35%		
Е		5		1,7		34%		
F	6,9	6,2	0,7	1,2	0,5	19%	71%	3,7
IRL	6,6	5,9	0,7					
Ι	5,5	4,9	0,6	1,5	0,4	31%	67%	2,2
NL	7,2	4,7	2,5	1	2,2	21%	88%	4,1
A	5,8	5,1	0,7	1,7	1	33%	143%	4,3
Р		5,4		0,8		15%		
FIN	6,2	4,6	1,6	1,2	1,7	26%	106%	4,1
S	8,8	6	2,8	1	2	17%	71%	4,3
UK	6,3	4,6	1,7	1	0,8	22%	47%	2,2

Source: Commission of the European Communities (2001b).

## "What are the existing demands and emerging data needs for policy purposes and planning at EU level? And more in particular for health care and for social protection."

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In the area of health, evidence-based medicine has received increasing attention in recent years. The main emphasis has been on collecting and synthesising the best available evidence from medical research. However, policy-makers in health policy and health care are also in need of the best available evidence on which to base their decisions. Evidence based decision-making in health policy requires a systematic application of the best available evidence on health but also on economic and social research.

Before examining the issues related to health data, it is important to look at the policy setting for the next decade from the point of view of EU social policy. As the recent Commission Communication "The future of health care and care for the elderly: guaranteeing accessibility, quality and financial viability" argues, Health care systems in the European Union are facing the challenge of attaining at one and the same time a three-fold objective: Access to health care for all; A high level of quality in health care and The need to ensure their financial viability.

Promoting cost containment while improving health care in terms of accessibility and quality will only be feasible if we are in a position to take the right decisions in relation to the future of health care systems. We should not forget that besides the issues related to the efficiency, quality and equity dimensions of present, there is a particularly important dynamic dimension. Changes in population structures, lifestyles and income as well as the continuous progress in medicine constitute a particularly challenging policy environment because it leads to continuous quantitative and qualitative changes in the demand for and the supply of health care. It is also worth noting that after a period in the 90's, with modest growth compared to GDP, health expenditure in several countries has returned to a level of growth that is higher than GDP

These issues will be further discussed and analysed in our next year's Social Situation Report (2003) which will focus on trends and issues related to health and social policy. Within this context the following 4 main areas will be explored:

#### Population and health trends:

In this chapter we intend to present a set of key indicators showing the dynamic trends in fertility, morbidity and mortality and establishing comparisons at national level. We also intend to provide some analysis of the burden of disease. Depending on the data availability, we will also try to show some of the significant differences at regional level in relation to those basic parameters.

#### Living conditions and health status:

This chapter will focus on specific areas of the social and living conditions of European citizens, which are related to the health status of individuals. Drawing upon recent research in the field, the chapter will examine health in relation to socio-economic status, the extent of inequalities within society, education, working conditions, housing and other aspects related to the lifestyles of the population. Health status will be described through variables coming from different sources such as the Eurobarometer, the ECHP, the LFS and other Eurostat, OECD and WHO sources of health statistics. They will range from opinion data on self-perceived health and attitudes and behaviour related to lifestyle to hard date on causes of mortality and morbidity. A challenging area which requires particular emphasis relates to the issues and interventions for specific age and income groups. Within this context a key question which has not yet fully been replied relates to the cost implications of ageing in the health sector. One of the main difficulties, to my knowledge, has to do with absence of consistent and harmonised statistical data on age-related health costs. Another equally important concern relates to the health status of the most vulnerable groups for which it is often very difficult to find reliable data.

#### Health care systems in the EU

This chapter will look at the contribution of EU health systems to the overall health of the population. It will briefly describe some key features of the Member States' health systems in terms of their structure (public/private mix), overall expenditure and their accessibility in terms of cost and coverage. This will provide background to an assessment of their effectiveness and productivity which will take account of the balance of health care provision and preventive services.

We will also focus on:

- the sources of financing and their allocation
- the structure of health delivering
- issues related to performance

In addition, the chapter will present information on employment levels in the health sector and its contribution to the economy. Finally, the chapter will give a prospective view on the policy-related health challenges in relation to the pressure on public expenditure brought about by factors such as ageing of the population, changing household/family structures, the introduction of new therapies and technologies and the increasing expectations of citizens in relation to health services.

#### Health and Society

Social participation and social cohesion can influence health status in different ways: by facilitating the dissemination of information on healthy behaviour, by social control of some risk behaviour (alcoholism, drugs abuse, ...), by ensuring better access for all social groups to the health system. In this chapter we attempt to shed light on the interplay between social capital and health. In fact, some studies made in the USA show a positive correlation between a high social capital level and good health.

Other issues to be discussed in this chapter refer to:

- Health and Disability,
- Ageing and Social participation.
- Health Accessibility and social exclusion
- The role of the third sector
- Forms of informal care

In presenting the question of health in next years report we also intend to raise the issues related to the improvement of the health information infrastructure at both national and European levels and establish the link between the policy debate and what needs to be done in order to facilitate an evidence-based decision-making process.

This brief account of our work programme provides an idea of the data issues we are confronted with. At the present, to get the best available data one has to look at different sources. At European level our aim with the recently established open method of co-ordination in the area of Social Protection is to promote the co-ordination, the development and evaluation of public policy in order to achieve the commonly agreed policy objec-

tives. We aim to report publicly on national and international trends, produce basic comparisons, and analyse key public policy issues to develop benchmarking and facilitate evidence-based decision-making.

Evidence-based decision-making is not value free and it does not imply a methodological straightjacket. It is influenced by individual values, interests and judgements as well as external pressures and conditions. Moreover, evidence is continually changing; health and health care are dynamic processes and research within and outside the health system influence health and health care developments.

There is, therefore, a need to continue this dialogue between statisticians, researchers and policy-makers on the kind of information and evidence we need at European level, how national activities (in terms of collecting and analysing information and researching health and health care issues) can be better co-ordinated and how decision-making can be better informed.

- There is a need to aggregate and analyse national data at European level according to data standards and common definitions. Policy-makers also need to have access to standardised, longitudinal and comparative data. on health status and health system performance. In some countries short- and long-term performance indicators exists but in most Member States these are not available. Integrated, linked information on socio-economic indicators, medical and non-medical determinants of health, unitisation costs and health care capacity need to be collected in a standardised way using common definitions and methodological approaches.
- Policy makers are in need of comparative analyses across the Union, leading to understanding of the relative contributions of non-medical and medical inputs to health; the linkage of information to current financing and delivery perspectives and the flexibility to provide focused responses to well-articulated policy questions. Several factors and emerging trends that have an impact on the health care systems are placing more emphasis on the need for evidence-based decision-making. These include fiscal pressures, new technologies, a growing focus on population health and higher population expectations from the health care systems.
- There is also a need to improve information and evidence on what works and what does not work in health care systems: what is the contribution to health of new medical interventions and treatments, what is their cost-effectiveness and what is that of available alternatives?
- Data on access to health care services are not available in most Member States. This is also the case with data that allow for comparison of programme and service costs with other models of delivery and assessment of the costs of practice variations.
- At a macro-level, decisions on financing health care, re-organisation of the health services, restructuring of the hospital sector, to name a few, are under way in many Member States but decision-makers are finding that the facts and figures they need are not available.

Given the existing limitations briefly presented, we hope that the next Social Situation Report with its focus on health and health care will make the best possible use of available data and analyses.

## **OCCUPATIONAL HEALTH OF THE AGEING POPULATION**

#### **SILVA SANTOS Carlos**

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There are well-known negative and positive relations between the work place and the worker's health.

Professional diseases and accidents are important health issues in the industrialised countries. The consequences are not only death or disability but also the loss of income and heavy costs to health and social services.

From the user's point of view, it is necessary to know much more about what kind of work we now have in the EU and what will be the work in the future.

Our main interest is not to only study the labour market and the regulation or deregulation and its' relation to health. We would also like to know better what are the work conditions, physical, , chemical, biological and psychological risks and their effects on worker's health and wellbeing. Work injuries and professional diseases are only a small part of the negative effects of work on health. A large group of work-related disorders including stress must be included in bad work conditions.

Are all the negative aspects of interaction between work and health sufficiently known and registered, in particular, morbidity, disability and mortality related with work?

The negative impact of work on health, changing all the people's life cycle, must be considered a very important effect on the ageing work population (more than 50 years old), with 30 or more years of work. The pattern may be a man or a woman born after the Second World War, working in industry or services with relative stability instead of some innovation changes at work, and with some doubts about the future.

Does the ageing population have or have not job satisfaction at work, professional motivation, and the physical and mental health to continue working? That's another relevant question.

Today, working conditions are clearly considered one of the most important health determinants, but for the public in general and too many health professionals, the major factors are usually identified as alcohol and tobacco abuse related with life-style, transferring to a second place the work environment and work conditions.

The public health policy must define a new overall strategy to change the environment and the quality of work to reach a high level of health protection and to promote a healthy lifestyle.

Active ageing may be a slogan of health promotion at the work place. In reality, to achieve this, it becomes necessary to reflect on and study work conditions with the indispensable participation of the main interested party, the workers.

The next issue is related with humanisation of work. Is it possible to adapt the working conditions to the capacity of workers, especially aged workers?

I believe so, but for that it is first necessary to contest the principle that only young workers are efficient and productive.

Ergonomic perspectives must always be present at all work places and accomplishing the natural and physiological evolution of working people. As a matter of fact the adaptation of work, including work conditions, environment and work organisation makes aged and or disability workers equally produtive. The change of actual economic determinism and correlated policies, oriented to be competitive in the globalized economy should probably be necessary.

From a national point of view, the data related with health of workers, in different sectors, must be the starting point for national progress to establish national priorities for action, strengthening the European policy.

For an effective intervention, it is very important to learn not only about the health status of the ageing population, but also all known dimensions of work determinants on health.

## ACTIVE PARTICIPATION IN SOCIO-ECONOMIC LIFE: TIME USE SURVEYS AS THE DATA SOURCE

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#### Background

Time Use Surveys have been carried out in Europe by several national statistical institutes since the 1970s. Even where countries have developed their own methods and classifications these have mainly been based on the methodology set up by the Multinational Comparative Time-Budget Research Project carried out in 12 countries in the 1960s (Szalai 1972).

In the early 1990s Eurostat recognised the need for increased comparability between national Time Use Surveys. A survey design was developed. It was based on a detailed analysis of the national Time Use Surveys carried out in the EU and EFTA countries. Workshops were arranged, and comments from international organisations as well as from time use researchers around the world were taken into account. Several units of Eurostat as well as the relevant policy partners (DGs) of the European Commission showed interest in time use data. It was recognised that Time Use Surveys provide a multipurpose database and a linkage between social and economic statistics. A series of pilot surveys were conducted in 1996-1997 in nine Member States and nine Central Eastern European countries.

In 2000, a set of *Guidelines on Harmonised European Time Use Surveys* was produced. By now data collection has been done, or is ongoing, in the field in the following countries: France, Portugal, Belgium, Finland, Norway, Sweden, United Kingdom, Germany, Denmark, Italy, Slovenia, Estonia, Hungary, Bulgaria and Romania. Eurostat took the responsibility of the planning phase and co-ordination for these, but the fieldwork has been nationally financed.

#### Harmonisation approach

#### A mix of input and output harmonisation

The chosen harmonisation approach is a mix of input and output harmonisation. On the input side, it was recommended that the countries should apply a diary format, certain data collection procedures, and a common activity coding list. Diary instructions and examples were also recommended for use in national time use surveys.

On the output side, a set of common questions was recommended for the interview questionnaires so that national populations could be broken down to comparable domains for an analysis of time use. Most of these questions had previously been used in other surveys, e.g. the LFS and the ECHP, and slight adjustments to country-specific conventions were allowed (wording, terminology, etc.). Some of the questions were marked as mandatory and others as voluntary.

#### Population and sample design

It was agreed that the survey samples should be representative of the populations of the respective countries, and that persons in institutions and doing military service would be excluded. People living at the same address, sharing meals, and sharing a household budget are considered as members of the same household. It was recommended that each person aged 10 and over in a household be requested to fill in the individual questionnaire and the diary. Although most of the countries had drawn household samples, some countries used the individual as the sampling unit.

Time was the second sampling dimension. Not only households/individuals but also days were sampled. It had been agreed that the sampled days should cover 'a year'.

#### Survey forms

The Guidelines contain definitions and explanations concerning the survey forms, i.e. the household questionnaire, the individual questionnaire, and the time diary. Interviewers were trained in collecting data with faceto-face interviews.

- A family member familiar with the circumstances of the household filled in the household questionnaire.
- All family members were asked to fill in the individual questionnaire during the same visit.
- *The diary* for the two designated days was left to the respondents and introduced by the interviewer together with short instructions.

#### Diaries

The time-diary method is used for studying the daily pattern of a person's time use, including such everyday activities as gainful work, education, housework, taking care of personal needs, and free time. Activities are recorded in chronological order over the entire day.

Time as a common measurement unit offers a variety of possibilities for analysing methods of differing degrees of complexity. Limiting the study to the 24 hours of the day allows enough sensitivity for exploring changes: time removed from one activity (e.g. because of reduced working hours) is unavoidably transferred to other activities. The measurement units of hours and minutes are the same in all countries, which is a clear advantage in cross-national comparisons.

According to validity studies, for most activities the time-diary method produces data that are consistent with real behaviour and not subject to misunderstandings, recall problems, or over or under-reporting with the exception of certain very sensitive activities. Methodological comparisons show that it is difficult to replace the diary method with direct interview questions when the measurement concerns everyday activities that are difficult to recall because they do not stand out from other uses of time. This applies especially to household care activities that are of short duration and overlap with other activities.

The Guidelines contain an Adult Diary and a Child Diary. The actual diary part is the same in both cases. They only differ in the introductory texts and in the examples showing how to fill in the diary. The Adult Diary also includes an additional example to be handed over to elderly respondents.

The time diary is self administered to be filled in at fixed 10-minute intervals during two randomly designated diary days, one weekday and one weekend day. The respondents record the activities in their own words (Annex 1).

The dimensions to be measured with the use of the time diary are:

- Main and simultaneous activities,
- With whom time is spent; and
- The location of the activity.

#### Time use categories

For main and simultaneous activities the activity coding list includes 42 codes at 2-digit level (Annex 2) and 167 codes at 3-digit level.

For an examination of active ageing, the most interesting variables might be:

Employment Study Household and family care Volunteer work Informal help to other households Participatory activities Social life Sports and outdoor activities

#### Variables of the questionnaires

Most of the questions are background variables for time use categories. In addition, there are some questions that reflect time use over a longer time period than just two days as in the diary. These questions relate to volunteer work and informal help.

#### Household questionnaire

Household composition and arrangements for childcare Housing and living conditions Income Receiving domestic help (See Annex 3)

#### Individual questionnaire

Employment (labour market status, occupation, working hours, income) Education Organised voluntary work (See Annex 3) Informal help (See Annex 3) State of health (See Annex 3) Marital status

#### Time use data on active ageing

In most countries, Time Use Surveys are co-financed by ministries and research institutes. Some of the sponsors have expresses special interest towards senior citizens, e.g.:

Finland

National Research and Development Centre for Welfare and Health, Social Insurance Institution, and Research Institute of the Finnish Economy.

*Norway* Ministry of Labour and Administration

*Sweden* Ministry of Industry

United Kingdom Economic and Social Research Council

#### Time use of the ageing population

Fresh results from the latest Finnish Time Use Survey present an example of how ageing influences the pattern of time use. Annex 4 shows the general allocation of time to different activity groups by gender among those aged over 35. With men the time spent on employment decreases gradually after the peak in the 35 to 44 age group, while with women the maximum is reached later, in the 45 to 54 age group.

Domestic work follows a different curve. The peak with women coincides with the 25 to 34 age group, whereafter it goes down in the 45 to 54 age group, but then turns up again when the time spent on employment starts to decrease. Domestic activity decreases clearly with women after the age of 75. With men the peak of domestic work will not be reached before retirement. In the age group of 65 - 74 years, men spend as much as 3.5 hours daily on household tasks. Women of the same age spend almost 4.5 hours daily on these duties. Domestic tasks seem to fill the extra time that becomes available after retirement.

With both genders the overall activeness reflected as participation in organisations seems to increase, as well as outdoor activities. Socialising does not decrease on average, as is frequently argued. The time used by persons aged over 65 for giving help to other households averages 11 minutes per day, which is roughly the same as applies to the whole population.

The Research Institute of the Finnish Economy exploited time use data in an analysis of early retirement (Huovinen & Piekkola 2002). It was observed, among other things, that "the Finns' early retirement years are in many ways associated with non-passivity rather than passivity. This holds, especially when retirees in good-health are considered. Activities with a high involvement like domestic and voluntary work are fairly popular for people who decide to leave their career."

Harmonised Time Use Surveys offer several opportunities to analyse the time use of the ageing population. A highly detailed classification of time use can be used, and further background variables can be applied, such as state of health, education, family situation, etc.

#### Changes in time use of the ageing population

Annex 5 shows the main trends in time use changes in Finland through the 1990s in different activity categories. The changes in the time spent on employment seem to be minor, averaging only a couple of minutes per day in the age groups above 45. The share of time spent on gainful employment diminished clearly among people aged younger than this. The average drop was half-an-hour per day in the 25 to 44 age group.

A parallel analysis of data from the Time Use Survey and the Labour Force Survey reveals interesting trends in participation in employment. Between 1989 and 1999, the overall employment rate fell from 74 to 66 per cent in Finland, and the decrease was clearly bigger in the under-45 age groups than in older ones. In the 30 to 34 age group, for example, the rate fell from 89 to 80 per cent, but in the 55 to 59 age group it only went down from 58 to 55 per cent.

The amount of time spent on domestic work tends to increase rather than decrease among the elderly in Finland. This concerns especially men, who in the 55 to 64 age group spent 20 minutes more and in the over-65 age group 36 minutes more on it daily in 1999-2000 than 12 years earlier.

Sports and outdoor activities also increased among the senior citizens, especially among the women aged over 65, who increased their daily exercise from 24 minutes to 38 minutes. Men of the same age spent on average 46 minutes on exercise per day. Socialising with friends has decreased in all age groups.

#### Forthcoming Eurostat reports

Comparative analyses, based on harmonised European surveys, will be topical in the near future. Some rough tables will be placed on the website of Eurostat later this year and more detailed publications will be issued during the coming years.

The project co-ordinator at Eurostat Unit E1 is Ms. Karin Winqvist, email: karin.winqvist@cec.eu.int

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European	<b>Fime Use Survey: Diary</b>					Annex 1
	What were you doing?	What else were you doing?	Were you alo	ne or to	gether wit	Ч
	Record your main activity for each 10-minute period from 04.00 to 07.00 am!	Record the most important parallel activity.	somebody you	ı know?		
			"Mark ""yes"" by c	crossing"		
			Alone Ch	uildren	Other	Other
	Only one main activity on each line!		up to 9 hou	usehold	persons	
	Distinguish between travel and the activity that is the reason for travelling.		living in your me	embers	that you	
	Do not forget the mode of transportation.		household kno	ΟW		
Time, am	Distinguish between first and second job, if any.					
04.00-04.10						
04.10-04.20						
04.20-04.30						
04.30-04.40						
04.40-04.50						
04.50-05.00						
05.00-05.10						
05.10-05.20						
05.20-05.30						
05.30-05.40						
05.40-05.50						
05.50-06.00						
06.00-06.10						
06.10-06.20						
06.20-06.30						
06.30-06.40						
06.40-06.50						
06.50-07.00						

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#### Annex 2

#### Harmonised European Time Use Surveys

#### Main and secondary activities

- 0 Personal care
  - 01 Sleep
  - 02 Eating
  - 03 Other personal care
- 1 Employment
  - 11 Main job
  - 12 Second job
  - 13 Activities related to employment
- 2 Study
  - 21 School or university
  - 22 Free time study
- *3 Household and family care* 
  - 31 Food management
  - 32 Household upkeep
  - 33 Making and care for textiles
  - 34 Gardening and pet care
  - 35 Construction and repairs
  - 36 Shopping and services
  - 37 Household management
  - 38 Childcare
  - 39 Help to an adult family member
- 4 Volunteer work and meetings
  - 41 Organisational work
  - 42 Informal help to other households
  - 43 Participatory activities
- 5 Social life and entertainment
  - 51 Social life
  - 52 Entertainment and culture
  - 53 Resting time out
- 6 Sports and outdoor activities
  - 61 Physical exercise
  - 62 Productive exercise
  - 63 Sports related activities
- 7 Hobbies and games
  - 71 Arts
  - 72 Hobbies
  - 73 Games
- 8 Mass media
  - 81 Reading
    - 82 TV and video
    - 83 Radio and music

9 Travel and unspecified time use
90-98 Travel by purpose
99 Unspecified time use

#### With whom time is spent

Alone Children up to 9, living in the household Other household members Other persons, known to the respondent

#### Location and mode of transport

- 00 Unspecified location
- 10 Unspecified location (not travelling)
- 11 Home
- 12 Second home or weekend house
- 13 Working place or school
- 14 Other people's home
- 15 Restaurant, café or pub
- 19 Other specified location (not travelling)
- 20 Unspecified private transport mode
- 21 Travelling on foot
- 22 Travelling by bicycle
- 23 Travelling by moped, motorcycle or motorboat
- 24 Travelling by passenger car
- 25 Travelling by lorry, van or tractor
- 29 Other specified private travelling mode
- 30 Unspecified public transport mode
- 31 Travelling by taxi
- 32 Travelling by bus or coach
- 33 Travelling by tram or underground
- 34 Travelling by train
- 35 Travelling by aeroplane
- 36 Travelling by boat or ship
- 39 Other specified public transport mode
- 40 Unspecified transport mode

#### **Time Use Survey questionnaires**

#### Household questionnaire: Receiving help

H 20. The following questions concern help and services received from someone outside your household. You could have paid something for this help or services, but it should not have been provided by a private firm or a public institution.

Did you or any other member of your household receive help or services, from someone who is not a member of your household, at any time during the <u>last 4 weeks</u>?

- A What kind of help or services did you receive?
- B How many times did you receive this kind of help or services during the last 4 weeks?
- C Last time you received this kind of help or services, did you pay for it?

Kind of help or services	Α	В	С
	Did you receive help?	How many times during the last 4 weeks?	Did you pay for the help the last time?
	Yes No		Yes No
a. Child-care	$\Box(1)$ $\Box(2)$		$\Box(1)$ $\Box(2)$
b. Food-preparation	$\Box(1)$ $\Box(2)$		$\Box(1)$ $\Box(2)$
c. Cleaning-tidying up	$\Box(1)$ $\Box(2)$		$\Box(1)$ $\Box(2)$
d. Watering flowers	$\Box(1)$ $\Box(2)$		$\Box(1)$ $\Box(2)$
e. Shopping and errands	$\Box(1)$ $\Box(2)$		$\Box(1)$ $\Box(2)$
f. Care for elderly and sick	$\Box(1)$ $\Box(2)$		$\Box(1)$ $\Box(2)$
g. Repair and construction	$\Box(1)$ $\Box(2)$		$\Box(1)$ $\Box(2)$
h. Vehicle services (car, bike etc.)	$\Box(1)$ $\Box(2)$		$\Box(1)$ $\Box(2)$
i. Work in the garden	$\Box(1)$ $\Box(2)$		$\Box(1)$ $\Box(2)$
j. Woodcutting and carrying water	$\Box(1)$ $\Box(2)$		$\Box(1)$ $\Box(2)$
k. Taking care of pets	$\Box(1)$ $\Box(2)$		$\Box(1)$ $\Box(2)$
1. Transport and removals	$\Box(1)$ $\Box(2)$		$\Box(1)$ $\Box(2)$
m. Other help Please, specify:	$\Box(1) \ \Box(2)$		$\Box(1)$ $\Box(2)$

#### (TUS Voluntary)

Individual questionnaire: Organised voluntary work

I 33 The following question concerns possible voluntary work you do. That is work, for which you are not paid, except perhaps for expenses. We only want you to include unpaid work you do through or on behalf of a group or an organisation of some kind.

Have you done any <u>voluntary work</u> through or on behalf of a group or an organisation at any time during the <u>last 4 weeks</u>?

- A Which organisation(s) or group(s) have you worked with?
- B How many times did you work for (group/organisation) during the last 4 weeks?
- C How long did you work, <u>last time</u> you did this work for (*group/organisation*) during the <u>last 4</u> weeks?

(TUS voluntary)

=//

	Type of organisation		A	В	С
		Did you w type of or	ork for this ganisation	How many times	Duration last time (in minutes)
		Yes	No		
a.	Young people's groups (Youth clubs, Scouts, Guides, Children's groups etc.)	□ (1)	□ (2)		
b.	Sports clubs and societies	□ (1)	□ (2)		
c.	Helping at a place of worship (Church, Mosque, Synagogue etc.)	□ (1)	□ (2)		
d.	Political groups or clubs	□ (1)	□ (2)		
e.	<b>Welfare groups</b> (Shelter, Oxfam, CAB, NSPCC etc.)	□ (1)	□ (2)		
f.	<b>Groups helping the elderly</b> (Meals on Wheels, Age Concern etc.)	□ (1)	□ (2)	]	
g.	Safety/First Aid groups (Red Cross, St. John's Ambulance, RNLI etc.)	□ (1)	□ (2)		
h.	<b>Environmental groups</b> (Friends of the Earth, RSPCA, Conservation groups etc.)	□ (1)	□ (2)		<u>                                    </u>
i.	Justice /Human Rights groups (Law Centre, Magistrate, Amnesty etc.)	□ (1)	□ (2)		
j.	<b>Neighbourhood groups</b> (Resident's Associations, Hospital Radio, Neighbourhood Watch)	□ (1)	□ (2)		
k.	<b>Citizen's Groups</b> (Women's Institute, Rotary Club, Lion's Club, Round Table etc.	) 🗆 (1)	□ (2)		
1.	Arts and recreational groups (Amateur dramatics, Photographic Society, Gardening clubs, Choirs, Art societies)		□ (2)		
m	Adult education groups		□ (2)		
n.	Any other groups or organisations. Please, specify:	□ (1)	□ (2)		

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#### Informal help

I 34 The following question concerns possible <u>help</u> or <u>services</u> you give to relatives, friends, neighbours, or anyone else who <u>does not belong to your household</u>. That is help and services, for which you are not paid, except for expenses. This may be shopping for your uncle, helping a neighbour to fix her car, looking after the children of a friend etc.

Have you given help or services to someone who is not a member of your household at any time during the <u>last 4 weeks</u>?

A What help or services did you give?

B How many times did you give this help or services during the last 4 weeks?

(TUS voluntary)

	Kind of help or service	Α	В
		Did you give this kind of help or service?	How many times during the last 4 weeks?
		Yes No	
n.	Child-care	$\Box(1)\Box(2)$	
о.	Food-preparation	$\Box(1)\Box(2)$	
p.	Cleaning, tidying up	$\Box(1)\Box(2)$	
q.	Watering flowers	$\Box(1)\Box(2)$	
r.	Shopping and errands	$\Box(1)\Box(2)$	
s.	Care for elderly and sick	$\Box(1)\Box(2)$	
t.	Repairing and construction	$\Box(1)\Box(2)$	
u.	Vehicle services (car, bike etc.)	$\Box(1)\Box(2)$	
v.	Work in the garden	$\Box(1)\Box(2)$	
w.	Woodcutting and carrying water	$\Box(1)\Box(2)$	
x.	Taking care of pets	$\Box(1)\Box(2)$	
у.	Transport and removals	$\Box(1)\Box(2)$	
z.	Other help (e.g. ironing clothes) Please, specify:		

#### To whom was help given

#### I 35 Whom did you give help or services to during the last 4 weeks? (TUS voluntary)

Wł	nom outside your own household did you help during the last 4 weeks?	Yes	No
a.	Parents (own parents or partner's parents)	$\Box$ (1)	□ (2)
b.	Grown-up children(own children or partner's children)	$\Box$ (1)	□ (2)
c.	Own children aged 0-17 not living in the same household	$\Box$ (1)	□ (2)
d.	Sisters/brothers (own sisters/brothers or partner's sisters/brothers)	$\Box$ (1)	□ (2)
e.	Grandchildren (own grandchildren or partner's grandchildren)	$\Box$ (1)	□ (2)
f.	Other relatives	$\Box$ (1)	□ (2)
g.	Neighbours/friends/colleagues at work	$\Box$ (1)	□ (2)
h.	Other people	□(1)	□ (2)

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#### State of health

I 36	What is your general health? (TUS vo	luntary. ]	ECHP)
Is it			
-	Very good $\Box$	(1)	
-	Good	(2)	
-	Fair	(3)	Please continue with I 37
-	Bad	(4)	Please continue with I 37
-	Very bad $\Box$	(5)	Please continue with I 37
I 37	Do you have any chronic physical or m	ental hea	th problem, illness or disability?
-	Yes □	(1)	Please continue with <b>I 38</b>
-	No 🗆	(2)	
I 38	Are you hampered in your daily activit ness or disability?	ies by thi	s physical or mental health problem, chronic ill-
-	Yes 🗆	(1)	Please continue with <b>I 39</b>
-	No	(2)	
I 39	Would you say that you are?		
-	Severely hampered $\ldots$	(1)	
-	Hampered to some extent. $\dots$ $\square$	(2)	

# Annex 4

Time use of Finnish men and women	aged over 35	in 1999-2000	. All days of th	e week.				Hours	minutes per d	<i>iy</i>
Activity	MEN Age 35-44	45-54	55-64	65-74	75+	WOMEN Age 35-44	45-54	55-64	65-74	75+
Gainful employment, total	5.26	5.11	2.38	0.27	0.01	3.51	4.02	1.48	0.11	0.01
Domestic work, total	2.33	2.35	3.17	3.32	3.18	4.25	3.53	4.36	4.24	3.24
Housekeeping	0.50	0.58	1.09	1.22	1.27	2.16	2.19	2.44	2.55	2.24
Maintenance	0.31	0.34	0.48	0.57	0.38	0.14	0.23	0.27	0.26	0.17
Other housework	0.14	0.13	0.27	0.26	0.21	0.12	0.18	0.33	0.18	0.12
Childcare	0.18	0.03	0.01	0.00	0.00	0.44	0.04	0.00		I
Shopping and services	0.21	0.27	0.29	0.31	0.32	0.35	0.31	0.33	0.29	0.19
Travel related to domestic work	0.19	0.19	0.22	0.15	0.20	0.23	0.18	0.19	0.16	0.12
Personal care, total	10.09	10.13	10.29	11.12	11.32	10.28	10.24	10.40	11.12	11.23
Sleep	8.09	7.57	8.15	8.45	8.57	8.20	8.16	8.30	8.50	8.56
Meals	1.19	1.24	1.29	1.43	1.41	1.17	1.18	1.22	1.28	1.35
Washing and dressing	0.40	0.51	0.46	0.44	0.54	0.51	0.50	0.48	0.54	0.51
Study, total	0.12	0.09	0.03	0.01	ı	0.14	0.05	0.01	0.02	ı
Free time, total	5.34	5.43	7.22	8.26	8.27	4.55	5.31	6.46	7.38	8.52
Participatory activity	0.06	0.09	0.09	0.12	0.09	0.05	0.07	0.07	0.15	0.10
Sports and outdoor activities	0.37	0.41	0.59	0.51	0.34	0.32	0.37	0.41	0.43	0.31
Entertainment and culture	0.05	0.04	0.05	0.05	0.07	0.05	0.04	0.05	0.02	0.05
Reading	0.35	0.46	1.07	1.11	1.17	0.36	0.52	1.01	1.09	1.16
Listening to radio	0.02	0.10	0.12	0.29	0.36	0.03	0.05	0.12	0.15	0.36
Watching television	2.11	2.05	2.55	3.12	3.08	1.35	1.52	2.25	2.49	3.04
Socialising with family and friends	0.48	0.44	0.38	0.43	0.46	0.56	0.48	0.53	0.51	1.05
Hobbies	0.19	0.16	0.18	0.17	0.13	0.11	0.20	0.25	0.36	0.27
Other free time	0.19	0.23	0.36	1.00	1.20	0.20	0.21	0.28	0.36	1.25
Travel related to free time	0.31	0.25	0.23	0.28	0.16	0.30	0.24	0.29	0.21	0.15
Unspecified	0.07	0.10	0.10	0.22	0.42	0.08	0.06	0.09	0.33	0.20
Total	24.00	24.00	24.00	24.00	24.00	24.00	24.00	24.00	24.00	24.00
Number of survey days	781	1003	618	413	169	933	1080	693	458	287
Population	375 000	402 000	270 000	$189\ 000$	82 000	387 000	427 000	296 000	256 000	181 000

							Hours.minute	s per day
Activity	Age 45-54 1987-88	1999-2000	55-64 1987-88	1999-2000	65-74 1987-88	1 999-2000	75+ 1987-88	1999-2000
Gainful employment, total	4.38	4.35	2.16	2.12	0.18	0.18	0.03	0.01
Domestic work, total	3.19	3.15 1_40	3.50	<b>3.58</b>	4.00 0 0 0 0	4.02 2.16	3.13	3.22
Housekeeping Maintenance	1.40 0.32	1.40 0.29	2.09 0.33	0 37 0	2.28 0.31	2.10 039	2.1 / 0 14	2.00 0.23
Other housework	0.14	0.16	0.20	0.30	0.15	0.21	0.06	0.15
Childcare	0.04	0.04	0.00	0.01	0.01	0.00	0.02	0.00
Shopping and services	0.25	0.29	0.27	0.31	0.27	0.30	0.23	0.23
Travel related to domestic work	0.19	0.18	0.20	0.21	0.18	0.16	0.11	0.14
Personal care, total	10.15	10.18	10.36	10.35	10.52	11.12	11.59	11.26
Sleep	8.09	8.07	8.20	8.23	8.32	8.48	9.17	8.57
Meals	1.18	1.21	1.28	1.25	1.30	1.34	1.37	1.37
Washing and dressing	0.49	0.50	0.48	0.47	0.50	0.50	1.05	0.52
Study, total	0.06	0.07	0.02	0.02	0.01	0.01	0.00	0.00
Free time, total	5.40	5.37	7.13	7.03	8.45	7.59	8.36	8.44
Participatory activity	0.08	0.08	0.11	0.08	0.14	0.14	0.08	0.10
Sports and outdoor activities	0.28	0.39	0.38	0.49	0.36	0.46	0.26	0.32
Entertainment and culture	0.04	0.04	0.04	0.05	0.03	0.03	0.01	0.06
Reading	0.53	0.49	1.12	1.04	1.26	1.10	1.15	1.16
Listening to radio	0.15	0.08	0.27	0.12	0.47	0.21	1.00	0.36
Watching television	1.38	1.59	2.02	2.39	2.23	2.59	2.02	3.05
Socialising with family and friends	1.02	0.46	1.12	0.47	1.15	0.48	1.15	0.59
Hobbies	0.17	0.18	0.24	0.22	0.39	0.28	0.20	0.23
Other free time	0.26	0.22	0.36	0.32	0.56	0.46	1.56	1.23
Travel related to free time	0.29	0.24	0.27	0.26	0.26	0.24	0.13	0.15
Unspecified	0.02	0.08	0.02	0.10	0.03	0.28	0.09	0.27
Total	24.00	24.00	24.00	24.00	24.00	24.00	24.00	24.00
Number of survey days	2101	2083	1854	1311	629	871	425	456
Population	565 000	829 000	$500\ 000$	565 000	$410\ 000$	445 000	264 000	262 000

Time use changes in Finland for persons aged over 45 in 1987-1988 and 1999-2000. All days of the week.

## ACTIVE AGEING IN PERSPECTIVE OF AGE STRUCTURE OF POPULATION, EMPLOYMENT AND GOVERNMENT POLICY IN THE SLOVAK REPUBLIC

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#### Introduction

The phenomenon of elderly people and active ageing is one of high relevance issues which has particularly been the object of increased attention of the Government of the Slovak Republic as well as other institutions in the course of the last years.

A need to solve the problem stands in the wake of:

- progressively negative trend in changes in the population structure, namely in terms of its pre-productive, productive and post-productive components and ongoing ageing of population as well as economic and social problems as a result of that state
- a continuum in high unemployment rate that has reached around 19 and 20 per cent since the last years, according to LFS

Global targets considering various social issues, including improvement of conditions for employment as well as statistical measurement and assessment of those phenomena, which were stipulated by the UN General Assembly on the ocassion of acclaiming the year 1999 as the International Year of the Elderly, made certain pressure on handling the problems on active ageing. They are defined more precisely in the National Programme on Protection of the Elderly endorsed by the SR Government in August 1999.

#### 1. Demographic ageing in development of population in the Slovak Republic

Ageing of the population is going on in the population development in the Slovak Republic similar to many other European countries. Changes shown in the demographic development in the last period are the reflection of the actual socio-economic situation and changes in the living standard of the population as well as of the worldwide globalization changes.

The age structure of the population in the Slovak Republic as the result of current and past reproduction processes and phenomena is characterized by irregular changes in the natality and mortality level, by wars and by other occurrences.

Age structure of the population in the Slovak Republ	Age structure of	of the pop	oulation in	the Slovak	Republic
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Census	Perma	nently resident population in the	e age (in %)
date	pre-productive	productive <sup>1)</sup>	post-productive
1. 12. 1970	27,2	56,3	16,5
1. 11. 1980	26,1	57,5	16,4
3. 3. 1991	24,9	57,8	17,3
26. 5. 2001	18,9	63,1	18,0

<sup>1)</sup>including unknown age

The view on the basic age structures of the Slovak population shows continuous decrease of the share of children (aged 0 - 14) as a result of declining birth-rate. The share of the population in pre-productive age decreased by 8,3 point in 2001 as compared with 1970 and reached 18,9 per cent of the total population. It was the absolute decrease of the number of young people by 218 thousand to 1 015 thousand during the last 31 years.

For your information, Slovakia has 5 mil. 379 thousand inhabitants according to the Population Census.

The share of persons in productive age (men aged 15-59, women aged 15-54) slightly increases while this age group comprises persons born in Slovakia after the war and in the seventies. The share of population in productive age as compared with 1970 increased by 6,8 point in 2001 and reached 63,1 per cent. It is an absolute increase by 796 thousand persons. Number of persons in productive age reached 3 349 thousand to May 26, 2001 and 48 per cent of this number were women.

Age structure of the population in post-productive (men aged 60 and over, women aged 55 and over) age is also gradually changing. In comparison with 1970 the share of persons in post-productive age increased by 1,5 point from 16,5 per cent to 18 per cent of the total population. It was an absolute increase by 215 thousand persons as compared with the year 1970.

Persons in the age group 80 years old and over participated on this increase most significantly - more than twice, which was an absolute increase from 49 thousand to 104 thousand persons. Age group of 75-79 years old persons increased from 70 thousand in 1970 to 137 thousand in the year 2001, i. e. almost by 96 per cent. Gradually but more slightly increased also the number of persons in other age groups over 60.

As a reflection of decline of the share of children population and of the increase of number of persons in postproductive age index of ageing is growing. It explains the proportion of the pre-productive part of the population to the post-productive one. Ageing index calculated for both sexes deteriorated from 60,2 in 1970 to the value of 95,2 in the year 2001. It means, there were 95 persons in post-productive age per 100 persons in the age 0-14.

The current age structure in the Slovak Republic is hiding a large potential of acceleration of demographic ageing in the future. The ongoing decrease of the number of births will be more significant. At the same time, persons born in the forties and the fifties will be moving over the 60 years limit, which will result into widening of the top of the age pyramid. Especially will increase the share of population aged 60 to 70. The share of persons aged 60-64 will increase in 2010 from 4,1 per cent to 5,5 per cent and the share of persons aged 65-69 will increase from 3,7 per cent to 3,9 per cent of the total Slovak population.

This fact will be important for the social policy of the government and it will influence more significantly first of all the financing of social and pensioner's insurance, as well as financing of the health care of the population of the Slovak Republic.

Age structure of population in the SR by censuses



## 2. Economically active population in the sr in terms of age structure (according to the results of Labour Force Sample Survey)

**In the whole course of the 90<sup>th</sup>, permanent growth in the number of economically active population can be observed in the Slovak Republic.** In the year 2000 it amounted to 2 608 thousand on average, from which 45.5 per cent was covered by women. Economic activity rate has kept itself constant at the level of 60 per cent. That implies that from the total population aged 15 and more the economically active are represented by 6 persons per 10 inhabitants in the SR. The indicator reflects significant gender differences. By men, the proportion of labour force to the total men was by 16 percentage points higher than that by women.

Year	1994	1995	1996	1997	1998	1999	2000
Total	59.9	59.8	60.1	59.9	59.9	60	60.3
Men	69.1	68.9	68.7	68.6	68.9	68.7	68.6
Women	51.4	51.5	52.3	51.8	51.5	52	52.6

Economic activity rate

#### Economic activity rate


The economically inactive, i. e. **population outside of labour market** represented 1 721.1 thousand (39.7 per cent) on average in 2000 in the SR. Within that group, retired persons cover the largest share - 62 per cent. Interannually, the number of pensioners went up by 23.1 thousand, and it was women who had an absolute predominance in the interannual increase of the retired by their 68 per cent. The second largest group was represented by students and apprentices with the proportion of 25.3 per cent of the total economically inactive. The rest is covered by persons in households (5.4 per cent), persons on the next maternity leave (3.3 per cent), persons not able to work (2.4 per cent), persons "discouraged" (i. e. they do not believe in getting a job - 0.6 per cent), and the persons who are not interested in working, or who are not facing the necessity to work.

# 2.1 Employment

Various transformation changes affected development of employment in the SR. There were undertaken significant restructuring changes in many of enterprises which were associated also with privatization of several state enterprises. Non-profitable activities were revaluated with the aim of creating more effective employment and reducing **ineffective overemployment** as it was one of the typical features of many companies particularly in the beginning of the 90<sup>th</sup> which resulted in a wave of redundancies. Transformation of the Slovak economy being in progress now has led to approximating the sector structure of the SR economy to that one in developed countries. Consequently, it was reflected in growing proportion of services at the expense of the share of industry. There is a continuum in the process of employment transformation within economic sectors of the national economy which reveals itself especially in both increasing the proportion of employment in the tertiary sector and decreasing the share of employment in the secondary and first of all in the primary sector of the SR national economy.

The transformation process of the Slovak economy found its expression in the development of employment after 1993 in the way that by 1996 there was interannual increase in the number of employees followed by yearly interannual decrease in the average number of employees in the SR during the period since 1997 up to the 2<sup>nd</sup> half of 2000. The trend stopped only in the course of the 4<sup>th</sup> quarter of 2000 when a new trend of growing the average number of employees started and intensity of interannual increases of employees for respective quarters of the years has gradually enhanced.

One of the most significant problem in the domain of employment in the SR is that of the constant decline of proportion of employees to the total economically active persons which has become evident since 1997. While until 1997 the proportion gradually increased from 86.4 per cent in 1994 to 88.7 per cent in 1996, since the year 1997 it started its gradual falling down to the level of 80.6 per cent in 2000. On the other hand, the increase in the number of the unemployed and in the unemployment rate in the SR accompanied the development introduced.

Year	1994	1995	1996	1997	1998	1999	2000
Economically active population, of which:	2443.7	2470.5	2509.1	2521.9	2544.8	2573.0	2608.2
employed (in thousands)	2110.2	2146.8	2224.9	2205.9	2198.6	2132.1	2101.7
in % of the total LF	86.4	86.9	88.7	87.5	86.4	82.9	80.6
unemployed	333.5	323.7	284.2	297.5	317.1	416.8	485.2
(in thousands.) unemployment rate in %	13.6	13.1	11.3	11.8	12.5	16.2	18.6

Development of the number and the	e proportion of employees	in the SR during 1	994-2000 (according to LFSS)
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# 2.2 Employment by age structure

Considering the **age structure**, from the total economically active population in the SR, they are the persons aged from 25 to 49 who are in a dominant position on labour market. In 2000 their proportion reached 69 per cent, 16.7 per cent was covered by those at the age between 15-24, and the age group of 50 years and more represented 14.3 per cent of the economically active population on labour market. It can be observed that analogously to the case of the total population age structure in the SR, the age structure of the economically active and particularly of persons employed has also **turned for the worse** by comparison with the situation in 1994.

In 2000 the proportion of the economically active aged 15-24 dropped by 0.2 of percentage point compared with 1994; for age group 25-49 it was 1 percentage point. On the contrary, the proportion of the economically active population aged over 50 rised by 1.2 percentage point for the period aforementioned. However, still more negative tendency showed itself in the category of persons employed where the share of young people aged 15-24 decreased by 1.7 percentage point by the same increase in the proportion of those over 50 years of age. The proportion of the employees aged 25-49 did not made a change.

		1994			2000	
			proportions in %	in age group		
Age	15-24	25-49	50+	15-24	25-49	50+
Economically active, of which: employed unemployed	16,9 14,2 33,9	70,0 71,9 58,3	13,1 13,9 7,8	16,7 12,5 31,6	69,0 71,9 59,1	14,3 15,6 9,3

Development of age structure of economically active persons in the SR (period 1994-2000)

The economic activity rate in the SR is traditionally high and it has gradually been going up again after its slight interannual decline in 1997. It belongs to the highest in Europe ranging from around 48-50 per cent in Italy and Belgium to about 58-72 percent in Austria and the Netherlands.

On the other hand, the employment rate in the SR is slow compared with that one in the EU. While the average employment rate (i. e. number of employees aged 15-64/number of population aged 15-64) reached 62.2 per cent in 1999 in 15 EU countries, it was only 58 per cent in the SR measured for the same period by making use of comparable method of calculation.

As it is apparent from the review, the proportion of older population, namely those aged 50 and more on labour market has **considerably increased** since 1994.

Undoubtedly, older people (at the age over 50) are engaged in working activities and their activity outlasts especially in the branches of agriculture (in 2000 there were 25.8 per cent of employees aged over 50 from the total persons involved in that domain), education (23 per cent), transport (18 per cent), health service (17.8 per cent), and public administration (17.7 per cent). From the total number of the population aged 50 and more, 95 per cent had a regular, predominantly full-time job, and just 3.8 per cent of the persons worked for the half-time. Almost 60 per cent of the older people (over 50) were employed in the public or the state sector, 26 per cent of them worked in the private sector, and 7 per cent was covered by self-employed (entrepreneurs, or traders).

Economic activity rate of elderly persons (over 50) increased from 24,5 per cent in 1994 to 26,6 per cent in the year 2000. It is influenced by relatively earlier retirement of Slovak population, the pension age is one of the lowest in comparison with other countries in Europe and in the world.

As it ensues implicitly from the tables in annex after the segregation of this characteristic into five-year age groups, **economic activity rate of persons aged 50-54** was significantly high - 79,5 per cent (87,8 per cent by men, 71,8 per cent by women). Also in comparison with the year 1994 it increased considerably (by 3,8 per-centage point).

Economic activity rate in the **age group 55-59** was 40 per cent (in comparison with 1994 increase by 0,6 percentage point), while its considerably lower value, as compared with former age group, is influenced by the possibility of women's retirement (aged 55 and over in average). That was the reason the value of economic activity rate in this age group by men was 65,5 per cent and by women only 18,4 per cent.

In the age group of persons **aged 60-65** the economic activity rate in 2000 reached only 6,4 per cent, in comparison with the year 1994 it was a decline by 1,2 percentage point (by men the rate was 10,8 per cent - decline by 2,4 percentage point and by women the rate was only 2,9 per cent - decline by 0,3 percentage point).

In the **age over 65** the economic activity rate represented only 1 per cent (by men 1,8 per cent, by women 0,5 per cent). In comparison with the year 1994 it was a decline by 0,9 percentage point (by men it was a decrease by 1,9 percentage point, by women decrease by 0,3 percentage point).

Aforementioned low economic activity rate of persons aged 55 and over is as well the reason for the efforts in the Slovak Republic to gradually increase the **pension age of women** from the former 55 years to 60 years of age.

### Tab.1 BALANCE OF ECONOMIC ACTIVITY OF POPULATION AGED 50+ BY LFSS FROM 1994 TO 2000

				thousands
INDICATOR		2. qu	arter	
	1994	1996	1998	2000
Population aged 50+	1 295,7	1 316,4	1 352,0	1 400,5
of which				
economically active population	317,6	328,6	340,1	372,4
of which				
employed	291,1	308,4	314,8	323,5
unemployed	26,6	20,1	25,3	48,9
economically inactive population	978,1	987,8	1 011,9	1 028,1
Economic activity rate 50+ (per cent)	24,5	25,0	25,2	26,6
Employment rate 50+ (per cent)	22,5	23,4	23,3	23,1
Unemployment rate 50 +(per cent)	8,4	6,1	7,4	13,1

TOTAL				thousands
INDICATOR		2. q	uarter	
	1994	1996	1998	2000
Population				
50-54	260,9	267,0	285,7	315,6
55-59	231,7	235,7	245,0	254,0
60-65	234,4	226,3	216,0	215,7
65+	568,8	587,4	605,3	615,2
Economically active population				
50-54	197,5	205,8	218,1	250,9
55-59	91,3	95,4	97,8	101,7
60-65	17,9	18,7	16,3	13,7
65+	10,9	8,7	7,9	6,1
Employed				
50-54	182,7	193,7	200,8	217,6
55-59	83,3	89,7	91,7	87,7
60-65	15,2	17,1	15,3	13,1
65+	9,9	7,9	7,0	5,1
Unemployed				
50-54	14,8	12,1	17,3	33,3
55-59	8,0	5,6	6,1	14,0
60-65	2,7	1,6	1,0	0,6
65+	1,1	0,8	0,9	1,0
Economic activity rate (per cent)				
50-54	75,7	77,1	76,3	79,5
55-59	39,4	40,5	39,9	40,0
60-65	7,6	8,3	7,5	6,4
65+	1,9	1,5	1,3	1,0
Employment rate (per cent)				
50-54	70,0	72,5	70,3	68,9
55-59	36,0	38,1	37,4	34,5
60-65	6,5	7,6	7,1	6,1
65+	1,7	1,3	1,2	0,8
Unemployment rate (per cent)				
50-54	7,5	5,9	7,9	13,3
55-59	8,7	5,9	6,3	13,8
60-65	15,3	8,6	6,3	4,5
65+	9,9	9,3	11,9	16,5

### Tab.2a BALANCE OF ECONOMIC ACTIVITY OF POPULATION AGED 50+ BY LFS FROM 1994 TO 2000

MEN				thousands
INDICATOR		2. q	uarter	
	1994	1996	1998	2000
Population				
50-54	122,9	125,7	135,9	151,9
55-59	106,0	107,7	112,2	116,7
60-65	104,0	100,2	95,3	94,5
65+	222,2	227,9	233,2	235,0
Economically active population				
50-54	108,6	109,7	116,2	133,4
55-59	72,4	73,2	76,2	76,5
60-65	13,7	13,7	11,7	10,2
65+	8,2	6,8	4,4	4,2
Employed				
50-54	100,7	103,4	105,9	113,1
55-59	66,1	68,8	71,5	64,6
60-65	12,2	12,3	10,8	9,8
65+	7,6	6,2	3,4	3,7
Unemployed				
50-54	7,8	6,4	10,3	20,3
55-59	6,3	4,4	4,7	11,9
60-65	1,5	1,4	0,9	0,4
65+	0,6	0,6	0,9	0,5
Economic activity rate (per cent)				
50-54	88,3	87,2	85,5	87,8
55-59	68,3	68,0	67,9	65,5
60-65	13,2	13,7	12,3	10,8
65+	3,7	3,0	1,9	1,8
Employment rate (per cent)				
50-54	81,9	82,3	77,9	74,5
55-59	62,4	63,9	63,7	55,4
60-65	11,7	12,3	11,3	10,4
65+	3,4	2,7	1,5	1,6
Unemployment rate (per cent)				
50-54	7,2	5,8	8,8	15,2
55-59	8,7	6,0	6,1	15,6
60-65	10,7	10,3	7,7	4,0
65+	7.9	8,6	21,7	10,8

### Tab.2b BALANCE OF ECONOMIC ACTIVITY OF POPULATION AGED 50+ BY LFS FROM 1994 TO 2000

WOMEN				thousands
INDICATOR		2. q	uarter	
	1994	1996	1998	2000
Population				
50-54	138,0	141,2	149,8	163,7
55-59	125,7	128,0	132,9	137,3
60-65	130,4	126,0	120,7	121,2
65+	346,5	359,5	372,1	380,1
Economically active population				
50-54	88,9	96,0	101,9	117,5
55-59	18,9	22,2	21,6	25,2
60-65	4,2	5,0	4,6	3,5
65+	2,7	1,8	3,6	1,9
Employed				
50-54	82,0	90,3	94,9	104,6
55-59	17,2	21,0	20,2	23,1
60-65	2,9	4,8	4,5	3,3
65+	2,3	1,6	3,6	1,4
Unemployed				
50-54	7,0	5,7	7,0	12,9
55-59	1,7	1,2	1,4	2,1
60-65	1,3	0,2	0,1	0,2
65+	0,4	0,2	-	0,6
Economic activity rate (per cent)				
50-54	64,4	68,0	68,0	71,8
55-59	15,0	17,3	16,3	18,4
60-65	3,2	4,0	3,8	2,9
65+	0,8	0,5	1,0	0,5
Employment rate (per cent)				
50-54	59,4	64,0	63,4	63,9
55-59	13,7	16,4	15,2	16,8
60-65	2,2	3,8	3,7	2,7
65+	0,7	0,4	1,0	0,4
Unemployment rate (per cent)				
50-54	7,8	6,0	6,9	11,0
55-59	8,8	5,5	6,7	8,3
60-65	30,2	3,7	2,7	5,9
65+	16,2	12,0	-	28,8

### 3. Preparation of pension reform

As I mentioned the current pension age in the Slovak Republic is still one of the lowest ones in comparison with other European countries and with countries in transformation of the former V-4, Hungary, Poland and Czech Republic. The pension age is stipulated by the Act on Social Security. According to the Act, the pension age by men is 60 and that by women 53-57, depending on the number of children.

From the analysis of demographic and socio-economic development in order of harmonization with legislation in social sphere and standards of European Union complete reform of social and pension insurance is being prepared. The main items to be solved are

- · optimal age of retirement
- gradual equalizing of retirement of women and men

As the necessity of adjustment of pension age is concerned I can mention for example the following facts:

- while by current limits of pension age there were 3,5 person in productive age (over 15) per 1 person in postproductive age in 2000, then if these limits were kept in 2015 there would be only 2,5 person in productive age per 1 person in post-productive age
- in the year 2000 there were 5,3 men aged 15-59 per one men over 59, in 2015 the value will be only 3,8
- In the year 2000 there were 17,1 per cent of population over the current limit of pension age. Women represent 66,4 per cent of all pensioners, while men represent only 33,6 per cent. That means, from the total male population only 11,8 per cent are in pension age, but from the total female population it is 22,1 per cent.

Also above mentioned facts are making a pressure on widening and development of the statistical information system, particularly in the sphere of social statistics.

### 4. Targets and principles of government policy in the Slovak Republic in the field of active ageing

National targets and principles on active ageing are focused on:

- supporting development of employment by creating such a business environment which enables its factual improvement, and creating conditions for economic recovery of the regions with the highest unemployment rate also by foreign investors assistance. By means of such measures it could be possible to create, among others, suitable conditions for employment of elderly people that, in turn, will lead to meet condition for increasing the level of pension security
- encouraging development of employment by restructuring industry and socio-economic development of the regions with the highest unemployment rate, taking also into account direct impact and importance of developing employment for increasing available resources of various insurance schemes
- handling employment of the elderly through engaging senior experts in activities of performing small and medium enterprise consultancy, law consultancy in the area of enterprise and company management, or human resources management, and that all to do with the aim to activate experts at pensionable age as well as to provide various services for firms and companies. Moreover, the services, such as information, comercial, advisory, translation, guiding and other ones might be substantionally more attractively priced than those provided by any reputable firms.

However, keeping the elderly active requires adopting a set of global measures to solve the issue of unemployment that currently seems to be the most serious socio-economic problem as the unemployment rate in the SR has amounted to 19 per cent, according to LFS. Enhancing the flexibility of the labour market by means of supporting economic growth which can be reached particularly by increasing demand and, consequently, by creating new working vacancies is considered to be a basic way how to cope with the situation. Another approach is to make use of active market policy tools such as life-long learning or retraining which enable the elderly to continue their working. At the same time, modification of working conditions in favour of the elderly has to be taken alongside. It is particularly the case of elderly women that modification of working conditions is necessary when keeping job or reinvolving in. Finally, much considerable role in ensuring labour market balance in the next years will be played by labour force mobility.

Given the conditions of the SR, ideas and recommendations introduced are an impulse to defining, measuring and assessing statistical indicators.

# LESSONS FROM THE DUTCH HEALTH AND RETIREMENT SURVEY (CERRA)

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# 1. Introduction

In the late 1970's, elderly workers in the Netherlands were given new opportunities for early retirement by means of company or sector provided early retirement schemes. These so called VUT schemes were designed as part of an "old for young" policy in an attempt to lower the high level of youth unemployment in a period of economic downturn. Since then, these financially attractive VUT schemes have become widespread. They offer an average replacement rate between 70 and 90 percent of last earned gross wages at an average age of 59. In the meantime however, youth employment has gone to historic low levels and shortages start to appear in the labour market. However, the VUT early retirement schemes are still in place and count as one of the reasons for the very low labour force participation rate of elderly people aged 60 and over: 20 percent for males and 6 percent for females in 1998.

In the beginning of the 1990's, policy concerns were raised with respect to the low level of elderly labour force participation combined with a rapidly ageing population in the Netherlands. Soon there would be too few workers to pay for the benefits of the retired workers in the pay-as-you-go public pension system and private VUT schemes. But when these schemes would be changed, how would that affect the well-being of a growing part of the population? How would it affect the already high inflow into disability schemes? Why were elderly people retiring so early and how could elderly labour force participation be increased? As part of the growing debate on the consequences of population ageing, these questions lead to the funding of the Dutch Foundation for Elderly Research (Nestor). In 1992, Nestor asked the Tinbergen Institute to work out a detailed proposal for the design and collection of a longitudinal data set for the elderly (defined as 50 years and older) and to formulate a research plan to study the economics of labour force participation and retirement. Three research topics were suggested:

- (a) labour force participation and retirement;
- (b) income status and dynamics;
- (c) income and age-related take-up of public services and transfers.

New data collection was thought to be important for three reasons. Firstly, there was no informative, high quality data on elderly available in the Netherlands that would permit researchers to fully study the process of retirement and the economic consequences of major events, such as the onset of health problems, impairment of physical and social functioning or death of a spouse, which occur at advanced ages, or to map the changes in income, consumption and wealth accumulation patterns in an ageing population.

Secondly, there was no longitudinal data available in the Netherlands that would provide a full record of all the important social and economic changes that take place as people grow older. One usually thinks of youth as being full of hectic changes. But this is also true of the aged. While the changes may not be as rapid as at earlier ages, they are often more radical. Retirement from active life and the accompanying changes in income and

wealth position, in social contacts, in time use and the ageing process itself, bring about complete shifts in economic needs. When studying the socio-economic status of the elderly, one has to know about these changes, what they are, when they arrive, and how they affect the household. Hence the need for longitudinal data that would follow a representative sample of the elderly population over time, recording changes in characteristics and living conditions as they grow older. The data had to capture features of the timing of the transition from work to non-work, time use, participation in economic and social activities, and the subjective appreciation of the socio-economic status.

Thirdly, building a data base for research on the elderly is the most appropriate way to 'anchor' research in ageing. As has been very clearly shown by for example the University of Michigan Survey Center's Panel Study of Income Dynamics (PSID), a good data set will by itself generate a great number of scientific studies. The PSID started in 1968 and is one of the longest running panel surveys in the U.S. Another more specific example is the Retirement History Survey (RHS) which has been the basis of a good deal of research on the elderly, which to quote a review article by Hurd (1990), "could not have been done with other data sets". In 1990 the Survey Research Center was awarded a new grant from the National Institute on Ageing (U.S. Department of Health and Human Services) to design and conduct a new panel data set, labelled the Health and Retirement Study (HRS)<sup>1</sup>. Given the substantial amount of experience and effort that has been put into the RHS and HRS, these surveys were used as a model for the design and implementation of the Dutch Health and Retirement survey, called CERRA (Centre for Research on Retirement and Ageing). The CERRA project started in 1992. The first wave of the CERRA household survey was held in the autumn of 1993, the second in the autumn of 1995. In 1994, a additional survey was held among employers of the household members in the CERRA household survey.

Contrary to the RHS and HRS, the Dutch Health and Retirement Survey has not been continued after two waves (as the Nestor funding ran out). This has limited the longitudinal character of the information on the socio-economic status of elderly in the Netherlands and kept CERRA from truly anchoring ageing research in the Netherlands. So what has been the value of the CERRA survey? What research has been performed with it? What lessons can be learned from this research about data collection on the socio-economic status of the elderly? And which opportunities does it still provide?

In this paper we try to give answers to these questions. In chapter 2 we give an overview of the CERRA survey, its history, contents, implementation process, costs and results. Next in section 3, an impression is given of the research that has been performed using information from the CERRA survey. What information has been used, what information has not been used, and what information has been lacking in answering research questions? Not all the opportunities provided by the survey has been fully used. Chapter 4 gives an example of how answers on questions about time expenditure can be used to obtain a better insight in the participation of elderly people in socio-economic life. It describes results from the CERRA survey and presents some simple analyses with time expenditure data. Chapter 5 concludes with lessons learned from the CERRA data collection, including opportunities and further needs for answering questions regarding true socio-economic status and participation in socio-economic life by elderly people.

### 2. Overview of CERRA survey

A very extensive overview of the first wave of the CERRA survey can be found in Fokkema (1996). Here we give a more general overview. At the start of the CERRA survey, respondents were selected nation-wide under the condition that at least the breadwinner (main income earner) agreed to participate in the survey. Some of the respondents in the first wave of the CERRA survey had participated in a 1991 national survey put out by the Dutch Social and Cultural Planning Bureau (SCP)<sup>2</sup>. A 'primary' group of respondents consists of house-holds with the head aged between 53 and 63 on October 1st, 1993. A secondary or control group consists of house-holds with the head aged between 43 and 52. For the first wave, 4001 households from the primary group

<sup>&</sup>lt;sup>1</sup> Since then the Michigan Survey Research Center has been awarded additional grants for new waves of HRS and for the collection of data on the very old (80 plus). In recent years, the Survey Research Center has combined their data collection efforts into one sample whereby the focus shifted from an 'age-of-the-respondent' approach to a 'birth-cohort' approach.

<sup>&</sup>lt;sup>2</sup> Addresses of the elderly persons in the 1991 SCP survey were provided to CERRA. Hence for a subset of the elderly respondents in the CERRA survey, there is information available that was collected in 1991.

and 1263 households from the secondary group were approached by telephone. To structure the survey, heads of household were distinguished by five different labour market states:

- employment (contract, seasonal and stand-by workers);
- self-employment;
- early retirement (receiving VUT early retirement or similar benefits);
- disability, and
- otherwise (mainly unemployed and pensioners).

Each type of respondent received a different type of oral questionnaire and a standard written questionnaire. Heads of household were asked to fill out the written questionnaire in the presence of the interviewer. Partners were given a separate oral questionnaire and a written questionnaire similar to that of their partner. The first wave of the CERRA survey was also combined with a survey in 1994 among employers of the interviewed employees, but the response rate to this employer's survey was rather low.

From the 5264 households in the first wave of the CERRA survey, 4727 households returned valid and completed sets of questionnaires (89.8 percent). The 537 non-valid cases contain wrong persons as head of household (22), refusals (275), households that were unavailable during the survey period (164) and others (76). Table 1 gives an overview of the number of valid questionnaires that were completed in 1993. Before the second wave of the survey, respondents were presented a summary of the results of the first wave to motivate participation and reduce attrition. Of the initial 4727 households in the first wave, 1303 households (27.6 percent) dropped out in the second wave for various reasons. Table 2 gives an overview of the number of valid questionnaires that were completed in 1995. Beforehand it was assumed that the response rate would be around 80 percent and the attrition rate around 30 percent<sup>3</sup>. With a response rate of 89.8 percent and an attrition rate of 27.6 percent, the response in the CERRA survey can be considered successful.

	Heads of household		Par	Partners		Households with partner	
	Oral	Written	Oral	Written	Number	Percentage	
		Primary group: H	Iead of househo	ld aged 53 to 63			
Employed	1296	1275	1031	1011	1098	84.7	
Self-employed	222	220	169	169	178	80.2	
Early retired	759	750	613	605	656	86.4	
Disabled	690	672	476	466	499	72.3	
Other	614	604	218	217	237	38.6	
Total	3581	3521	2507	2468	2668	74.5	
	, L	Secondary group:	Head of househ	old aged 43 to 52			
Employed	910	903	740	730	786	86.4	
Self-employed	91	91	62	62	69	75.8	
Early retired	1	1	1	1	1	100.0	
Disabled	78	77	51	51	55	70.5	
Other	66	66	15	15	17	25.8	
Total	1146	1138	869	859	928	81.0	
Full total	4727	4659	3376	3327	3596	76.1	

### Table 1: Number of valid questionnaires in the 1993 CERRA survey

<sup>&</sup>lt;sup>3</sup> The attrition rate was based on information from the OSA Labour Market Survey and the CBS SEP. The attrition rate in the OSA Labour Market Survey for the age group 50 and older was calculated at 35 percent between the 1985 and 1986 wave, and at 28.5 percent between the 1986 and 1989 wave. The CBS SEP panel survey had roughly 8000 participants in April 1984, 7000 in October 1984 and 6000 in April 1985, from which a 12,5 percent attrition rate was derived for the half year's interval and a 25 percent rate for the full year's interval.

	Heads of household		Par	Partners		Households with partner	
	Oral	Written	Oral	Written	Number	Percentage	
		Primary group: H	lead of househo	ld aged 53 to 63			
Employed	664	664	507	507	547	82.4	
Self-employed	151	151	101	101	119	78.8	
Early retired	701	701	563	563	610	87.0	
Disabled	450	450	290	290	315	70.0	
Other	640	640	270	270	314	49.1	
Total	2570	2570	1731	1731	1905	74.1	
	Å	Secondary group:	Head of househ	old aged 43 to 52			
Employed	654	654	518	518	562	85.9	
Self-employed	66	66	39	39	48	72.7	
Early retired	1	1	1	1	1	100.0	
Disabled	67	67	38	38	49	73.1	
Other	66	66	23	23	28	42.4	
Total	854	854	619	619	688	80.6	
Full total	3424	3424	2350	2350	2593	75.7	

Table 2: Number of valid questionnaires in the 1995 CERRA survey

The CERRA survey contains a large number of questions on topics that relate to the labour market position of elderly workers, their options for retirement and a variety of personal circumstances, like health conditions. Table 3 gives a brief overview of the topics that are treated in the oral and written questionnaires. Included in the 1993 survey are questions regarding the individual labour market status in the autumn of 1991. Information about changes in the socio-economic status between 1993 and 1995 can thus be combined with information about changes between 1991 and 1993. The retrospective questions provide an extra (virtual) wave of the survey. Table 4 illustrates how heads of household change their labour market status over a period of 4 years, first from 1991 to 1993 and then from 1993 to 1995. For example, of the original 2662 employees in 1991, at least 839 have retired by 1995 (31.5 percent). Between 1991 and 1995, only 62 retirees return to labour (3.6 percent). In most cases these individuals were unemployed. During the survey period, retirement percentages grow and re-entrances to the labour market decline, reflecting the ageing process of respondents over time. A considerable amount of respondents change from one retirement programme to another during the four years: 6.4 percent of all retirees between 1991 and 1993, and 12.4 percent of all retirees between 1993 and 1995. These changes either result from eligibility for early retirement programmes, accounting for 63.5 percent of all changes between 1993 and 1995, or from reporting errors. The main trend is one of growing retirement over age, which in general consists of permanent exits from the labour market.

Торіс	1993	1995
General characteristics of the respondent	Х	Х
Characteristics of the current job and employer	Х	Х
Health in relation with employment	Х	Х
Income from labour, pensions, benefits and other sources	Х	Х
Labour market histories	Х	Х
Characteristics of the former employer	Х	
Changes in the labour market situation in the past two years		Х
Labour market situation in two years time	Х	Х
Retirement arrangements in current (workers) or former (retirees) job	Х	Х
Individual moments of potential retirement		Х
Opinions concerning retirement	Х	Х
Job search behaviour	Х	Х
Time preferences and risk aversion		Х
General subjective health assessments	Х	Х
Detailed subjective health assessments		Х
Objective health assessments	Х	Х
Health insurance	Х	Х
Household income and bequests	Х	Х
Housing and migration	Х	Х
Wealth		Х

Table 3: Overview of the topics treated in the CERRA survey

The CERRA survey has been fielded by Intomart, a company which is specialised in large-scale surveys among households. A typical interview lasted 90 minutes on average. However, respondents appreciated the survey topic, and often took time to talk more on their health and socio-economic status than the survey required. However, there were only limited options for open end questions. The costs associated with the survey included the preparation and design of the questionnaire, the actual survey and post-survey cleaning and coding of the data, and did amount to roughly  $\leq 250,000$  for the first wave and  $\leq 200,000$  for the second wave.

	Employee	Self-employed	Early retired	Disabled	Unemployed		
1991 status	Labour market status in 1993						
Employee	2166	7	359	58	72	2662	
Self-employed	8	296	3	2	11	320	
Early retired	2	0	493	4	36	535	
Disabled	3	4	12	695	26	740	
Unemployed	22	5	26	7	399	459	
Total 2201	312	893	766	544	4716		
1993 status		Labou	r market status in	1995		Unknown	
Employee	1286	17	257	34	59	548	
Self-employed	6	200	6	6	6	88	
Early retired	1	0	608	5	36	243	
Disabled	3	0	46	459	18	240	
Unemployed	22	0	79	13	293	137	
Total	1318	217	996	517	412	1246	

Table 4: Labour market transitions between 1991 and 1995 in the CERRA data

One of the aims of CERRA was to interview a representative sample from the Dutch elderly population. To see whether this has been realised, some characteristics of the heads of household in the CERRA survey are compared with average characteristics in the Dutch elderly population as reported in the Labour Force Survey of 1993 and 1995, held by Statistics Netherlands (Centraal Bureau voor de Statistiek, CBS). Table 5 shows population shares by gender and labour market status. Heads of household in the CERRA survey are more than average males (almost an obvious result caused by sample selection). Also, heads of household generally are breadwinners, so it is not surprising that workers are over-represented in the CERRA survey. Otherwise, the distribution between workers, disabled and other respondents in the 55 to 64 age group is fairly representative for the actual population.

		Age	45 - 54		Age 55 – 64				
	19	93	1995		199	3	1995		
	CERRA	CBS	CERRA	CBS	CERRA	CBS	CERRA	CBS	
Male	83	51	84	51	82	49	81	50	
Female	17	49	16	49	18	51	19	50	
Working	82	62	84	64	36	24	34	26	
Disabled	10	14	8	13	20	24	19	24	
Other	9	24	8	23	44	51	47	51	
Total	100	100	100	100	100	100	100	100	

#### Table 5: Population shares by gender and labour market status (percentages)

The proportion of individuals by level of education is very similar between the CERRA survey and the relevant Dutch population. Table 6 shows that educational levels with relatively few people are over-represented. This has the advantage of increased reliability for outcomes from an analysis on these groups. Table 7 shows worker percentages by employment and sector type. The CERRA survey slightly over-represents employees relative to self-employed workers. The representation of the CERRA survey by sector type is striking, both in 1993 and 1995.

### Table 6: Population shares by level of education (percentages)

	199	3	19	1995		
Education	CERRA	CBS	CERRA	CBS		
Primary general	19	23	16	20		
Primary vocational	22	19	22	19		
Secondary general	14	9	15	8		
Secondary vocational	16	30	17	31		
Higher general	5	2	5	2		
Higher vocational	17	12	19	13		
Academic	5	5	6	5		
Unknown	3	0	2	0		
Total	100	100	100	100		

	199	93	199	95	
	CERRA	CBS	CERRA	CBS	
Employee	87	81	86	81	
Self-employed	13	19	14	19	
Agriculture and fishing	5	5	5	5	
Mining	0	0	0	0	
Industry	18	19	15	17	
Utility companies	1	1	1	1	
Construction	8	7	8	7	
Catering	14	16	13	15	
Transport	6	7	5	6	
Financial services	10	10	11	12	
Other services	33	34	35	35	
Unknown	6	1	6	2	
Total	100	100	100	100	

Table 7: Worker shares by employment and sector type (percentages)

### 3. Research with the CERRA data

Since 1993, many aspects of the Dutch elderly population have been investigated with data from the CERRA survey. Here we try to give a very short overview of the research performed without being complete, focussing on data that has been used, experiences with the data, and problems arising from these data, including lack of data.

### Income

The CERRA survey contains extensive questions on income from wages, benefits and pensions. Heyma (2001) presents an overview of, and analyses with the income data from CERRA. A simultaneous model of net hourly wages and labour participation is estimated, using panel data from 1991, 1993 and 1995. The analysis is performed on 3772 observations of non-workers and 5151 observations of workers (maximum number of workers at any time is 2662), of which 3781 have known wages and 1370 have no data on wages. Reproduction of net hourly wages, based on estimation results, show good fits of both the wage level and distribution. The estimation results are used to calculate non-stochastic life-time wage profiles from 15 to 65 years for each individual in the CERRA data. Next these wage profiles serve as basis for the calculation of potential benefits and pensions, using detailed benefit and pension rules. A comparison between calculated benefits and pensions and actual benefits and pensions observed in the CERRA data, show very similar distributions. The calculated wage profiles are not only used in the retirement model of Heyma (2001), but also in Kerkhofs, Lindeboom and Theeuwes (1999).

### Labour market status and retirement

When the CERRA data became available in 1994, the Centre for Economic Research on Retirement and Ageing at Leiden University immediately started with an empirical analysis of labour force participation and retirement. Heyma and Thio (1994) applied a labour force participation equation for both the Netherlands and the United States, comparing CERRA data from 1993 with similar data from the Health and Retirement Study (HRS) held in 1992. The study shows that the surveys are very similar, enabling comparative analysis at the micro-level. A model for individual retirement decisions in which elderly workers choose between employment, early retirement, disability and unemployment had already been constructed by Woittiez, Lindeboom and Theeuwes (1992), based on the AVO 1991 data (Aanvulling Voorzieningen Onderzoek), held by the Dutch Social and Cultural Planning Bureau (SCP). With the new CERRA data, Lindeboom (1996) used the larger amount of observations for a modification of this model. Heyma (1996) further extended the model by introducing a life-cycle dimension and uncertainty, presenting a simple dynamic programming model of individual retirement decisions. Even after one wave of the CERRA survey, the longitudinal dimension could already be introduced as a result of the retrospective questions on the labour market status in 1991. An analysis of labour mobility of elderly workers based on the CERRA data was performed by Hebbink, Kerkhofs, Theeuwes and Woittiez (1996). They were able to answer most of their research questions, but a good assessment of the relation between labour costs and productivity turned out to be infeasible with the CERRA data. Groot (1997) used the CERRA data to investigate the existence and effectiveness of demotion, which is defined as a simultaneous decline in wages and improvement of labour conditions. Full use of both the 1993 and the 1995 wave of the CERRA survey is made in the analyses of retirement and elderly labour force participation by Kerkhofs, Lindeboom and Theeuwes (1999) and Heyma (2001). The main aim of Kerkhofs, Lindeboom and Theeuwes (1999) was to measure the effect of different health measures on the retirement decision of elderly workers to further investigate the quality of these health measures in the CERRA data (see below). In Heyma (2001), a full dynamic programming retirement model is estimated, using life-cycle income and health profiles and correcting for labour demand side effects by means of layoff rates. Important conclusions with respect to the CERRA data were: (1) that linking household data to company data results in a considerable reduction in valid observations, (2) that using subjective information on habits influencing health, such as smoking and exercising, does the same, (3) that despite this reduction in valid observations, a reasonable number of observations remain for the analysis to result in plausible and significant outcomes, (4) that life-cycle values of explanatory variables can easily be constructed under strict but plausible assumptions, (5) that there may be an over-estimation of elasticity's of retirement behaviour when the analysis of retirement decisions between ages 40 and 65 is based on observations of individuals at only two moments in time, and (6) that the lack of data on savings, wealth, applications for disability benefits and entry conditions to disability may be crucial for the quality of the analysis of retirement decisions.

# Labour demand and layoffs

Even though the CERRA data provide an unique opportunity to link employer data to employee data, the quality of the link and the resulting number of valid observations only allows for a restrictive analysis of labour demand and layoffs. However, the household surveys by themselves already provide many data on reasons for job separations, which allows for a separate analysis of quits and layoffs. Thio (1995) offers a duration model of retirement in which he makes this distinction, testing several economic theories on labour demand. A similar analysis with a straightforward Logit model is given in Heyma (2001), where it is argued that a labour supply side analysis must account for labour demand shocks to produce unbiased estimates for the retirement incentive effects, such as income and health. Even though the distinction between quits and layoffs remains somewhat arbitrary, based on subjective reasons for job separation, the subjectively based layoff rate corresponds closely to national layoff rates. However, for a good analysis of labour demand, a direct link of employer and employee data would still be necessary.

# Health condition

Much of the literature on health economics has been occupied with problems in measuring true health or the health condition that is relevant for economic behaviour. For example, Bound (1991) studied four sources of bias that could result from using subjective health measures in retirement studies: (1) subjective health judgements are not comparable across respondents, which is a case of measurement error that leads to an under-estimation of the health effect, (2) when health is used to rationalise retirement behaviour, the health effect is tautological and its magnitude therefore over-estimated, (3) if there are financial incentives to identify oneself as disabled, for example from benefit eligibility rules, there is an endogenous relationship between income and health, which leads to an over-estimation of the health effect, and (4) if the health status is not independent from labour market outcomes, this endogeneity leads to an over-estimation of the health effect. The CERRA survey contains multiple subjective questions on health status, but also objective health measures, subjectively assessed objective health measures and employment related health measures. Kerkhofs and Lindeboom (1995) used these data to assess the importance of state dependent reporting errors in responses to health questions in the CERRA survey and estimate a model that accounts for the systematic mis-reporting as indicated by Bound (1991). Their analysis is based on a comparison of a subjective health measure with a subjectively assessed objective health measure produced from answers to 57 questions concerning physical and mental symptoms, known as the Hopkins Symptom Checklist (HSCL). A HSCL score is constructed by adding the values of all answers and is well known for its internal consistency and stability, its high correlation with clinical judgements, its discriminating power between patients and non-patients, and its ability to determine changes in true health conditions as a result of treatment, see Luteijn, Hamel, Bouwman and Kok (1981). As suggested by Anderson and Burkhauser (1985), health indices created from information on several observable physical and mental problems may overcome drawbacks of straightforward subjective and objective health measures. Lifecycle health profiles based on the HSCL measure are estimated by Kerkhofs and Lindeboom (1997) and applied in the dynamic programming retirement model of Heyma (2001). A comparison of the effect of reporting errors and endogeneity of different health measures from the CERRA data on the estimates of a retirement model, is given by Kerkhofs, Lindeboom and Theeuwes (1999) and Heyma (2001). It is found that subjective health measures overstate the effect of health on retirement and that endogeneity of health surpresses the health effects.

# Well-being

The CERRA survey contains a question in which respondents are asked to rank their satisfaction with life on a scale from 1 to 10. This scale is borrowed from the psychological literature, where it is known as the Cantril scale. Woittiez and Theeuwes (1998) use this information to measure the effect of labour market status on wellbeing. In the data from 3570 respondents in the CERRA survey (75.5 percent of the total survey), they observe a plausible distribution of present happiness, with a mean value of 7.5 and a standard deviation of 1.4. There is some bunching around the value of 8 (38 percent), and almost 8 percent of the respondents are perfectly happy (with a value of 10). At the lower end there are much less observations. The authors conclude that results for the effect of health, housing characteristics, preferences for work, income and personal characteristics on well-being are plausible, but that after controlling for these variables, there remains a negative effect on welfare of being in one of the non-working states.

# Housing

Woittiez and Theeuwes (1998) use some of the housing data from the CERRA survey, but an extensive study on housing, and in particular the residential moving behaviour of the elderly, is performed by Fokkema (1996). She found that no information is available on preferences of respondents regarding several housing and neighbourhood characteristics, expect for a question on whether respondents have difficulties paying for their living costs each months. To describe the social bond with the neighbourhood, she used the number of years that respondents were living in their current dwelling. The question on time expenditure on visiting family and friends was too general for this. Questions regarding the value placed on social contacts and on social status was difficult to use as a result of the limited number of answer categories (important versus not important). Also, 93 percent of the respondents expected no changes in social status after moving, which she attributes to the lack of examples of possible changes in the survey. Both problems are due to the limited space for housing questions in the CERRA survey.

# Neglected information from the CERRA survey

Despite the many research activities with the CERRA data, part of the information has been ignored for different reasons. Questions on time preferences and risk aversion, which are relevant for dynamic analyses of retirement behaviour, have not been used. A reason might be the experimental set-up of these questions. Information on wealth turned out to be of insufficient quality and quantity for use in an analysis of wealth, consumption and savings behaviour. And as far as we know, information on health insurance, bequests and time expenditure has been ignored completely. Information that is neglected is likely to suffer from bad quality or from irrelevance for the main research themes. But before we conclude that these questions can be ignored in new data collections on the socio-economic status of elderly people, we should assess their relevance and potential for research. As an example, the next chapter explores the use of time expenditure data from the CER-RA survey for the analysis of participation in social activities.

### 4. Measuring socio-economic participation by time expenditure

Questions regarding the socio-economic position of the elderly become more important as a larger fraction of the population is getting older. Past research has shown an increase in the risks of ill health, disease, disability and premature death with decreasing socio-economic and occupational standing. This should be particularly visible among the elderly. An ageing population will present a major challenge in the near future to the public

health care services and policy makers. Health and welfare of the older workforce has an impact on their productive capacity and their ability to provide for themselves in retirement. If poverty, unemployment and social exclusion affect the health status and well-being of the aged, the health bill of society and general public costs at the later stages of life will increase. As the 'baby boom' generation now approaches retirement, and hence their decisions regarding retirement, post retirement work and post retirement social activities become imminent, it is very important for policy makers to identify the nature of these relationships in order to guide current and future policy.

Labour market status and income may tell much about the socio-economic status of elderly people. But many elderly people retire early or stop working. Even though labour income is well replaced by social security benefits and pensions in the Netherlands, there is often no immediate replacement for the labour activities and other time expenditure, and the social contacts that are directly connected with a job. Some elderly will become isolated and bored, and will loose many of their (work-related) friends. Others are finally able to pick up on their hobbies, or become (more) active in voluntary work or unpaid labour. The difference in social participation is part of the relevant socio-economic status of elderly people. Social participation or the lack of it has direct consequences on health and well-being. In most surveys aimed at the collection of information on the socio-economic position of elderly people, numerous questions are included on work status, work environment, work history and health conditions. However, questions on social participation and well-being, although present, are generally scarce in these types of questionnaires. This chapter describes how the available information in the CERRA survey can be used to investigate the socio-economic status and in particular social participation of elderly people in the Netherlands. For that purpose, only a small number of questions are used from the CERRA survey, namely those concerned with time expenditure on socio-economic activities (see table 8).

The time expenditure questions in table 8 that may tell us most about the participation in social activities are 'taking part in sports', 'voluntary work', 'visiting family or friends' and 'church activities'. Sports may be exercised on an individual basis, but generates many social contacts. The same is true for church activities. Visiting family or friends clearly indicate social contacts, but when the purpose of these visits is to provide family care, they may also reduce the possibility for participation in other social activities. Participation in voluntary work may indicate participation in social activities most explicitly.

A number of questions can be raised regarding the outcome of these time expenditure questions:

- What is the response / non-response to these questions?
- What is the quality of the answers?
- Are the answers intuitively appealing?
- How does time expenditure vary by socio-economic characteristics?

The first two questions can be answered by showing response rates (table 9) and frequency distributions of the valid answers (figures 1 to 4).

Question:	Answers:	
How much time a week do you spend on:	<u>a wee</u>	<u>k</u>
	Working	hours
	Travelling	hours
	Taking part in sports	hours
	Making music	hours
	Doing odd jobs	hours
	Hobbies	hours
	Studying	hours
	Voluntary work	hours
	Political party	hours
	Union	hours
	Action team	hours
	Visiting family / friends	hours

Church

Table 8: Question on time expenditure in the 1993 CERRA survey.

Table 9 shows that the response rates for the time expenditure questions are all well above 85 percent. Respondents do not find it difficult to estimate the time they spend on these activities. Only a negligible fraction of the respondents has no idea. Large fractions of the respondents give zero hours as an answer, indicating that they do not take part in these activities at all. For voluntary work and church activities, this may not be a surprise. But it is remarkable that 55.9 percent of elderly individuals do not take part in sports and that even 10.3 percent do not visit family and friends. It shows that these questions only consider a small part of people's daily social activities, and therefore only partly illustrate their socio-economic status.

	Sports		Volunta	Voluntary work		Visit family or friends		Church activities	
	#	%	#	%	#	%	#	%	
Valid answers	4201	88.9	4104	86.8	4387	92.8	4114	87.0	
of which 0 hours	2341	55.7	2836	69.1	454	10.3	2705	65.8	
Does not know	1	0.0	1	0.0	2	0.0	0	0.0	
No answer	457	9.7	554	11.7	270	5.7	545	11.5	
Missing forms	68	1.4	68	1.4	68	1.4	68	1.4	
Total	4727	100.0	4727	100.0	4727	100.0	4727	100.0	

#### Table 9: Response numbers to the time expenditure questions.

The quality of the answers is illustrated by the frequency distributions in figures 1 to 4. Typical for these kind of questions is that the answers cluster into round numbers, such as 10, 15, 20, etc. But apart from clustering and large frequencies at zero hours, all frequency distributions appear to be smooth distributions of a Gamma shape. In sports, most respondents who participate spend 2 hours per week, with a mean value of 1.8 hours and a standard deviation of 3.9 hours. Table 10 shows that employed respondents spend less hours in sports than early retirees and unemployed respondents. Disabled respondents spend the least hours on sports. The distribution of the amount of hours spend on voluntary work is much flatter than that of sports, but the mean value is about the same. The standard deviation is 4.9 hours, with a large difference between workers and non-workers. Voluntary work therefore seems to be a substitute for paid labour. A more regular time expenditure is visiting family or friends. Even though 9.7 percent of the respondents never visit family or friends, the average time spend is around 4 hours per week. Again, non-workers spend more time on visits than workers. The over-all standard deviation is 5.3 hours, which shows that visiting family or friends is a very basic activity. Less com-

... hours

mon are church activities, even though more than 40 percent of the respondents take part in them. The average time spend is 0.8 hours with a standard deviation of 2.6 hours and hardly any difference between labour market states.

Labour market status	Sports	Voluntary work	Visiting family or friends	Church activities
Employed	1.66	0.98	3.16	0.72
Self-employed	1.46	0.75	3.08	0.79
Early retired	2.90	3.47	4.78	1.16
Disabled	1.12	2.44	4.55	0.70
Unemployed	2.20	3.39	5.70	0.94
Total	1.84	1.93	3.97	0.83

Table	<i>10</i> :	Mean	hours	of time	expenditure	per week b	by labour	market status.
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The outcomes of the time expenditure questions on sports, voluntary work, visits to family or friends and church activities, seem to be of good quality and intuitively appealing. Most answers are between zero and ten hours, with smooth distributions. The higher numbers may be less precise, since these are clustered at round numbers, which may be exaggerated to provide socially desirable answers. On the other hand, the zero's may be underreports when looking at a longer period of time: people may neglect activities in which they participate only occasionally.

The answers provide enough variation for further analyses. To show the variation with multiple socio-economic characteristics of respondents and analyse possible causal relationships, we ran simple regressions of time expenditure on variables like labour market status, age, gender and educational level. The regression results are reported in table 11. The fit of the regressions is low (corrected R<sup>2</sup>'s between 0.007 and 0.067), due to the large number of zero hours in the sample. These regressions are however not meant to *explain* time expenditure, only to *illustrate* its variation with socio-economic characteristics and to see whether the outcomes make sense. If so, this provides confidence in the time expenditure questions to be suitable for further analyses on socio-economic status, social participation and well-being of elderly people.

Table 10 already made clear that labour market status influences the number of hours spend on social activities. People who are not employed have more leisure time to spend on these activities. In the regressions the difference in time expenditure by labour market status is modelled as dependent on the labour market status two years earlier. This is to capture the effect that people have to get accustomed to their new situation and may not immediately start to pick up new activities after retirement. Since the time expenditure questions were asked in 1993, the labour market status is taken from the virtual 1991 wave of the CERRA survey. Employment as a contract, seasonal or stand-by worker is used as the base-line situation.

Figure 1: Frequency distribution of hours spend on sports per week; 2341 respondents (50.2 %) do not participate in sports.



Figure 2: Frequency distribution of hours spend on voluntary work per week; 2836 respondents (60.9 %) do not participate in voluntary work.







Figure 4: Frequency distribution of hours spend on church per week; 2705 respondents (58.1 %) never spend time on church activities.



It is very clear that all time expenditure increases with years since retirement. Early retired respondents are the first to pick up on activities, increasing the hours spend over time, especially in voluntary work and church activities. Disabled respondents do not immediately pick up on these activities, but after two years of retirement, they are also much more involved in voluntary work and visits to family or friends than working people. A similar situation is true for the unemployed, who only choose to participate in sports more often. Hardly any difference is present between contract workers and self-employed respondents.

	Spo	orts	Voluntary work		Family / friends		Church activities	
	coef.	t-value	coef.	t-value	coef.	t-value	coef.	t-value
Constant	4.290	5.32	1.625	1.62	1.743	1.64	-1.314	2.39
Labour market status								
Employed								
Self-employed	0.040	0.16	0.019	0.06	-0.140	0.41	-0.021	0.12
Early retired and								
- working in 1991	1.035	2.77	1.673	3.57	1.226	2.47	0.219	0.86
- not working in 1991	1.238	3.48	2.236	5.05	1.163	2.46	0.294	1.22
Disabled and								
- working in 1991	-0.878	1.46	-0.115	0.16	0.610	0.77	-0.197	0.49
- not working in 1991	-0.547	1.65	1.346	3.24	0.930	2.09	-0.040	0.18
Unemployed and								
- working in 1991	0.258	0.48	0.398	0.58	0.547	0.77	-0.052	0.14
- not working in 1991	0.927	2.60	2.344	5.28	1.429	3.04	0.249	1.03
Real working hours	-0.012	1.79	-0.017	1.98	-0.005	0.56	0.002	0.45
Age	-0.049	3.71	-0.018	1.07	0.029	1.65	0.035	3.90
Female	-0.798	4.39	0.156	0.69	1.673	7.03	-0.020	0.16
Education								
Primary vocational	0.241	1.29	0.477	2.05	0.045	0.18	0.098	0.77
Secondary general	0.684	3.22	1.106	4.19	-0.040	0.15	-0.007	0.05
Secondary vocational	0.654	3.20	0.963	3.80	0.080	0.30	0.101	0.73
Higher general	0.605	1.98	0.911	2.40	-0.193	0.48	0.283	1.35
Higher vocational	0.820	4.08	1.685	6.75	-0.217	0.82	0.090	0.66
Academic	0.928	3.19	2.148	5.91	-0.407	1.05	0.548	2.77
Nationality								
EU other than Dutch	-0.353	0.65	-0.923	1.39	0.372	0.53	-0.441	1.21
Indonesian	0.091	0.23	-0.851	1.67	0.020	0.04	-0.473	1.70
Surinam and Antillian	-0.556	0.80	-0.399	0.47	0.593	0.65	0.542	1.19
Other	1.113	1.40	-0.800	0.79	-0.292	0.28	0.029	0.05
Observations	42	00	41	03	43	386	41	13
Corrected R <sup>2</sup>	0.0	031	0.0	)67	0.0	042	0.0	007

Table 11: Regression results for time expenditure equations in the 1993 CERRA wave.

That retired people spend more time on social activities may seem evident, but it would also mean that people who work less hours also spend more time on these activities. To see whether this is true, the number of working hours is regressed on time expenditure. Evidence that smaller working hours lead to more hours on other activities is found for sports and particularly voluntary work, but not for visits to family or friends and church activities. Sports and voluntary work would seem to be stronger substitutes for work. Even though respondents increase the time spend on social activities the longer they are retired, the time spend on sports and voluntary work is reduced when becoming older. Again this provides an argument that these activities function as substitute for paid labour, since time spend on paid labour also declines with age. Visits to family or friends increase when growing older and the same holds strongly for church activities. However, it should be kept in mind that this can be due to cohort effects (older generations being more religious than younger generations). Compared to men, women spend less time on sports and more time on visits to family or friends. Higher educated respondents generally spend more time on all activities, except for visits to family and friends. Differences by educational level are particularly strong for voluntary work and church activities. Hardly any significant differences are found by nationality.

In sum, these simple regressions suggest that the time spend on social activities vary by socio-economic characteristics in a similar way as participation in regular paid labour. Social activities such as sports, voluntary work, visits to family or friends and church activities therefore all seem to work as substitutes for regular paid labour. This is particularly true for sports and voluntary work. Using the time spend on these activities as an indicator for socio-economic position that determines health and well-being seems to be in line with a more traditional definition of socio-economic position, such as the labour market position of elderly people.

# 5. Conclusions

This paper provided an overview of experiences with the Dutch Health and Retirement Survey (CERRA), showed its value and limitations, and detailed the lessons that can be learned for new data collections on the socio-economic status of elderly people. The CERRA survey consists of two waves (1993 and 1995) of a sample of around 4500 elderly households and provides information on labour market status, retirement, incomes and health. In the first wave, it combines the respondents' data with data on a limited number of companies at which respondents were employed. It has generated a large number of studies, which lead to more insight in issues like incomes, labour market behaviour and retirement, health conditions, well-being and residential moving behaviour of the elderly. Unfortunately, the CERRA survey was stopped after two waves. Therefor, similar up-to-date information on the socio-economic status and health condition of elderly people is absent in the Netherlands, while there are still many open scientific and policy questions, resulting from population ageing. There is an urgent need for a similar but new data collection. How could the lessons learned from CERRA contribute to such an effort?

Firstly, the CERRA surveys gave a high level and high quality of response. Therefore, both the survey procedure (separate oral and written questionnaires), and the outline and contents of the questionnaires could be copied (they were already based on experience with the Health and Retirement Study in the United States). Secondly, the longitudinal character of the survey should be maintained and preferably be extended. Many of the studies that use CERRA data make explicit use of its longitudinal character, since *changes* in states and conditions are most informative of behaviour. The use of retrospective questions to create an extra virtual wave of the survey proved to be a valuable and cheap method to collect data. Thirdly, more data is needed on private wealth, savings behaviour and consumption, since private wealth has become much more important in the economic decisions of people, especially when looking at retirement. And fourthly, questions on participation in social activities, which have been neglected in past studies with the CERRA data, must not be left out of future surveys, since labour market status cannot fully capture the important issue of socio-economic status and wellbeing of retired people.

In the empirical part of this paper it was shown that data on time expenditure in social activities give a good approximation of the socio-economic position of elderly people, These survey questions are well understood and well answered by respondents, provide intuitively appealing answers, and can possibly be used as explanatory factors for the health condition and well-being of elderly people. It shows behaviour that could be interpreted as labour force participation behaviour beyond the labour market career. This may help to understand and identify socio-economic and health inequalities, and give policy makers insight in the actions that are needed to reduce any negative effects from ageing. At the same time, the time expenditure questions treated here do not provide a full and unbiased understanding of the socio-economic position of elderly people. Large fractions of the population do not participate in these activities, answers to the questions are clustered at round numbers, introducing reporting errors and reducing variation, and these questions only cover part of the many social activities which determine the socio-economic position. A solution would be to ask multiple questions on time expenditure that cover a larger part of the social activities of people, and add them to a checklist that reflects

social participation, similar to health indices like the Hopkins Symptoms Checklist (HSCL) or on Activities of Daily Living (ADL). A well-balanced standardised checklist could well serve as an indicator of the socio-economic position of elderly people, and as a explanatory variable for the health condition and well-being of elderly people.

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# SURVEY ON THE ELDERLY IN INSTITUTIONS: ISSUES, SURVEY STRUCTURE, FINDINGS

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# SUMMARY

The quality of life of elderly people has been the subject of numerous reports, which often relate exclusively to the quality of life of persons living independently (i.e. in their own homes). This is liable to seriously distort the results. The Social and Cultural Planning Office (Sociaal en Cultureel Planbureau, or SCP) is therefore calling for general population statistics (e.g. statistics derived from health surveys) to include the residents of homes. For specific topics which are relevant to those homes, such as the quality of the care provided, there continues to be a need for targeted study of this group, alongside the official statistics.

An example of a survey which combines both aspects is the "Elderly in Institutions" survey, which took place in the spring of 2000. It took the form of verbal interviews with 575 residents of rest homes and 400 residents of nursing homes. If they were unable to answer the questions themselves, the information was collected via proxies (members of the person's family or members of staff).

# **1 INTRODUCTION**

The Social and Cultural Planning Office (SCP) regularly reports on the quality of life of various population groups, such as the elderly, the disabled, ethnic minorities, young people or low-income groups. It does so on behalf of a wide range of government departments. The purpose of such studies is to give a systematic description of the social situation of the groups in question. A number of elements are surveyed, including the target group's participation in education and work, its financial situation, leisure activities, living conditions, health and use of care facilities (De Klerk, 2001a).

The authors of this type of report make use of large-scale population surveys. The surveys are generally based on a sample of the population which lives independently. This means, for example, that older people living in nursing homes or rest homes are excluded. Based on this type of survey, findings about the situation of the elderly will be distorted, because the analysis fails to take account of elderly residents of homes.

This paper will first set out in brief the number of elderly people in the Netherlands and the number living in homes (the rather arbitrary age at which people are regarded as "elderly" being 65). We then outline the distortions which can occur if the studies focus exclusively on elderly people who live independently, before going on to discuss how a survey can be structured in such a way as to avoid those distortions. Next, we set out some of the results of the survey of the elderly in homes. The paper ends with some recommendations on the collection of information from elderly people.

On 1 January 2000, there were more than 2 million people aged 65 or over in the Netherlands (13.6% of the total population), including about 1 million people over the age of 75. About 60% of all elderly persons are women, and about 40% live alone. The proportions of women and persons living in one-person households are higher in the older age groups.

Table 1	Some de	emographic	characteristics	of the	elderly,	l January	2000 (in	absolute i	numbers (	('000s)	and in	%)
		8 . r		.,						,		,

	65-74 yrs	75-84 yrs	$\geq$ 85 yrs	Total
Elderly (x 1.000)	1 194.90	731.9	225.7	2 152.50
Women (%)	54	63	74	59
One-person households (%)	28	51	72	40

Source: CBS (Statline); SCP (AVO 99)

About 5% of all persons aged 65 or more live in a rest home, and 2% in a nursing home (Figure 1). A total of 160 000 elderly persons (persons aged 65+) live in a home. Practically everyone in the 65-74 year age group lives independently, as do 91% of persons aged between 75 and 84. A majority (64%) of people in the 85+ age group also lives independently, with 36% (80 000 persons) living in a home. It is most important, especially where the very elderly are concerned, for the data to include the very elderly residents of homes. Annex A gives a brief description of homes in the Netherlands.

Figure 1 Types of household of persons aged 65 and over, by age category, 1999 (in %)



Source: Prismant; CBS (Statline, Statistics on rest homes); data adapted by SCP

# **3 DISTORTED FINDINGS: HEALTH**

We regularly read reports on the health of the elderly. The authors often state explicitly that the data relate exclusively to elderly people who live independently (i.e. not living in a nursing home or rest home), but sometimes fail to make it clear which group the analyses relate to. Clearly, selecting only people who live independently will tend to overestimate the extent to which the elderly are able-bodied, as it is mainly persons with physical limitations who are admitted to homes. The resultant distortion is likely to be most pronounced among persons in the 85+ age group, as they are more likely to live in an institution. This shows how serious the distortion can be if we focus exclusively on elderly people who live independently, rather than on all elderly people (De Klerk, 2001b).

Figure 2 shows the extent to which people in the 75+ age group have difficulty looking after themselves or suffer from incontinence. The Figure first sets out the data for elderly persons who live independently, and then the data for all elderly people, including those living in homes. The data for the former group are based on the Supplementary Survey of the Use of Facilities 1999 (AVO); the data on the elderly residents of homes were taken from the "Elderly in Institutions" survey (referred to hereafter by its Dutch abbreviation "OII"), which was conducted in 2000.

Figure 2 Limited ability to look after oneself and problems of incontinence among persons in the 75+ age group, persons living independently and the entire population (incl. residents of homes), by age category, 1999 (in %)



Source: SCP (AVO'99 and OII2000)

28% of persons in the 75-84 age group have difficulties looking after themselves. The corresponding figure for persons in the 85+ age group is 57%. If we include the data for the residents of homes, 64% of persons in the 85+ age group have difficulties looking after themselves (Figure 2).

Any attempt to ascertain the problems of invalidity among persons in the 85+ age will therefore automatically underestimate the true extent by 7% if the residents of homes are left out of the equation. Among the 75-84 year olds, the difference between those who live independently and the population as a whole is about 4%. The differences are greater in relation to incontinence, which is one of the factors determining admission to a home: 16% of persons aged 85+ who live independently suffer from incontinence, compared with 28% of all persons in that age group.

These differences can result in significant distortions. There are about 960 000 persons aged 75 or above in the Netherlands. Thus, if we apply the percentage of elderly people who live independently but need help to the entire population of elderly people, the number of persons aged 75+ with only a limited ability to look after themselves is underestimated by 45 000. This group does, however, make use of provisions for care, physical aids, special pads for incontinence, etc.

The above example relates to health, where the distortion is most apparent, but there are other areas where distortions can occur, such as older people's incomes (most of the elderly in homes are on a low income) or social participation (cf. also Section 5).

The bigger the number of people living in homes is (in bigger countries, countries with a more rapidly ageing population or countries with a larger proportion of people living in homes), the more seriously elderly people's problems with invalidity will be. Even when we are describing the entire elderly population, however, underestimates of their health problems can have major consequences, for example when it comes to forecasting future needs for medical care. Moreover, the danger of underestimating this type of problem becomes more acute if the aim is to arrive at conclusions regarding more specific groups (such as very old people who live on their own).

# **4 STRUCTURE OF THE "ELDERLY IN INSTITUTIONS" (OII) SURVEY**

Because elderly people living in homes are systematically excluded from population studies, which are always targeted solely at elderly people who live independently, the SCP has conducted three studies of elderly residents of homes since the beginning of the 1990s.

# The 1991 study

The first of these studies, the 1991 AVO study, surveyed about 700 residents of rest homes. The purpose of this study was to map the extent of social and cultural participation by the residents of rest homes (Konings-van der Snoek, 1993). The survey was based on a questionnaire which a sample of the population living independent-ly was asked to complete. Only those questions which were clearly irrelevant to the elderly (e.g. on day care for children) were not asked. A few questions about the specific situation of the residents of homes were added, in the light of a survey conducted by Statistics Netherlands in 1982. It was found that the residents of homes made little use of recreational and cultural facilities: such activities were often organised inside the home. This means that questionnaires intended for those living independently cannot be used without adjustment for the residents of homes. This is certainly true of questions on the use of facilities. Generally speaking, the questions on health (chronic diseases, physical limitations) can be used in their original form, although the questions on the use of medical facilities sometimes require adaptation. Patients in nursing homes (which have also been part of the survey population since 1996), for example, tend to consult their in-house doctor, and visit a specialist less frequently. The usual questions about consulting a GP or specialist therefore need to be adapted.

The AVO is a household survey: data on the household are first inventoried, and all members of the household (aged 6+) are then asked questions. The same structure was used in the AVO study: if an interviewee lived in the home with his or her partner, the latter was also interviewed. It was subsequently found that this yielded little additional information, and that a sample of persons would have sufficed. It also meant that married people and men were over-represented in the sample, unless the population was weighted by type of household.

No particular approach was adopted if the respondent was no longer able to answer the questions. If he or she had a partner, however, that person could answer the questions instead. It later became apparent that 23% of the intended respondents were unable (in the opinion of the staff) to take part in the survey. The data therefore related mainly to the relatively able-bodied residents.

The survey also looked at the extent of cluster effects (are the results distorted because a number of residents of a particular institution are interviewed, or are the residents of an institution sufficiently representative?). Generally speaking, there were no cluster effects: even within a single home, the population tends to be fairly heterogeneous, although this does not apply to elements which are internal to the institution, such as household jobs or the provision of meals. The religious background of the residents of any given home also tends to be fairly homogeneous, and therefore sensitive for cluster samples.

Some interviewers were opposed to this survey from the outset, because they thought the target group would be difficult to interview and would be embarrassed by some of the topics covered by the questionnaire (for example, on mental depression and various health-related questions, including questions on incontinence). In fact, the interviewees proved extremely frank and were very willing to answer a wide range of questions. They generally found it a welcome change from their daily routine. Nor did they mind the questions about health. The only questions which gave rise to some difficulties were those about their financial situation (e.g. about

their income and the contribution which they had to pay towards their care and accommodation). Not only do many elderly people think that this sort of information is nobody else's business, but they also sometimes genuinely cannot provide the information, because other people (often their children) take care of their finances for them. Tables which had to be filled in by the respondents themselves generally proved too difficult: many elderly people have difficulty reading (especially if the type face is too small) and writing, and prefer a verbal interview.

It is important to take the time to explain the purpose of the questionnaire to the elderly and to assure them that the information which they give will be treated in confidence (for example, that it will not be discussed with staff): some residents feared that they would have to leave the home, or were afraid of expressing complaints. Others forgot that they had an appointment with the interviewer. This was generally dealt with by leaving a letter for the person concerned and asking the staff to remind him or her about the interview.

### The 1996 study

In 1996, another, independent study was undertaken among elderly residents of homes: the "Elderly in Institutions" survey ("Ouderen in instellingen", or "OII'96"). This study was conducted not only in rest homes, but also in nursing homes and psychiatric hospitals. The study was concerned exclusively with the elderly residents (65+ age group) of these institutions. A method of approaching proxies was also adopted (cf. the 2000 study).

Conducting the survey in psychiatric hospitals gave rise to numerous problems. Cooperation with the hospital management was very difficult, because managers thought that the use of proxies would conflict with patients' right to privacy (it was assumed that many older psychiatric patients would be unable to answer the question-naire themselves). Moreover, a very large proportion of older residents lived in a very small number of psychiatric hospitals, which meant that the cluster sample which was selected (cf. the 2000 survey) ran up against practical problems.

The survey went satisfactorily in rest homes and nursing homes. Sound methods of asking proxies were developed (see below) and the newly formulated questionnaires, which were more closely geared to the quality of life in homes (see below) hardly contained any irrelevant questions.

### General structure of the 2000 study

The 1996 survey was repeated in 2000, only this time psychiatric hospitals were excluded. On the other hand, the target population was extended to include elderly persons living in sheltered accommodation and service residences.<sup>1</sup> In the following, only the study of the residents of rest homes and nursing homes will be discussed. Table 2 summarises some of the characteristics of the three surveys of the residents of homes.

	1991	1996	2000
Name of study	AVO study	Elderly in Institutions	Elderly in institutions
Type of study	Linked to AVO (for person living independently)	Independent study	Independent study
Type of institution	Rest homes	Rest homes Nursing homes Psychiatric hospitals	Rest homes Nursing homes (housing units with services) (sheltered accommodation)
Proxies allowed	No	Yes	Yes

Source: SCP

<sup>&</sup>lt;sup>1</sup> Generally speaking, this type of household is part of the sampling frame used in general population surveys. Sheltered accommodation is not always readily identifiable as such in population surveys, however, which is a problem if the intention is to make statements about the group in question. This was the reason for including this group in the survey. A major problem with sheltered accommodation is the sampling frame: there is no national register of this type of accommodation, and definitions of terms such as "sheltered accommodation" and "service residences" vary in the sources which can be used as a sampling frame. Moreover, there is no central body which can help with the selection of residents or with looking for proxies.

# OII2000 sample

The study was targeted at institutions which had official recognition as a home (the number of privately run homes in the Netherlands is growing constantly). Unfortunately, there is no general register of this type of institution in the Netherlands. Various sources of addresses<sup>2</sup> were therefore combined to form a single source (GfK 2000) and used as a sampling frame.

It was decided at the outset to collect information on 1 000 elderly people. Moreover, when determining the make up of the sample, we made sure that at least 200 residents in each type of institution would be included, so that meaningful statements could also be made about the residents of each type of institution. In practice, this meant that nursing homes were oversampled. To allow for this, a coefficient was subsequently applied to the calculations (with nursing homes being given a lower weighting than rest homes). A total of 100 rest homes (600 residents), 50 somatic and 50 psycho-geriatric wards (each with 200 patients) were selected.

On the basis of the coefficient and the increment, we determined from how many institutions a single institution had to be selected. By way of example, there are 110 000 beds in rest homes (T) and 100 such homes are selected. The increment was therefore T/100=1 100. We then randomly selected a "starting number" between 1 and the increment. The starting number was added to the increment in order to select the next institution (i.e. if the starting number was 60, the home with beds numbers 1 160, 2 260, 3 360, etc., was selected).<sup>3</sup> In practice, the increment and starting number were determined separately for each region and type of institution.

Large institutions therefore have a bigger chance of being included in the sample. On the other hand, residents of large institutions have a lesser chance of being selected within their institution (six residents are selected from each institution, irrespective of its size). Individual residents eventually all have the same chance of being included in the sample.

We first made sure that none of the institutions was 'self-selecting', i.e. it had so many beds that it would automatically be included in the sample. Institutions of that size were not, in fact, included in the survey sample.

In addition to the original sample, two shadow samples were drawn (two homes of a size which was comparable to those in the original sample were selected from each region) to cater for the eventuality that one or more of the institutions originally selected were unable to take part in the survey.

A total of 315 institutions were approached (158 rest homes; 79 somatic and 78 psycho-geriatric nursing homes), 201 of which agreed to take part (96 rest homes; 58 nursing homes catering for patients with somatic illnesses; 47 psycho-geriatric nursing homes): a response rate of 64%. The main reasons cited for not taking part included workload and lack of interest, although changes of address, mergers and the holiday period also played a part (the field work took place between 1 February and 31 July 2000).

In some cases, permission to take part in the survey had to be obtained not only from the management, but also from the residents' committee or "client council" (which represents residents and/or members of their families). As some residents' committees meet only a few times a year, this considerably delayed the field work in some cases.

Between four persons (in nursing homes) and six persons (in rest homes) were selected at random from each institution. The management selected a number between 1 and 10. This number was then added to the increment (the number of residents in the institution divided by the number of interviewees) in order to select the individual residents who would be included in the sample. This method may appear laborious, but managers have a tendency to select the healthiest residents or to concentrate the survey on a single department, which is likely to make the sample unrepresentative. We also used a shadow sample within institutions to cater for the eventuality that residents who were originally selected for inclusion in he sample (or their proxies) did not wish to take part.

<sup>&</sup>lt;sup>2</sup> The 'Adressengids ouderenzorg 1999' (Directory of Providers of Care for the Elderly 1999'), the 'Zorgnota 2000' ('Care Memorandum 2000') (Ministry of Health, Welfare and Social Affairs) and 'Instellingen van intramurale gezondheidszorg 1999' ('Institutions providing intra-mural health care, 1999') (Prismant 2000).

<sup>&</sup>lt;sup>3</sup> i.e.: increment + i T/100 beds, for i=0,1,...,99 (where 100 is the number of homes to be selected).

Data on 975 persons were collected. It is not known exactly how high the response rate within each institution was, because some managers were not willing to release the respondents' names unless the residents or their carers gave their explicit permission for their identity to be divulged.

The study focused exclusively on permanent residents of homes in the 65+ age group. Residents who were younger than 65 (in nursing homes) and temporary residents of homes (e.g. in a rehabilitation ward, nursing home or visitor's room in a rest home) were not in included in the study, as they live independently.

# **OII2000** respondents

Answers to the questionnaires were given verbally by those residents who were able to do so. The interviews lasted about an hour on average. Where necessary, the interviewer allowed a break. It was important to take the time to explain the study and to make it clear that the respondents' answers would not be discussed with staff. For some of the questions, the respondents could choose from answer cards, which were printed in very large letters. The 1991 study had shown that the elderly were often unable to answer questions on their financial situation, because other people (e.g. their children) took care of their finances. To overcome this problem, the interviewers left a list of questions on financial matters for the respondents' children. The interviewer collected the form once the respondents had obtained the information from their children or the children had answered the questions. This method worked well.

If residents could not answer the questions themselves, a written questionnaire was left for the nursing staff (the person most closely involved in looking after the resident, or "main carer") and the person known to the institution as the respondent's contact (usually a member of the family) was questioned over the telephone. Families received a copy of the questionnaire in advance, to give them time to think about the questions. This worked well, particularly for the questions on finances (income, fixed expenditure). Table 3 shows the distribution of the respondents over the various homes. In the rest homes, data on 575 residents were collected, 521 of whom answered the questionnaire themselves. In the nursing homes, data on 400 patients were obtained, 187 of whom answered the questions themselves (mainly in somatic nursing homes).

	Rest homes	Nursing homes			Total
		Somatic	Psychogeriatric	Total	
Number of homes	96	54	47	101	197
Number of respondents	575	217	183	400	975
Number of persons answering themselves	521	182	5	187	708

Source: SCP (OII2000)

The respondents were weighted by age, sex, type of household, region, type of district (urban or rural) and type of institution (rest home, somatic ward, psychogeriatric ward) with a view to ensuring representativeness.

### **OII 2000 questionnaires**

When compiling the questionnaires, considerable effort was made to ensure that the information on topics relevant to persons living independently was also available for that group, so as to obtain a good degree of comparability of the quality of life of elderly residents in homes and that of elderly persons who live independently. In addition, questions were formulated which related to the specific circumstances in a home (e.g. on the use of particular facilities there).

Firstly, we compiled a questionnaire for the residents of rest homes. We then used it as a basis for a questionnaire for the residents of nursing homes. It contained somewhat fewer questions than the questionnaire for the residents of rest homes. This was because the residents of nursing homes will, on average, have less independence of action, and hence take part in a narrower range of activities. Moreover, it was assumed that residents of nursing homes would not, as a rule, be able to take part in an interview of the same length. As it turned out, it took just as long (one hour) to complete the shorter questionnaire in nursing homes (see Annex B) as it did to complete the longer one used in rest homes. Next, we compiled questionnaires for members of staff (the main carers) and a "family questionnaire". These were identical for both nursing homes and rest homes. The two lists contain some of the questions which are put to residents themselves. Persons other than the residents themselves were not asked questions of a subjective nature, because it was assumed that they would not always be able to gauge a resident's opinions or feelings. Thought was given in advance to the types of question which proxies would be able to answer correctly. Another factor was that these questionnaires were completed in writing or by telephone and therefore had to be shorter.

When compiling the questionnaire, we tried to ensure that "serious" topics (e.g. questions about mental depression and income) were interspersed with lighter ones (e.g. questions about the use of recreational facilities or the media) and we took care to ensure that the interview ended with a more "neutral" topic (general aspects of life in a home).

Annex B lists the topics which were touched on in the various questionnaires. It can be seen that the proxies were not asked all the questions.

Lastly, the institutions provided data about themselves by completing a questionnaire. These data relate mainly to the facilities which the residents have at their disposal and the activities which are organised for them. The present paper will not devote any further attention to this information.

# **5 ACTIVE AGEING: IS THERE SUCH A THING IN HOMES?**

The expression 'active ageing' refers, for example, to social participation by the elderly. This section looks at the extent to which the elderly make use of various cultural and recreational facilities. The data for elderly persons who live independently were taken from the AVO 1999; while the data for elderly people living in homes were obtained from the "Elderly in Institutions" survey (OII) of 2000. Only the information provided by members of that group themselves are set out (i.e. the information on psychogeriatric patients in nursing homes is ignored). Moreover, there are some differences between the questions in the two studies (the AVO study asks about the use of all kinds of facilities, whereas the OII combines these questions, because earlier studies had shown that residents made little use of such facilities).

Table 4 shows a clear correlation between age and participation in a range of recreational and cultural events: in particular, persons in the 75+ age group make considerably less use of recreational and cultural facilities than do younger people. If we compare the residents of homes (89% of whom are older than 75) with elderly persons who live independently, we see that the former are even less active than the latter. This is not to say that they do not participate in cultural events at all: homes frequently organise events in which the majority of residents take part.

		Persons living independently		Population of homes <sup>a</sup>
	35-54 yrs	55-74 yrs	$\geq$ 75 yrs	≥65 yrs
Museum or zoo	68	56	28	13
Park or woods	78	72	42	31
Interesting buildings	46	46	21	12
Theatre, cabaret, concerts, cinema	59	45	26	16
Fashion show, film showing, concert in the home	_	_	_	65
(n)	(4.256)	(2.454)	(735)	(788)

### Table 4 Use of recreational and cultural facilities, by age category and type of household, 1999 (in %)

a Only relevant to residents who answer the questions themselves (not proxies), which means that the information relates mainly to residents of rest homes and somatic wards.

Source: SCP(AVO'99 and OII'2000)

# 6 THE QUALITY OF LIFE OF ELDERLY PERSONS LIVING IN HOMES

We have seen that the OII survey can be a useful instrument for comparing aspects of the quality of life of elderly people in homes with that of other elderly persons. However, the survey is also a suitable instrument for studying the specific circumstances of the residents of homes. Living conditions and the quality of the care provided are two crucial determining factors of the quality of life.

# Quality of care

Residents were asked what they thought of the care which they received. They were given a list containing 15 statements and were asked which, if any, were applicable to them and which issues were important for them. Table 5 lists the five main problem areas in both rest homes and nursing homes. The residents of homes indicate that privacy, waiting times after pressing the alarm bell, freedom to choose when to go to the toilet and get up in the morning, and opportunities for a confidential discussion, were aspects where there was room for improvement. These are areas where residents of homes have had negative experiences and to which they attach considerable importance.

# Table 5 Quality of care: residents' assessment of their experiences and the importance which they attach to them,2000 (in %) "

	Rest home			Nursing home		
	Applicable to me	Major issue for me	Priority	Applicable to me	Major issue for me	Priority
More than 10 minutes' wait after pressing alarm bell	30	71	1	41	68	2
No-one available for a confidential discussion	42	56	2	37	64	5
Not enough privacy	13	87	3	41	71	1
Not sufficient attention given to appearance every day	59	27	4			
Do not receive the amount of help needed	10	84	5			
Not able to decide when to go to the toilet oneself				34	79	3
Not able to decide for oneself when to get out of bed				49	56	4

a This only concerns residents who answer the questions themselves (i.e. not proxies), which means that the data relate mainly to residents of rest homes and somatic wards.

Source: SCP (OII2000)

### Accommodation

Another cause of some dissatisfaction among the elderly is their accommodation. Nearly 30% of the residents of rest homes are dissatisfied with the number of rooms which they have (Table 6). A quarter feel that their accommodation is too small. Nursing home residents are even more likely to be dissatisfied with their accommodation. 75% of residents do not have a room of their own. Fewer than half are satisfied with their accommodation. Nearly 40% of residents who do not have their own room would like to have one, and 15% would like fewer people to each room. Privacy in nursing homes is currently the subject of considerable attention in the Netherlands, but residents are stating quite clearly that much still needs to be done in this area.

### Table 6 Satisfaction with intramural households (%)

	Total	
REST HOMES		
Not satisfied with number of rooms	28	
Not satisfied with size of accommodation	24	
NURSING HOMES		
Persons not having a room of their own	75	
Of whom: own space inadequate	47	
Of whom: would like to have fewer people in the room	15	
Of whom; would like to have own room	38	

Source: SCP (OII2000)

# CONCLUSIONS

The SCP's "Elderly in Institutions" study demonstrates that it is perfectly possible to obtain data from elderly residents of homes. The reasons for carrying out this type of survey are threefold: (1) systematically excluding the residents of homes can distort the overall findings, for example regarding the health of the elderly; (2) where the aim is to compare the quality of life of residents of homes with that of elderly persons who live independently, and (3) where the aim is to gain insights into specific topics which are important for the residents of homes, such as the quality of the care which they receive.

The first type of study could work very well if the residents of homes were included in general population surveys. This is certainly true of topics where excluding the residents of homes could be assumed to cause distortion, in that residents of homes and persons who live independently are likely to give different answers. The best example is health surveys. When conducting this type of survey in a home, one first has to check that all the questions can be taken over without any changes (for example, questions about consultations with an in-house doctor). A pilot survey can bring problems to light. Where a study is targeted specifically at aspects of life within the home, it makes sense to set up a separate survey which focuses on the quality of life of elderly persons and on their problems. This is beyond the scope of official statistics.

Generally speaking, the most appropriate method of surveying the elderly is to use verbal interviews. The elderly find it difficult to fill in tables themselves, and answer cards with specially large letters need to be made. In order to prevent the results from becoming distorted, it is important to develop a method for asking proxies the questions. Examples of proxies are the staff of the institution (for questions relating to daily life in the institution) or family members (for questions on health). Care must be taken to ensure that sufficient time is available for the interview and for explaining the purpose of the survey. It is often necessary to work out a separate sampling frame for these particular target groups and then to draw a cluster sample.

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# ANNEX A: DESCRIPTION OF HOMES IN THE NETHERLANDS

Like most European countries, the Netherlands has both rest homes and nursing homes.

A rest home is an institution which permanently accommodates at least five persons aged 65 or over and provides partial or total care. Since the 1970s, the elderly have had to fulfil certain criteria in order to be admitted (whereas, previously, elderly people who were relatively healthy could be admitted). The most important criterion is a deteriorated state of physical health (e.g. limited mobility, personal care or household help), but people can also be admitted on social grounds (for example, if they are seriously confused or suffering from acute loneliness). The criteria have been continually tightened up in recent years, which means that the care which has to be provided has become more intensive.

Married couples can also be admitted to a home if one of them requires care which the other is unable to provide. Generally, single persons have one room with a simple cooking niche and a bathroom. Married couples have two rooms.

At the turn of the millennium, there were about 1 380 rest homes with a combined capacity of 114 250 beds and about 108 000 residents (renovation work accounts for the difference between the two figures). Only 450 of the residents were under 65.

A nursing home is a health care institution which provides nursing, medical and para-medical care to persons who can no longer be given adequate help in their own home or in a rest home. The care provided by nursing homes is continuous, systematic and often long-term multidisciplinary care.

There are three types of nursing home: those for persons with somatic illnesses, those for psychogeriatric patients and those catering for both groups. Unlike rest homes, nursing homes do not admit married couples. Privacy in nursing homes has been in the spotlight in recent years, but many residents still have to share a room with other people. Many residents often have no more than a cupboard in which to keep their personal possessions.

There are currently more than 55 000 beds in 120 nursing homes for patients with somatic illnesses, 78 psycho-geriatric and 123 combined nursing homes. About 93% of the capacity of nursing homes (52 000 patients) is occupied by elderly patients.

Apart from rest homes and nursing homes, there are other forms of serviced accommodation, mostly self-contained flats (each with its own front door and separate address), whose occupants benefit from services such as alarm systems or meals-on-wheels, and other forms of sheltered accommodation (often located in the vicinity of a home).

# ANNEX B: STRUCTURE OF THE QUESTIONNAIRES

Annex B shows the topics which are dealt with in the various questionnaires. The numbers in the cells represent the number of questions in the relevant questionnaire. The topics are arranged in the order in which they appear in the questionnaire.

Table B1	Topics and	number o	f auestions	in the OII	2000 auestionnaires
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Торіс	Rest homes (info. provided by residents themselves)	Nursing homes (info. provided by residents themselves)	Staff questionnaire	Family questionnaire
Demographic data (age, sex, marital status, partner)	9	9	_	14
Accommodation (period of residence, type and size of				
accommodation, facilities)	15	15	6	8
Health (pains, chronic diseases, psychiatric illnesses)	30	30	30	1
Cognitive disorders	3	3	_	_
Vision and hearing	9	9	9	_
Physical limitations (day-to-day life, mobility, household)				
and help received	38	30	35	_
Helping others	2	2	_	_
Social networking (scope of social networks, frequency of visits	) 10	9	2	6
Sport, physical exercise	5	1	—	_
Use of recreational and cultural facilities (outside and				
within the home)	10	10	10	
Loneliness	6	6	—	
Holidays	3	1	_	1
Use of media(television, radio, newspapers)	6	1	—	3
Educational attainment	4	4	—	4
Religion and religious practice	13	13	_	5
Nationality	3	3	_	3
Membership of association or organisation	6	6	_	_
Transport (use of transport, suitable means of transport)	24	11	_	5
Personal wellbeing	5	5	—	—
Use of medical services (doctor, hospital, medicines)	17	17	12	7
Health insurance	7	3	_	7
Financial position (income, own contribution, fixed expenditure	e) 41	41	—	26
Mental depression	20	20	14	—
Reasons for moving	9	9	_	_
Quality of care	32	32	_	15
Alternative provisions, reasons for moving, experience				
of living in a home	14	14	_	1
Total	340	304	118	106
Type of survey	verbal	verbal	Written	Telephone
Average duration of survey	60 min	60 min	45 min	20 min

Source: SCP (OII2000)
### **ACTIVE PARTICIPATION IN SOCIO-ECONOMIC LIFE: USERS VIEW**

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#### Background

The present paper draws on contributions made to the NIEPS workshop on Ageing, Intergenerational Solidarity and Age-Specific Vulnerability held in Rome on 20–21 April 2001.<sup>1</sup>

NIEPS (Network for Integrated European Population Studies) is a thematic network. Its task is to bring together major national demographic centres which, *inter alia*, have as their mandate to carry out research, assess policy implication of research results and which are called upon by their national authorities to provide recommendations regarding population related policies and measures.

NIEPS is funded by the European Commission in the Fifth Framework Programme Improving the Human Research Potential and the Socio-Economic Knowledge Base, thematic frameworks Societal Trends and Structural Changes, under Contract No. HPSE-CT-1999-00005.

Three themes constitute the content of the activity of the thematic network:

- gender-relations, family-building and patterns of work;
- ageing, intergenerational solidarity and age-specific vulnerabilities;
- demographic and cultural specificity and integration of migrants.

These themes and their interdependence is discussed in two dimensions:

- retrospective, which comprises the review of the state-of-art research undertaken in recent years by the network members and pertinent research results obtained by other institutions;
- prospective, which will lay grounds for future policy relevant research comparable at the European level.

The starting date of the project is April 1, 2000 and is implemented over the period of 36 months, including, *inter alia*, six thematic workshops and three technical meetings.

The work under the Network will be carried out by11 principal contractors:

- Bundesinsitut für Bevölkerungsforschung (BiB), Germany;
- Centre of Demography (COD), Latvia;
- Demographic Research Institute (DRI), Hungary;
- Department of Demography and Geo-Demography (KDGD), Czech Republic;
- Estonian Inter-University Population Research Centre (EKDK), Estonia;
- Institut für Demographie (IFD), Austria;
- Institute of Statistics and Demography (ISD), Poland;

<sup>&</sup>lt;sup>1</sup> E. Daróczi: Population Ageing in Hungary. Review of related literature. Paper presented at the NIEPS workshop on Ageing, Intergenerational Solidarity and Age-Specific Vulnerability. Rome, 20–21 April 2001 and E. Daróczi: Executive Report. NIEPS workshop on Ageing, Intergenerational Solidarity and Age-Specific Vulnerability held in Rome on 20–21 April 2001.

- Instituto di Richerche sulla Populazione (IRP), Italy;
- Netherlands Interdisciplinary Demographic Institute (NIDI), the Netherlands;
- Population and Family Study Centre (CBGS), Belgium;
- Population Research Institute (PRI), Finland.

Population and Family Study Centre (CBGS), Belgium is the co-ordinator in charge of the scientific, financial and administrative co-ordination of the Network.

#### Research Experience in the Use of Hungarian Statistics on Ageing

Several specific surveys were made in connection with censuses and micro-censuses, household income surveys etc. in order to have information on the demographic composition, economic activity, living arrangements and housing conditions, health status, family relationships and social network of old people – the definition of which varied. The threshold was either put at the age of retirement (which was, for a long period 55 for women and 60 for men) or at the ages of 60, 65, or 70. One specific study, focussing on the job market position of people around the age of retirement, surveyed people from their fifties (Fóti–Lakatos 1996), while another concentrated on the oldest old (Klinger 1990).

The first social-statistical survey of the elderly population in Hungary was made in 1963 by the (that time) Demographic Research Group of the Central Statistical Office (CSO)<sup>2</sup>. The study was based on a national representative sample of retired population. Hypotheses issued from the national sample survey were tested by interviews with people on pension by own right and living in Budapest (Andorka–Cseh-Szombathy 1965). This survey provided new information on the attitude of elderly population concerning retirement.

In 1965 a specific survey was made on people living in long-term residential social institutions (Heinz 1966). The study aimed at revealing those circumstances in which there seemed to be no alternative to this type of care.

The above surveys only dealt with selected strata of the elderly. The first comprehensive study on the elderly population was based on a secondary analysis of the 1968 micro-census and a representative sample survey of the population of retirement age (women born in 1913 and earlier, men born in 1908 and earlier) conducted in 1969 (Andorka et al 1972). The secondary analysis provided background information for the detailed survey which had two major and two minor topics:

- Majors: economic and other activities (48+20 questions); family and social network, isolation (15+16 questions).
- Minors: economic situation (21 questions); health (25 questions).

Personal data made up nine more questions. The size of the sample was 2147 persons with a only14,8% missing answers (6,6% due to deaths).

Findings of these first surveys will not be discussed here but it should be stressed that the well structured, detailed questionnaire of the 1969 survey has been used as a point of reference in similar surveys ever since.

In 1987 the CSO published extensive quantitative and qualitative information on the elderly (retired population) pooled together from various surveys (Kepecs–Dallos 1987). These surveys included the:

- 1984 micro-census (demographic data, economic and other activities, economic situation, social allowances, health, accidents, nutrition, smoking, alcohol consumption, housing conditions, family network, loneliness);
- 1983 income survey (sources of income: pension, paid work);
- 1985 household budget survey (composition of consumption, household equipment, durable goods);
- 1984 opinion poll on living standards (opinions on how their standards of living changed during 1978–83, and on how they were expected to change in the forthcoming years, on the amount of income necessary to maintain four different levels of living and its change in the near future).

<sup>&</sup>lt;sup>2</sup> A nyugdíjasok helyzete (Retired population). Budapest: KSH Népességtudományi Kutató Csoport Közleményei, 1963, 85 pages.

A new, public opinion poll-type, series of surveys started in 1982 in the co-operation of the Demographic Research Institute and the Mass Communication Research Institute (S. Molnár–Pataki 1983). The inquiry concentrated on opinions and prejudices concerning old age. A sample of 1,000 people, representing the major (18 years and above) population of Hungary was selected and five topics were covered:

- 1. Knowledge about the size and proportion of retired population in Hungary;
- 2. Subjective definition of the most difficult age of life, opinions on the desirable age of retirement;
- 3. Opinions about the tasks and distribution of work between the state and the families in solving the problems of the elderly;
- 4. Prejudices concerning old age and the elderly in the public opinion;
- 5. Preparations for the old age.

A block of similar questions was included in a 1989 public opinion poll on various population issues (S. Molnár–Virágh 1990) and that permits comparison:

"It was seven years ago, in 1982 when we last time studied opinions about the elderly and the nature of prejudices concerning old age. Opinions have also changed in this respect. Financial loss as a result of retirement is regarded to be much more serious today than earlier. This may explain the growing sympathy towards the elderly and that people are less willing to intensify or exaggerate the sometimes unpleasant features of old people which are typical of their age. Nevertheless, within the circumstances which developed by the end of the 1980s, public opinion is, to some extent, becoming "harder". Anxiety from unemployment, pressing career requirements and last but not least, failures of the aged generation are motives for advocating for stricter measures when evaluating the accomplishment of people around the age of retirement. Compared to the survey of seven years ago, today less people accept that – because of their accumulated experience – the work done by the elderly is worthier than that of the young, and less people share the view that older people should be more respected at work. People with higher education or non-manual workers – who earlier proved to be more tolerant towards the problems of the old generation in all respects – are the most determined in these opinions. It seems that in the public opinion the just solution means more rigorous requirements at work and reasonable pensions, acceptable living conditions following retirement." (Op. cit. pp. 13–14).

S. Molnár and Virágh note that most people would have voted against raising the age of retirement in the 1980s. In 1989 35% of the 18–54 year old respondents found the age of 55 too high for women's retirement while only 19% of older respondents agreed with their opinion.<sup>3</sup> Those who supported this view largely argued that "health fails earlier", "people need rest". Young respondents also found it important that if parents retired earlier they could help them in raising the children. Authors gave the following possible reasons behind the large difference between the opinions of people in pre- and post-retirement ages: those who are still active can only see the advantages of retirement while many of those who had just retired (relatively young) find their lives aimless and can only see the negative economic consequences of retirement. In 1982 50% and in 1989 only 33% of retired people reported that they being on pension they spent their time more or less as envisaged. Lack of money (42%) and poor health (20%) were basically the major answers given in 1989 for the questions of why their plans, however modest, could not be realised. In 1982 the situation was reversed: more respondents mentioned failing health than narrow means as an obstacle. Since the health status of old people did not at all improve during the 1980s, this change in opinions resulted from the rapid deterioration of economic standards. Op. cit. pp. 100–104.

Retirement has become an attractive alternative to unemployment during the early 1990s. This issue was addressed by a specific survey on the job market position of people around the age of retirement.

"As a preparatory phase of the micro-census of April 1996, the HCSO carried out a pilot survey in ... 1994 on a representative national sample with approx. 25,000 dwellings. Simultaneously, on a smaller sample, supplementary questionnaires were ... filled in on persons born in 1944 or earlier ... Both the pilot survey and its supplement included questions concerning the possibilities for being employed, intention to work, working conditions of persons aged 50 and more ..." (Fóti–Lakatos 1996: 11.) Questions focussed on economic activity, intentions to be employed, risks of unemployment, and planned activities following retirement.

<sup>&</sup>lt;sup>3</sup> There was no significant difference between women's and men's responses (28 and 32%, respectively).

The most recent HCSO study on the elderly (population aged 60+) is based on the 1996 micro-census and the 1998 household survey (Szucs 2000 – with table of contents, preface, and summary in English). The publication summarising the results contains seven papers focussing on:

- demographic features;
- economic activity;
- housing;
- household and family;
- family relationships and physical activity;
- expenditures;
- economic situation.

Besides the surveys already mentioned (Andorka et al, Heinz, S. Molnár) the involvement of the Demographic Research Institute in elderly studies is demonstrated by three publications from the year 2000:

- 1. Dutch–Hungarian comparative study: *Population ageing in Hungary and the Netherlands* (Beets–Miltényi 2000). Most data refer to early 1990s but there are some retrospective time series. The structure of the book follows good demographic traditions:
  - 1. Introduction (with population histories of the two countries)
  - 2. Demographic backgrounds: what is population ageing?
  - 3. Demographic backgrounds: population ageing trends in Europe
  - 4. Demographic backgrounds: population structures and ageing dynamics
  - 5. Socio-demographic characteristics of aged population: nuptiality
  - 6. Socio-demographic characteristics of aged population: marital status
  - 7. Socio-demographic characteristics: individual living arrangements, households and dwellings
  - 8. Socio-economic characteristics of aged population: educational level and urbanisation
  - 9. Socio-economic characteristics of aged population: family composition and financial resources
  - 10. Future population and household trends: projections and scenarios
  - 11. Ageing and the family
  - 12. Ageing and the labour force, social security, and retirement
  - 13. Ageing, mortality, morbidity and health care
  - 14. Population ageing: European convergence?
- 2. In 1999, the International Year of Elderly People, DRI organised a national conference entitled *On Top of the Age Pyramid* (Daróczi–Spéder 2000). The book published as an outcome of this forum combines social statistical and demographic approaches to the topic. Five papers deal with the economic, housing and family situation of old people. Authors emphasise that in the 1990s there is much less variation within the incomes of pensioners than those of the active population<sup>4</sup>:

"[In 1996] Almost half of pensioners (44%) can be found within the three medium [income] deciles. They are hardly represented (3,3%) in the lowest income group." (Spéder 2000b: 13.)

"Old people live at a more even level of incomes than members of younger generations. Hungarian pension system and the policy of pension corrections tend to level off incomes. According to household statistics, the national average difference between the first and the last income deciles is five-fold, while it is hardly three-fold among the elderly." (Havasi 2000: 30.)

"Among people aged 18–60 the maximum value of the ninths decile is 3,9 times higher than that of the first decile, but among older people this ratio is only 2,4. ... Other measures of inequality also show smaller income variation within the elderly." (Cserna–Szivós 2000: 48.)

Statements in the above, as well as earlier studies, on the relative improvements in the economic situation of the elderly during the 1990s compared to families with children were met by doubts and sometimes by anger. This happened in spite of emphasising that relative improvement often involved smaller than average deterioration and that pensions, however modest, provide a safe financial resource, while families with dependent chil-

<sup>&</sup>lt;sup>4</sup> These statements are in clear contrast with the situation ten years earlier (in 1986): "Though variation in pensions has in recent years significantly reduced, it is still considerably higher than variation in wages and salaries." (Kepecs–Dallos 1987: 7.)

dren, and/or unemployed adults may be much worse off. There is, however, a valid argument also on the other side: retired people have less chance to find extra earnings or hide their income.

The three demographic studies contained in the book are the following:

Notion, measurement and components of demographic ageing (Valkovics 2000); Mortality in old age in Hungary, 1954–1999 (Daróczi 2000); Population ageing (Hablicsek 2000).

3. Within the frameworks of an international co-operative comparative study across five European countries on the economic well-being of the elderly Spéder (2000a) analysed

- the increasing number of Hungarian pensioners as an unintended consequence of transition: "It seems that the almost 30% increase in the number of pensioners was an unplanned consequence of transition (more precisely, of the restructuring of the economy)."

(Op. cit. pp. 53-54.)

- differentiating and homogenizing processes among pensioners;
- the relative well-being of pensioners;
- factors differentiating the society of pensioners;
- living conditions of pensioners.

"While the Hungarian pension system has been constantly adapted since the mid-1980s, its pay-as-you-go structure did not change until 1994. The separation of the pension system and the social assistance system started in 1989 and in 1991, the indexing of pensions underwent significant changes. In 1992, the system of social insurance was split into two separate entities: health and pension system. Private insurance companies began offering savings programmes aimed at old-age social security. Reliable macro statistics are available only from 1992 onwards; hence, data before and after 1992 are not always comparable.

The *enormous increase in the number* of inactive persons, and of *pensioners* among them is considered as an important factor driving pension reform. The changes in the number of pensioners were caused by several factors, but the framework was set by demographic trends." (Spéder 2000a: 56.)

The Act LIX of 1996 "On raising the retirement age for old age pension and the related legal modifications" created a completely new situation. This act concerns women born between 1940-1944 and men born between 1938-1944." (Fóti–Lakatos 1996:13–14.)

#### Recommendations for areas in need of development

The following recommendations were formulated at the NIEPS workshop on Ageing, Intergenerational Solidarity and Age-Specific Vulnerability held in Rome on 20–21 April 2001.

Areas mentioned at the workshop as being in need of development can be organised under three major titles: (1) broadening and deepening the knowledge on the process of ageing and on the aged population; (2) developing research instruments; (3) assisting policy-making and analysing policy impacts.

# Specific aspects of the process of ageing and the situation, problems and needs of the aged population for which existing, documented scientific knowledge is insufficient

Ageing is an on-going process all over Europe but the relative importance of the driving forces behind ageing (fertility, mortality and migration), its speed, prospects and the particular issues related to it show important national, regional and social variations. In aggregate terms the process of ageing is more or less well documented (ageing from the bottom, ageing from the top). Nevertheless, there are specific aspects which need further elaboration. The following list includes the problem areas mentioned as important and in need of deeper research. It does not represent any order of importance or preference agreed upon by the participants. The topics listed essentially cover three major dimensions: activity, well-being, and care.

Preparations for ageing and retirement;

Transition from work to retirement;

Uncertainty about increasing activity: will there be work for the elderly, are aged people really willing to work?

Long-term financial and economic problems in retirement, poverty;

Activity options, time budget, daily circumstances, kin and social network of the elderly/retired population; Heterogeneity of the aged by generation, education, income, objective and subjective poverty, autonomy, culture, ethnicity, place of birth (migration), etc.;

National, regional and urban-rural variations in selected aspects of ageing, with special regard to historical and cultural differences (East–West, North–South);

Selective effects of transition on different groups of the elderly in ex-socialist countries;

Gender differences in ageing (ageing as a source of the construction or display of gender);

Individual expectations about and attitudes towards various types of activity, family and social contact, participation, living arrangement, housing, type of care, etc.

Relationship between living arrangements, the need for privacy and housing costs;

Ageing as a social construct;

Various aspects of intergenerational solidarity (growing old in a new environment without a well established social network, the functioning of multigenerational families in urban settings, family exchange, willingness to pay taxes, etc.);

Separation of young and old family members by international migration;

Various dimensions of dependency of elderly people (e.g. loneliness, kin and social network, physical mobility, migration, control of economic resources, etc.);

Progress in ageing;

Chronic and degenerative ailments associated with ageing;

Specific problems of the oldest old;

Implications of trends in mortality and morbidity;

Evaluation of the need and the effective demand of dependant population for medical and social care, its level and amount, especially for formal services and institutional arrangements in comparison to effective supply;

Sharing the responsibility of elderly care between the state, the family and the market;

Formal support to the family and the development of formal institutional care;

Transition of older adults in and out of institutions;

Pre-death mortality;

Attitudes towards the length of life, dying and death.

#### Areas in need of development in the field of scientific description and analysis of ageing

It was emphasised that the quantity and quality of scientific knowledge on ageing varies enormously from country to country, even within the EU, or the former socialist countries. The lagging behind of the latter group is, however, very distinct. Research on ageing in East-Central European countries badly needs support, both scientific and financial, to keep up with its West-European counterpart. For their specific situation, New Independent States represent a separate group of countries in this respect (e.g. because of the lack of national census for many decades). Areas in need of development mentioned in the field of research cover three major items: data, analyses, and research organisation.

As for data availability, quality, and comparability, the following needs were formulated:

More extensive use of existing national macro data sources, and international surveys like Labour Force Survey, Health Survey, FFS I, FFS II (GGS), National Minority Survey;

Systematic collection of new information on the elderly;

Close monitoring of the phenomena of ageing;

Standardised definitions and comparative data, comparable questionnaires and systematic documentation; Demographic projections;

Better statistics on care services, their clients and care expenditure.

With regard to approaches and methods, as well as institutional and organisational aspects, developments were urged concerning:

Micro-level studies, individual life cycle stages, behaviour, life-course patterns, experiences and prospects; Employment histories;

Dynamic approach;

Cohort approach; Gender-aware research on ageing; Long-term research and longitudinal data, cohort effects; More cross-national projects on few selected research topics; Sample surveys and panel surveys also in international projects; Improvements in research methodology, application of research standards; Multi-disciplinary approach; Need for co-ordinated and institutionalised interdisciplinary scientific community.

#### Areas in need of development concerning elderly policy-making

There was a consensus on the need for more research to meet the requirements of policy-making, as well as more impact analyses of elderly policies.

The most frequently mentioned topics included:

The need for long-term care insurance; Politicians concentrate on the consequences of ageing on the pension fund, but the growing need form medical and social care is less researched;

Not only the pension system but also the health system faces collapse;

Developments in research-based policy making and impact analyses;

A better insight into dependency patterning and the possible consequences of a multi-pillar system of pensions;

The relationship between spending on pension and spending on unemployment.

#### **Research methods and instruments**

Macro data on population ageing are relatively easily accessible though the suggested use of flexible age boundaries makes cross-national comparability difficult. The study of dynamic ageing (in which threshold ages are not fixed but based on health, occupational and relational risks) faces similar methodological problems.

More problematic, it seems, is the collection, documentation, comparison and analyses of individual or micro data, particularly in cohort or longitudinal perspective. The related problems are multi-faceted. One dimension concerns the necessary time, money and professional expertise, since such studies are very expensive, time-consuming and highly demanding in professional and organisational terms. The other dimension relates to privacy. Legislation on access to individual data, possibilities of linking various data bases varies from country to country, some being rather restrictive. The third is concerned with the specific problems of surveying very old and institutionalised people over time, due to the need of elaborating specific questions, the uncertainty of obtaining answers and the problem of drop-outs. It was suggested to treat drop-outs as specific a sub-population which needs further analysis.

Increasing heterogeneity within the aged urges the use of both objective and subjective indicators on work, financial situation, income, poverty, housing, health and leisure, etc. For this purpose quality measures of attitudes, expectations, vulnerability and satisfaction are to be developed. A composite indicator of vulnerability contrasting means (income, education, housing and satisfaction) and risks (age, gender, family and social contacts) was suggested.

Due to the comprehensive nature of the ageing process which, at the same time, has a strong national and cultural variance, international scientific co-operation is badly needed. The range of cross-national comparative analysis should include macro and micro levels, cross-section and cohort analyses, national and regional variations, and co-operation in the field of measurement, description, modelling, projections and policy impact analysis. In order to increase the efficacy of co-operation, cross-national research should focus on a few selected topics. Examples mentioned included surveys (in-depth studies with comparable questionnaires) on elderly living arrangements, preparations for old age dependency, demographic projection of the dependency/activity ratio, and comparative studies on the economic efficiency of pension schemes.

Effective co-operation between EU member states and transition countries represents specific challenges. In transition countries researchers need to cope with the lack of individual information necessary for life course analysis and for revealing the selective effects of transition on various elderly groups.

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## **PROMOTING ACTIVE AGEING AND PERSONAL WELLBEING: THE NEED FOR QUANTITATIVE INFORMATION**

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# 1 – The characteristics of the necessary "capital formation" to pursue an effective active ageing in the technologically advanced countries

As has already been stressed in the past (cfr. brochure entitled *Il benessere degli anziani* No 4, April 2000), to mark the end of the UN International Year of Older Persons (1999) the European Commission's DG V published a document entitled *Active ageing: promoting a European society for all ages*, which pointed out that the marked growth in longevity over the last five decades, with an increase in life expectancy of about ten years, was "one of the outstanding achievements of the 20th century". This has evidently been a major factor, together with a cut in fertility rates, in the increasing ageing of the structure of population in Europe.

On this basis, the document points out that demographic ageing emphasises "the need for European society to adapt" and for "an active society for all ages". This is a *fundamental challenge* requiring "a strategy which both enables and motivates older persons to stay involved in working and social life".

This means, above all, putting a definite stop (without a negative impact on unemployment) to the trend towards the early retirement schemes that have been a feature in various European countries until fairly recently, with the related reduction in the activity rates of relatively elderly workers (OECD, 2001), as well as increasing the employment rates of adult or elderly persons of both sexes, especially those living in central and southern Europe (Eurostat, 2001a).

In addition, it means *promoting active ageing*, which is not "simply a question of keeping older workers at work", but should involve all those concerned (public bodies, firms, families and individuals) in adopting "life-cycle strategies enabling workers of all ages (of both sexes) to stay longer in employment".

What this means is that promoting the active ageing of all, as they grow older with time, goes way beyond taking a broader view of structural policies on employment and labour and has to impact in the broadest sense on social and economic policies in general.

Furthermore, as was clearly highlighted in a document put out by the *United Nations programme on ageing* (UN, 2001) and reviewing what was learnt from the International Year of Older Persons, our job is not simply to acknowledge that ageing processes constitute a fundamental challenge to the world as it moves from the 20th to the 21st century, but above all to provide ourselves and future generations with the wherewithal to offer an adequate response to such a challenge.

Building a society for all ages would seem to be based on four components: 1) efforts by the elderly; 2) development of skills as they increase throughout life; 3) mutual enrichment between generations within families and in the community; 4) creation of institutions and structures designed to provide an adequate response to demographic change in conjunction with other features of change that are likely to affect circumstances in the future.

These four components could be expressed in dynamic terms by thinking of them as capital formation in four areas: human, sociocultural, environmental and economic.

Figure 1 shows how the subjects to which the four components refer (the four boxes in the centre) can generate capital in the four areas and, in a circular fashion, provide flows of capital (human, social, etc) resulting in processes of accumulation which make it easier to tackle and manage ageing processes in the population.

The chart in Figure 1 shows how the subjects (people of various ages, families, communities, centres of interest, firms, public bodies in general, local authorities, planners, development agents), operating and interacting in and between the various areas, work together in forming "capital", leading to the acquisition of capacities and skills (components of "capital") which comprise the "capital" that is accumulated in the human, sociocultural, environmental and economic areas.

The activity of the various subjects seems effective with regard to the active ageing of the population if it is conducted in line with some basic operating principles that make it possible to pursue economic development in terms of sustainable growth, to construct a living environment allowing choice and interaction, to aim for a society based on mutual interdependence, to obtain for everyone civilised conditions of independence and ability to adapt to constant change with the ultimate aim of securing wellbeing (Sen, 1999) for all.

These activities should be aimed at achieving for all, regardless of age but especially for those who have reached or who will reach an increasingly advanced age, suitable "capital components" in terms of health, knowledge/skills/ability to understand and decide, personal interrelations and intercommunication, trust, mutual help, freedom from barriers, compatibility between generations, quality of human resources, living and working conditions.

The accumulation of these "capital components" would lead the elderly, thanks to societies (tolerant, pluralistic, etc) towards a living environment (flexible, accessible, with various generations integrated, etc) and to an economic system (safe, open, reactive, etc) with features that were increasingly suitable for effectively pursuing individual wellbeing through (at the same time) active and accountable involvement in the process of "capital" formation and thus in the pursuit of collective wellbeing.

It is obvious that such a process of accumulation requires an active and ongoing contribution on the part of everyone (individuals, families, communities, firms, other private and public institutions), using strategies that are deliberately pursued on various individual and collective levels.

In developing countries this means first of all combating economic and human poverty, in the awareness that the prevalence of poverty among the elderly is to a large extent the legacy over time of increasingly inadequate "capital accumulation" as described above (Randel, German and Ewing, eds., 1999).

In technologically advanced countries, such as those in Europe, apart from narrowing the poverty gap and reducing the social exclusion that affect the elderly in particular (Eurostat, 2000), it becomes more and more vital to ensure that everyone, and especially the elderly, has the opportunity to improve his conditions with regard to health, knowledge and skills, ability to understand and take decisions, interpersonal relations and communication, trust and mutual help, freedom from barriers of every kind, compatibility between generations and work and life in the economic and more general sense.

The various subjects mentioned above, and especially those whose jobs involve groups of people or public and private communities/institutions, will have to play an active role in the processes for the formation of such "capital components".

However, these strategies will need to have the information that is essential to formulate, introduce, assess (during the "accumulation" process and also subsequently) the particular strategies for achieving these "components" and, more generally, the wellbeing of all, with special reference to the elderly.

What this means is that there is a need for quantitative information that can be converted to more or less composite indicators that are useful for stating in advance the intermediate and final objectives to be achieved, as well as for measuring impact during the processes and afterwards, when the level of achievement/attainment of the objectives needs to be checked.

#### 2 - The need for quantitative information: health and learning statistics

As was pointed out many times in *Il benessere degli anziani*, since it is important for the wellbeing of the elderly to live a long but healthy life, it is vital to have suitable quantitative indicators on people's health.

This has been clearly realised at both the national (or even local) and the international level. Where Italy is concerned, for example, there is no shortage of quantitative information derived from sample surveys such as the multipurpose survey<sup>1</sup> or from administrative sources. The use of this information to illustrate and clarify the problems of wellbeing that need to be tackled, and also to formulate/introduce/assess the best strategies for dealing with them, has led to attention focusing on a significant methodological problem, concerning the subjective or objective nature of the information that is collected and processed.

Household sample surveys collect information on the respondents' opinions about their health, with details about some of the conditions they claim to suffer from, on their attitudes and habits in relation to their use of the facilities, the human and material resources (including pharmacies) and the structure of health care, with consideration also given to behaviour affecting health as a result of *life style*. This information is essentially subjective, and its significance in information terms on respondents' *objective state of health* seems limited unless they are subjected to longitudinal surveys, possibly in conjunction with careful health checks<sup>2</sup>. In addition, the "objective" significance of the information on the use of health care facilities/resources/structure (with special reference to the elderly) could actually be backed up in Italy, to the extent that the information collected via household surveys could be supplemented by information from administrative sources, with regard not only to expenditure on health care and the subsequent monitoring of the use of health goods and services, but also to the quantitative and qualitative features of the production and productive capacity of such goods and services. ISTAT has made a definite move along the path of combining information collected from households with information that could be derived from the administrative records of the various bodies producing and providing health services<sup>3</sup>.

At international level, there seem to be similar efforts to merge subjective and objective information, with the aim of arriving at a set of information that on the one hand makes it possible to determine significant aspects of individual wellbeing, while on the other hand revealing objective features (properly classified in relation to the qualitative features of those involved) of the level of accumulation acquired in terms of "human capital" in the case of health. An effort of this kind has definitely been made by Eurostat which, especially after the discussions by the European Parliament and the Council at the end of June 1997, initiated a process designed to confirm the results of surveys that had collected "subjective" information, such as the various instalments from 1994 onwards of the European Community Household Panel (ECHP), together with various information from national administrative sources, including information collected and compiled by other international bodies and agencies (OECD, WHO, FAO, AIDS Surveillance Centre, International Agency for Cancer, Human Development Network). This resulted in a recent publication (Eurostat, 2001b) that is intended to be the first step towards the construction of a system of health information that is comparable at international level and can be combined with other information systems of varying levels of refinement on the major social and economic aspects concerning the pursuit of individual and collective wellbeing.

However, it can already be said that the effort made by Eurostat has revealed two important pointers. First of all, the international comparison of information is definitely affected by the tremendous institutional and sociocultural differences that typify the various national systems. The information that the Eurostat experts collect and bring together on the major features of the various national health systems clearly reveal the very considerable differences that exist among the 15 Member States of the European Union. Secondly, especially when

<sup>&</sup>lt;sup>1</sup> This is an ISTAT sample survey of the resident population (excluding permanent members of institutions). It has been conducted once a year, covering a reference week in November, since 1993 to collect information on the previous 12 months by means of direct interviews with all members of the selected households. The sampling plan covers 29 000 households and just under 78 000 individuals. Since 1999 the survey has resulted in the regular publication of four volumes, including one on living conditions and health which provides a breakdown of data by age group.

<sup>&</sup>lt;sup>2</sup> An interesting example in this regard is the *Italian Longitudinal Study on Ageing* based on a sample of 5 632 people aged 65-84 of both sexes living in eight Italian cities. The results were published in the paper: Amaducci L., Scarlato G., "Salute e malattia sugli anziani: risultati a confronto. L'indagine ILSA" contained in ISTAT-CNR, 1995.

<sup>&</sup>lt;sup>3</sup> The results of this effort are clearly shown by ISTAT publications, e.g. the recent *Annuario Statistico Italiano* (ISTAT, Rome, November 2001), in which administrative data on the structure and activities of health care institutes are accompanied by the results of the ISTAT annual multipurpose surveys and the results of other ISTAT surveys of the population.

it comes to using the results of sample surveys in an attempt to compile internationally comparable information, there are some tricky problems with regard to breaking down the information, particularly with regard to what is needed for understanding and tackling issues affecting the elderly.

This also applies to some extent to the "human capital" component in connection with learning. Lifelong learning for all is an essential part of the processes of accumulating "capital" in the sense defined earlier, both for its intrinsic value as a component of human and sociocultural "capital" and also for the noticeable indirect impact that it has - especially in a dynamic sense over the medium and long term - on the other components of "capital".

Compilation of suitable quantitative information on lifelong learning was the topic of the 14th International Seminar of the CEIES (European Advisory Committee on Statistical Information in the Economic and Social Spheres) held in Parma on 25-26 June 2001 in collaboration with the European Commission's DG EAC (Directorate-General Education and Culture) and the local university (Eurostat, 2002). Even before the seminar, European interest in quantitative information on lifelong learning had grown to such an extent that Eurostat had been prompted to set up a relevant task force comprising, apart from Eurostat, representatives of the European Commission's directorates-general for education and culture, employment and social affairs and research, together with representatives from the CEIES and the European agencies, CEDEFOP and Eurydice, as well as the OECD and UNESCO. Their report in February 2001 (Eurostat, 2001c) provided the basis for the meeting between statistical producers and users at the Parma seminar.

The meeting dwelt on: 1) problems of definition and classification and other basic methodological aspects; 2) problems of relating information supply to demand by users, as shown by recent experiences; 3) future requirements and the possibilities of getting a suitable response from producers of statistical information.

The definition of lifelong learning that was adopted covers *all learning activities, formal and informal, that are intended to improve individual knowledge, skills and abilities and that are conducted on the (ongoing) basis of duration and continuity (with no lower limit on duration) as well as by any method of financing (private or public) and by any means (traditional or modern).* 

It is a definition which has a chronological dimension referring to learning activities throughout life from childhood to old age, and a spatial dimension referring to the location/arrangements, etc, of the various methods by which learning activities can in fact be undertaken.

The second dimension recalls the traditional distinction between *formal education* (meeting all the criteria laid down in the UNESCO manual of 1996), *non-formal education* (referring to learning activities intentionally organised in specific institutional settings and locations, without showing other features in terms of structure and content that are typical of the training provided by training establishments issuing qualifications on the basis of results) and *informal learning* which is apparently in line with the criterion of being intended (individually or by means of families, firms or other social institutions) to improve individual knowledge, skills and abilities in a way that is much less organised/structured than other learning methods.

The distinction was used to compile classifications for each type of education/learning that would serve, in a *learner-based approach* (which is essential in dealing with individual wellbeing for the elderly as well), to provide quantitative information on access to and involvement in available learning opportunities, on the characteristics of learning processes, and on the results and effects of such processes.

The classification that is most commonly used, in Europe as well, is UNESCO's ISCED97 (OECD, 1999), which was compiled with the aim of providing an integrated and consistent statistical framework for the collection and presentation of statistics on supply and demand in education that are taken from national sources but are internationally comparable.

Formal education can fairly easily come under the classification, although necessary attention must be paid to the particular features of each institutional context because of the radical historical and institutional differences among the various national (and often local) systems, especially when this kind of education is not restricted to the "initial training" given to young people but also includes training/learning programmes designed for adults.

In any case, the major problems in applying the classification have been encountered in the case of non-formal training programmes, and even more so in the case of the wide variety of arrangements - which are constantly changing - for informal learning, which are particularly useful for the wellbeing of the elderly.

However, the producers of statistics have endeavoured to provide quantitative information collected from various sources, both institutional (solely for formal and non-formal education) and individual (for informal education as well).

In the particular case of Italy, the information on formal education (essentially limited to young people and young adults on account of the shortcomings that still exist in the Italian education system - Frey and Ghignoni, 2000) comes primarily from administrative sources, especially (at the moment) the Ministry of Education, the Universities and Research and regional authorities (for vocational training). This is objective information. Also basically objective is the information on qualifications obtained that is collected by means of ISTAT censuses or household sample surveys (with the labour force surveys being particularly important here). Subjective information on individual views and attitudes comes mainly from sample surveys on the transition from school to work by those with higher secondary school qualifications (ISTAT, 1999) and by university graduates (IS-TAT, 2000). However, this information does not yet systematically include all administrative data and is considered by users (institutions and individuals) to fall short of their needs. As a result, there are lots of unofficial sample surveys in an attempt to fill the gaps (see, for example: Frey and Livraghi, eds., 2001). As far as promoting active ageing is concerned - and that is the main topic here - the official information set-up in Italy seems to be decidedly lacking. The administrative data offer scant information on the formal and non-formal education of adults and almost nothing on the elderly, who are also virtually neglected by non-formal education. The most important "subjective" source of information could have been the "multipurpose" household survey, but when it comes to education the information it provides cannot be compared with that on health. Furthermore, the quantitative and especially qualitative information provided by research on adult education in Italy has revealed (Frey, 1997) that the training of the elderly still follows methods that can be classified as "informal", and thus it is difficult to assess so that it can be properly incorporated in the system of education statistics that we are trying to set up in Italy.

The Parma seminar was not lacking in references to significant experiences with regard to collecting and compiling information on adult learning, for the elderly as well, and the Canadian experience was particularly instructive.

The various national experiences have, however, been considered in order to arrive at ideas and suggestions on how to organise an international framework that is comparable at international level and deals adequately with some tricky problems: not only of definition and classification but also of providing sufficient coverage of all the individual fields involved, of invaluable linking of information on lifelong learning processes with other information taken from the same sources, and of efficiency, compatibility and actual comparability at international level.

Among the comparable information that already exists at international level, the following were mentioned by Eurostat's experts (Eurostat, 2001c):

- a) information collected every year from administrative sources (persons enrolled and attending, teaching staff and expenditure per training) by means of the joint UNESCO-OECD-Eurostat (UOE) questionnaire;
- b) information collected every year from administrative sources (with regard to participants, access requirements, opportunities for further study, links with job during training, teaching staff) on vocational education and training (VET);
- c) information collected (on undertakings, with or without relevant programmes, and on participants, hours of training and costs) by means of the regular ad hoc sample survey at Community level on continuing vocational training (CVTS) and carried out `with substantial organisational effort on the part of Eurostat (the first survey was in 1994 and the most recent in 2000, with results that should have been available at the end of 2001 but which are not yet ready;
- d) information (quarterly since 1999) taken from the labour force sample survey (LFS) on participation in training schemes, level of training achieved by the population (broken down by particular main characteristics relating to work and with reference to the level of education attained by parents);

e) limited information obtained each year from the European Community Household Panel (ECHP) sample survey on learning and training results.

This information is not properly linked, however, at either national or international level, with other information on formal and non-formal education.

Apart from the need for systematic integration, the Parma seminar also revealed the need to improve and focus specific surveys that are especially useful for compiling suitable quantitative information on lifelong learning.

Above all, it was suggested that the type of information collected from administrative sources, such as those collected at European level in connection with the UOE and Eurostat/VET questionnaire, should be updated.

During the seminar there was repeated mention of the information potential of the labour force sample surveys, which are increasingly becoming one of the keystones of the European social statistics system.

It was mentioned it would be useful to improve that source, by adding to the survey's core questions (central questions that are repeated from survey to survey) some questions on vocational education and training. There was also a favourable response to the proposal of including an ad hoc module on lifelong learning in the 2003 survey.

It emerged that there was a possibility that the revision of the ECHP (to be known henceforth as the EU-SILC (EU Statistics on Income and Living Conditions), which was to be completed in 2002 and lead to a new annual survey starting in 2003, could provide regular information on self-reported skills, with the further possibility of detailed information on vocational training by means of ad hoc modules every three years, or at any rate at regular intervals.

There would still be some tricky methodological problems further up the system, including a classification suitable for the growing and prevalent existence of non-formal and informal learning activities. In order to solve problems of this kind, at least in part, mention was made of the possibility of using the time use surveys (TUS) to improve classifications of such activities. A better classification would also improve the information potential concerning the funding and cost of individual learning in the household budget surveys (HBS).

Better classifications suitably combined with a revised version of ISCED97, covering a range of educational and cultural activities (such as distance learning using electronic media, educational trips, various cultural activities), would also be invaluable for developing the information potential of further continuing vocational training surveys in firms (after the 2000 survey). These are unfortunately costly for firms and should therefore be improved, in the view of experts in the business world, with the inclusion of information useful for assessing the effectiveness of company investment to improve workers' knowledge/skills.

In addition, it was stressed that in future the learner must be the focus of information on lifelong learning. This calls for a proper link between administrative information, often subject to concerns in relation to the institutional agents involved, and the information collected via household sample surveys.

This link is vital for understanding and analysing the resulting economic and social problems and for formulating/introducing the strategies that are best suited to achieving the wellbeing of all. In this sense, the effort to integrate data cannot stop at information on learning. On the one hand, it is useful to move gradually towards an increasingly integrated system of information on social statistics in Europe, under the guidance and coordination of Eurostat and with the active involvement of various European agencies (such as CEDEFOP and EU-RYDICE, with specific reference to learning), as well as the producers of national statistics and users at various territorial levels. On the other hand, there needs to be a decisive move towards increasingly close methods of collaboration between what is being done with the European system and what is emerging in the wider international context as a result of initiatives like those launched by the OECD and various UN bodies or agencies.

# 3 – The need for quantitative information: information on interpersonal and intergenerational relationships

Learning is a process which, apart from contributing to the accumulation of "human" capital, also provides a notable contribution to the accumulation of "social" capital.

According to a definition referred to by the Australian Bureau of Statistics (Trewin, 2001, p. 20), social capital can be understood as the set of values, beliefs and attitudes which condition the behaviour of individuals and have an influence on the interrelations between people with important repercussions for the pursuit of individual and collective wellbeing. This capital can be increased or reduced, depending on how people interact thanks to the social structures (families, communities, institutions, etc) of which they are a part. The various systems of connection and interaction among the members of these structures, and among the various groups of individuals which are formed on the basis of a wide variety of characteristics (among which there must be special emphasis here on relations between the generations), contribute - adversely as well - in the broadest sense of learning to the process of accumulation and to its effects on the components of "capital".

The fact is that international and national statistics (including those produced in Italy) provide plenty of quantitative information on family structures, which is derived from population censuses and, more frequently, from household sample surveys, such as those mentioned earlier that provide quantitative information on health and/or training processes.

This information is capable of indicating, for instance, very significant structural aspects with regard to the pursuit of wellbeing for all, with special regard to the elderly, such as whether they live alone or with relatives, whether or not they have dependent children, how often they have contact with other relatives, friends, etc.

It is also well known that the fact of being alone, especially if it becomes isolation (i.e. being alone without fairly frequent contact with relatives, friends or acquaintances), is a very important circumstance when it comes to the inadequate pursuit of wellbeing among the elderly. It can be considered a basic indicator of human poverty and even of social exclusion. This has been shown by "subjective" sample surveys such as the CERC survey in France at the end of the 1980s (CERC, 1996). It has also been shown by sample surveys such as the multipurpose household survey in Italy or - at international level - the ECHP survey, especially if the information on these structural aspects is cross-referenced against information on subjective opinions/assessments on the level of satisfaction/dissatisfaction with regard to interpersonal/intergenerational relations.

It has to be said on the one hand, however, that this kind of cross-referencing may occur only infrequently and may not appear as published quantitative information, which means that there is a significant problem of accessing the microdata (under reasonable conditions for users) with a view to compiling results of sample surveys that can throw light on the living conditions of the elderly. On the other hand - especially if the desire is to compile information that will be useful for formulating/introducing/assessing strategies for active ageing - such cross-referencing should highlight the various circumstances of people's wellbeing/problems, in the light of various stages of life (it not enough to make a simple distinction between those under and over 65, as occurs in some published information), of gender and of other important qualitative features of those involved.

This raises the tricky problem of how to break down the individuals included in the sample, which often runs into insurmountable restrictions in sample sizes and related sampling plans. It is not surprising that special surveys are common when the desire is for comprehensive but fairly disaggregated data on the population most closely involved with the problems of active ageing, i.e. those above a certain age. One striking example is a survey conducted in Finland on behalf of the Population Activities Unit (PAU) of the UN Commission for Europe, in connection with the International Year of Older Persons (Lindgren, Miettinen and Nieminen, 1999), and using a fairly broad sample - based on the census population of 1990 and covering between 60% and 100% of the respective group, depending on age - on Finns over 50, divided into three age groups (50-64, 65-79 and 80 and over) according to sex.

The Finnish survey also made a distinction between those living at home and those living in institutions and was able to focus special attention on the conditions of respondents' accommodation. These conditions are considered a fairly important component of "environmental capital" in the case of the elderly.

Sample surveys on the living conditions of individuals and households in the country usually provide information on accommodation features, with particular reference to those - lack or inadequacy of essential "facilities" - which can represent particularly significant barriers or obstacles for the elderly, especially those with some disability.

The issue of barriers and obstacles is definitely much wider, however. It involves various conditions (physical, but also psychological/social and economic) of the environment in which the elderly live. National sample surveys on households provide a wide range of information about various aspects of the physical obstacles. For in-

stance, the multipurpose survey in Italy offers plenty of information on the inadequate protection of people in various age groups against traffic/noise/dampness in the area where they live; on inadequate access to services (apart from health) with regard to transport and post and public services in general; on the level of exposure to risks of pollution and crime. But there is little quantitative information from official sources, even at national level, on the presence of psychological and social barriers like those reported in studies carried out by experts and by private or semi-private research centres. There is a particular lack of information, whether subjective or objective, on relations between generations apart from those referring specifically to relatives. The very close link between the existence of such barriers and obstacles and the social, cultural and institutional features of each country, or even region, has made it very difficult to create satisfactory systems of internationally comparable and quantitative information on the matter.

The situation seems to be better in the case of economic barriers and obstacles. There is no lack of quantitative national information on disposable income for individuals and households, as well as assessments of whether income is adequate or not in relation to the needs that are considered essential by people with differing qualitative characteristics (including those of a certain age). Nor is there any lack of information on the availability/accessibility of certain consumer items and other goods and services that are relevant for individual living conditions. Some of these data also seem to be comparable at international level thanks to harmonised household surveys such as the ECHP.

Among the significant barriers and obstacles, there seems to be growing attention on the part of producers of national and international quantitative information on access to work and the circumstances of the availability of work for the elderly, even if there is still a lack of quantitative information from official sources on the barriers and obstacles (economic, if not social and cultural) caused by attitudes and behaviour that discriminate against older workers (e.g. Gregory, 2000).

#### 4 – The need for quantitative information: labour and working conditions statistics

The information on labour is especially important for the formation processes of the various components - not only economic - of human, social, environmental and economic capital.

There is plenty of information on labour, whether coming from official sources or taken from sample surveys, and there has been a considerable improvement in the last decade at both national and international level, especially in the case of technologically advanced nations.

As for the Member States of the European Union, including Italy, the improvements that have been made are obvious in terms of the efforts towards integration and harmonisation with a view to creating a system of internationally comparable information.

The results seem considerable with regard to the data that can be obtained from the labour force surveys, which - as has been said - have become the keystone on which the system of labour statistics in the European Union is based, increasingly so in the future. As for the work of older persons, the improvement that is apparently needed in that area concerns not so much the collection of information as the methods for compiling and presenting the figures. The assumption should be that while there is a minimum for the working age - which should gradually move to 18, so that a thorough but broad enough range of basic skills can be acquired by all young people with a view to lifelong learning that starts with the young generations in order to lay the basis for future active ageing (Centre for Educational Research and Innovation, 2000) - there can be no preset maximum, because there should be acceptance of the general idea that in pursuing his own wellbeing the older worker should be free to choose how he wants to play an active and responsible role in the development of the economic and social system. This also means that data on work - compiled for information or for the construction of indicators (such as employment rates, indicating the ratios of those in employment to the active population) that are useful for defining employment and labour policy objectives, as well as for monitoring and assessing the results of such policies - should do away with the tradition of limiting working life to 65 years of age.

When it comes to active ageing, it is also very important to have information on working conditions (both monetary and non-monetary) occurring throughout working life, i.e. not only at a later stage, since the conditions attained by a worker as a young person or adult usually have a very significant impact on the same person's working (and living) conditions in old age. The information available on working conditions in Italy and other Member States of the European Union is taken to only a very limited extent from labour force sample surveys.

In addition, when CEIES seminars attended by producers and users of statistics have tackled the problems of collecting and compiling suitable quantitative data on the monetary and non-monetary conditions of labour, it has been pointed out that at both national and international level there exist household sample surveys (such as, again, the multipurpose survey in Italy and the ECHP for all EU Member States) offering subjective and objective information, albeit fairly limited, on some aspects of working conditions.

There have been a number of efforts at European level when it comes to conducting (such as for accidents at work and occupational diseases in 1999) or devising (as for working time in 2001) ad hoc modules in the labour force surveys with the aim of getting more detailed information on particular working conditions.

The most significant efforts were made in an attempt to combine such information with data from administrative sources.

A particularly interesting example came out of the seminar on Health and Safety at Work that was organised in Dublin on 10-11 May 2001 in collaboration with the European Foundation on Working and Living Conditions.

This example has shown that it is possible - as in the case of the developments planned by ESAW (European Statistics on Accidents at Work) and EODS (European Occupational Diseases Statistics) - to coordinate significant efforts at involving the statistical institutes and institutions providing administrative data at national level in a systematic attempt geared to considerably improving the availability and quality (also for international comparability) of the quantitative information relating to important working conditions.

Steps forward in this direction seem to be very important from the point of view of monitoring working conditions at various stages of working life that are particularly important from the viewpoint of growing old in good health and of the general living conditions of the elderly.

In addition, other working conditions (concerning various aspects of the working environment, job mobility, social protection and welfare, etc) can be considered of significance in this context. Once again, the need is for the harmonious construction of social statistics systems, at national and international level, which combine "subjective" and "objective" information (from surveys and/or administrative sources) on work, health and learning with better and better information on the various aspects of employees' working and living conditions, with special focus on those that have a direct effect - or will do so as time passes - on the wellbeing of the elderly.

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Graph. 1 – Flows of human, socio-cultural, environmental, economic "capital" formation.



Source: UN, The World Ageing Situation. Exploring a Society for All Ages, New York, 2001, p.11.

Capital	Human	Social-cultural	Environmental	Economic
Primary investors	Individuals Families Schools etc.	Families Local communities Communities of interest Media etc.	Local government Planners Developers (urban and rural) etc.	Individuals Families Communities Private sector Governments
Principles	Independence Resilience	Interdependence Reciprocity	Enablement Connectivity	Growth Sustenance
Assets	Health Knowledge, skills Understanding Capabilities, will	Networks Trust Communication Mutual supports	Barrier-free All-age compatible	Formal/informal Work skills, assets, security sistems etc.
Capital outcomes	Long-lived individuals who are: Skilled Resilient Reflective Adapted Flourishing throughout life	Societies that are: Caring, supportive Tolerant, pluralist Integrated Learning and capable of blending innovation and tradition in appropriate balance	An environmental that is: Livable Flexible Accessible Adaptable Age-integrated	An economy that is: Secure Open Equitable Responsive Competitive Adapted to an ageing Society

Table.1 – Matrix of human, socio-cultural, environmental, economic "capital" formation to pursue active ageing of population.

Source: UN, The World Ageing Situation. Exploring a Society for All Ages, New York, 2001, p.11.

## **18TH CEIES SEMINAR "ACTIVE AGEING STATISTICS"**

#### Summing up

The 18<sup>th</sup> CEIES seminar took place in the Hague in May 2002 and was attended by approximately 80 participants from 26 countries. So, even if this seminar did not cover enlargement itself, CEIES seminars are highly visible among EU-countries, candidate countries and non-EU European countries.

The seminar on Active Ageing followed a trend set in earlier seminars organised by the subcommittee on Social Statistics to discuss in depth social issues that require input from varied statistical fields. Precursors are the seminar on Social Exclusion (London, 1999) and the seminar on Life-Long Learning (Parma, 2001). The social issue in question was, of course, the demographic challenge facing us, namely the increasing ageing of European societies, which calls for more detailed information on the situation of older people. The seminar mainly concentrated on demographic developments, health, participation and living conditions and also went into the financial consequences of an ageing population.

From the contributions to the seminar and the discussions at the seminar it is abundantly clear that *The Ageing Population* of Europe does not exist. In contrary, *The Ageing Population* is an amalgam of divergent groups, differing in chronological age, functional age, region and country, gender, and health and social involvement even within the same age groups. Secondly, data needs related to ageing require not so much new statistics, but making statistics fit for this purpose. To do this a wide variety of measures can be taken, ranging from publishing statistics on the elderly per year, instead of broad age groups, to collecting specific information that is relevant for elderly people only. Analogous to the concept of *engendering* statistics, one might summarize the data needs from active ageing policy making and research under the concept of *enageing* statistics.

What makes statistics qualified for research into an ageing population? Firstly, we need **better coverage** and more than single, cross-sectional surveys. The situation of people in retirement and nursing homes must not be ignored in surveys, as has often been the case in the past. At the seminar an example was presented of a survey among inhabitants of these institutions, which yielded valuable information on, for instance, the health of the ageing population. It is also essential not to exclude very old people from surveys, as happens fairly often. Inclusion of elderly people in surveys may imply adapted fieldwork methods and adapted questionnaires.

Secondly, **longitudinal** studies are needed to distinguish between effects of age and effects of certain age cohorts, and to document the transition between various states of health. Based on a US example a longitudinal survey has been mounted in the UK (ELSA), other EU countries are expected to follow as part of the SHARE project.

Thirdly, **time use data** are needed to measure the social participation and participation in all kind of informal activities by an elderly population. How older people spend the time at their disposal after they retire from the production process is of central importance. Time use surveys are not conducted in all Member States at present, one reason being the high cost of such measures. To make such studies easier, a "**light diary**" covering only some 30 time use categories is now being developed as an adjunct to exhaustive surveys.

Fourthly, research into active ageing requires microdata that cover **different aspects of life**, as does the ELSAproject mentioned earlier, or the ECHP. Financial security is closely connected with health, family circumstances and social networks. The participation in paid work might influence the health of an ageing population. Poor health, on the other hand, might be a reason for early retirement. Additionally, to obtain a comprehensive picture of the living conditions of older people, it is essential to combine **objective and subjective** characteristics and to investigate the physical and economic circumstances of older people as well as their psycho-social situation and their social life. From both points of view the solidarity between the generations is highly relevant, economically and as in indication of social networks.

Apart from these general issues a lot of data needs were raised at the seminar. Just to give an impression:

- Nothing is so far known about the prosperity and savings habits of older people. The distribution of wealth needs new investigation.
- Statistics on health care expenditure currently tell us neither who receives health care nor what illnesses are treated. The development of expenditure profiles by type of care, related to age, might help.
- How is care for older people divided between State, family and market?
- Information is needed on the demand for staff in the various health professions and on future trends in this demand.
- Access to health services, for example, cannot be assessed at all at European level for lack of suitable data.

From the seminar one might **conclude** that, whereas EU statistics in general provide a comprehensive picture of the population, they fall short in describing an ageing population. To fully cover the situation of elderly people they should be fully covered in surveys and questionnaires ideally should be adapted. Longitudinal studies are required to analyse transitions between states (work to retirement), multi-aspect surveys are required to study the relationships between different conditions of living (health, participation in the labour market, social participation and the financial situation). Several of these studies have been set up recently. What official statistics should do is refrain from providing information on the elderly as a single age group. If the seminar on active ageing has made one thing clear, it is that the ageing population is a heterogeneous group within and among countries.

## **18TH CEIES SEMINAR**

#### **Reaction from Eurostat**

By Marleen De Smedt

#### **Question from Romanian participant:**

So the question was what about in the future having something as a European Health Survey. I would like to give you some more information about health and health data which we collect in the ESS In the same way as ageing is a horizontal issue that crosses a lot of policies, of course also health is something that is linked with determinants of health and all kinds of policies in the EU. There is an increased requirement for comparable data on health, on health status, on health determinants, and on health care services not only for elderly people but in general. We see also that in most cases the Member States have National surveys on health or modules on health in a more general survey. And there is a wish at EU level but also at national level to come towards better comparability at EU level and between countries on health. We do have our own statistical work in the area of health and the issue of health information will become even more important in the future because as I mentioned in my first speech on the first day, there will be a new Community action programme in the field of public health and one of the 3 main areas in that new action programme is health information. Now we know that statistics is an important part of that information and in the future, there will be even more actions for comparable data on health in the EU. Now how can we achieve that? We can achieve that by having the data coming from the national surveys on a number of issues and that is what we already do through ex-post harmonisation. So with the Members States we have agreed on a couple of items. We agree on the concept on which we want to have information and on a reference definition. While this works well for some areas, it is more difficult for other topics. At the same time, we look at common instruments which the Member States could use: input harmonisation.. Gradually we are getting more and more advanced in preparing reference instruments and even common modules which Member States could use in their national surveys. And already the question has come up what about a European Health Survey. Now in that discussion, we always have to see what is the most effective way of having our comparable data. Because a new survey will involve a lot of resources – financial resources and human resources - we have to look at the various options but it is not excluded that in the future we may have to think about something as European health survey or at least a module. Within our work on health statistics, we have a specific group (the Task Force on Health Interview Survey data TF/HIS) looking at health surveys and looking at all these different options and that discussion will certainly continue and even be intensified in the future. So I cannot directly respond to your question but I can say that a lot of activities are ongoing and a number of scenarios are being examined with respect to coming towards better comparability of data on health but also on life style and other elements which contribute to the health status.

#### What about parts on health already existing in EU-wide surveys?

I am very glad that you mentioned that. Because of course the first thing that we have to do is to look at what we already have as European surveys in the Community and indeed in the EU SILC but also in the ECHB we had a couple of variables on health. In the SILC we have 3 very important but general questions on health that will hopefully provide us a lot of information. Why, because it is a multi-purpose survey? At the same time we have indeed information on income, labour, education, housing, social relations etc, so it is a gold mine for information. But with respect to the more detailed and specific issues of health and maybe specific questions on health determinants, this instrument may not give all the answers to what we may need in the future for health policy as such and at that moment we have to think together with the Members States – we never do this alone because the European Statistical System is the statistical authorities together with Eurostat – we have to see what do we need and what is the most effective way to come towards EU-wide comparable data .. A module

could be a solution, introducing common instruments could be a way and even a common survey could be arranged. Before we decide on this there has to be a lot of debate, but you are quite right to mention that the SILC already has this element of health with a lot of other variables. In addition, in the Labour Force Survey 2002, there was a module on employment of disabled people.

#### Another question about the possibility to include more health topics in the SILC.

It depends of course on what you are looking at. I think that it has been discussed thoroughly with all the Member States that the method of the EU SILC corresponds to the purposes it was meant for. We know that surveys are expensive but through discussions with the users (in and outside the Commission) and with producers within the ESS one could find the best balance towards what type of instrument do we need and for which purposes. EU surveys are in a way complementary to what you may need at national level..

The main focus for us is to ensure that we all use the same concept in collecting statistics on a particular topic area. Once everybody agrees on the same concept, for which also a general reference instrument could be developed, countries could then prepare their national instruments. This is a important and challenging objective but it is proven that it is possible to do that. So that is also a reflection that I wanted to leave with you. And about involving ageing people: it was suggested to involve ageing people already in the work. We have indeed to take account of the huge knowledge and the experience available but also of the reality of the day to day activities from elderly people when we prepare a methodology for collecting statistics on health and disability. And I can only agree with what was said earlier – it was a good suggestion – that we take that back to Eurostat and the European Statistical System. Looking at my papers, I hope I have covered the most important things. I would like to say that it was a most interesting discussion, it is certainly not the end, it is only the start of initiatives on which we all have to pay attention in our work being researchers, policy makers or statisticians.

## **ATTENDANCE LIST**

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