

Zbornik 12. mednarodne multikonference
INFORMACIJSKA DRUŽBA - IS 2009

Zvezek B

Proceedings of the 12th International Multiconference
INFORMATION SOCIETY - IS 2009

Volume B

Soočanje z demografskimi izzivi v Evropi
Facing Demographic Challenges in Europe



Uredili / Edited by
Janez Malačič, Matjaž Gams

12. - 16. oktober 2009 / October 12th - 16th, 2009
Ljubljana, Slovenia

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Uredniki:

Janez Malačič
Ekonomska fakulteta
Univerza v Ljubljani

Matjaž Gams
Odsek za inteligentne sisteme
Institut »Jožef Stefan«, Ljubljana

Založnik: Institut »Jožef Stefan«, Ljubljana
Tisk: Birografika BORI d.o.o.
Priprava zbornika: Mitja Lasič, Jana Krivec
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PREDGOVOR MULTIKONFERENCI INFORMACIJSKA DRUŽBA 2009

V svojem dvanajstem letu ostaja multikonferenca Informacijska družba (<http://is.ijs.si>) ena vodilnih srednjeevropskih konferenc, ki združuje znanstvenike z različnih raziskovalnih področij, povezanih z informacijsko družbo. V letu 2009 smo v multikonferenco povezali rekordnih enajst neodvisnih konferenc. Informacijska družba postaja vedno bolj zapleten socialni, ekonomski in tehnološki sistem, ki je pritegnil pozornost vrste specializiranih konferenc v Sloveniji in Evropi. Naša multikonferenca izstopa po širini in obsegu tem, ki jih obravnava.

Rdeča nit multikonference ostaja sinergija interdisciplinarnih pristopov, ki obravnavajo različne vidike informacijske družbe ter poglobljajo razumevanje informacijskih in komunikacijskih storitev v najširšem pomenu besede. Na multikonferenci predstavljamo, analiziramo in preverjamo nova odkritja in pripravljamo teren za njihovo praktično uporabo, saj je njen osnovni namen promocija raziskovalnih dosežkov in spodbujanje njihovega prenosa v prakso na različnih področjih informacijske družbe tako v Sloveniji kot tujini.

Na multikonferenci bo na vzporednih konferencah predstavljenih 300 referatov, vključevala pa bo tudi okrogle mize in razprave. Referati so objavljeni v zbornikih multikonference, izbrani prispevki pa bodo izšli tudi v posebnih številkah dveh znanstvenih revij, od katerih je ena Informatica, ki se ponaša z 33-letno tradicijo odlične znanstvene revije.

Multikonferenco Informacijska družba 2009 sestavljajo naslednje samostojne konference:

- Inteligentni sistemi
- Kognitivne znanosti
- Kognitonika
- Mondilex
- Robotika
- Rudarjenje podatkov in podatkovna skladišča (SiKDD 2009)
- Sodelovanje, programska oprema in storitve v informacijski družbi
- Soočanje z demografskimi izzivi v Evropi
- Status in vloga tehniških in naravoslovnih poklicev v državi
- Vzgoja in izobraževanje v informacijski družbi
- 2. Minikonferenca iz teoretičnega računalništva 2009

Očitno finančna recesija ni zmanjšala zanimanja za informacijsko družbo; nasprotno, letošnja konferenca je rekordna v več pogledih, recimo glede na število sodelujočih konferenc.

Soorganizatorji in podporniki konference so različne raziskovalne institucije in združenja, med njimi tudi ACM Slovenija. Zahvaljujemo se tudi Ministrstvu za visoko šolstvo, znanost in tehnologijo za njihovo sodelovanje in podporo. V imenu organizatorjev konference pa se želimo posebej zahvaliti udeležencem za njihove dragocene prispevke in priložnost, da z nami delijo svoje izkušnje o informacijski družbi. Zahvaljujemo se tudi recenzentom za njihovo pomoč pri recenziranju.

V letu 2009 sta se programski in organizacijski odbor odločila, da bosta podelila posebno priznanje Slovcu ali Slovenki za izjemen prispevek k razvoju in promociji informacijske družbe v našem okolju. Z večino glasov je letošnje priznanje pripadlo prof. dr. Vladislavu Rajkoviču. Čestitamo!

Franc Solina, predsednik programskega odbora
Matjaž Gams, predsednik organizacijskega odbora

FOREWORD - INFORMATION SOCIETY 2009

In its 12th year, the Information Society Multiconference (<http://is.ijs.si>) continues as one of the leading conferences in Central Europe gathering scientific community with a wide range of research interests in information society. In 2009, we organized record eleven independent conferences forming the Multiconference. Information society displays a complex interplay of social, economic, and technological issues that attract attention of many scientific events around Europe. The broad range of topics makes our event unique among similar conferences. The motto of the Multiconference is synergy of different interdisciplinary approaches dealing with the challenges of information society. The major driving forces of the Multiconference are search and demand for new knowledge related to information, communication, and computer services. We present, analyze, and verify new discoveries in order to prepare the ground for their enrichment and development in practice. The main objective of the Multiconference is presentation and promotion of research results, to encourage their practical application in new ICT products and information services in Slovenia and also broader region.

The Multiconference is running in parallel sessions with 300 presentations of scientific papers. The papers are published in the conference proceedings, and in special issues of two journals. One of them is *Informatica* with its 33 years of tradition in excellent research publications.

The Information Society 2009 Multiconference consists of the following conferences:

- Intelligent Systems
- Cognitive Sciences
- Cognitronics
- Mondilex
- Robotics
- Data Mining and Data Warehouses (SiKDD 2009)
- Collaboration, Software and Services in Information Society
- Demographic Challenges in Europe
- Increasing Interests for Higher Education in Science and Technology
- Education in Information Society
- The Second Mini Conference on Theoretical Computing 2009

Evidently, the economic recession is not affecting Information society; on the contrary, this is a record conference in several terms, e.g. judging from the number of single conferences.

The Multiconference is co-organized and supported by several major research institutions and societies, among them ACM Slovenia, i.e. the Slovenian chapter of the ACM. We would like to express our appreciation to the Slovenian Government for cooperation and support, in particular through the Ministry of Higher Education, Science and Technology.

In 2009, the Programme and Organizing Committees decided to award one Slovenian for his/her outstanding contribution to development and promotion of information society in our country. With the majority of votes, this honor went to Prof. Dr. Vladislav Rajkovič. Congratulations!

On behalf of the conference organizers we would like to thank all participants for their valuable contribution and their interest in this event, and particularly the reviewers for their thorough reviews.

Franc Solina, Programme Committee Chair
Matjaž Gams, Organizing Committee Chair

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FOREWORD

»FACING DEMOGRAPHIC CHALLENGES IN EUROPE«

The beginning of the 21st century is facing developed countries with variety of demographic challenges. The outcomes of the future demographic processes may influence lives of many people living on this region. How to cope with these challenges, what are the current and future trends, new ideas? These are the questions that will be/were discussed at the "Facing Demographic Challenges in Europe" conference. Our conference is part of the 12th IS 2009 Multiconference. It provides an international forum for scientists, academicians, and professionals presenting their latest research findings in the various fields of Information Society.

Areas of interests include:

- fertility
- mortality/health care
- migrations
- population ageing
- family
- intergeneration solidarity
- gender relations
- moral / ideological influences
- (rural) planning in new demographical conditions
- economical aspects
- anthropological aspects
- sociological aspects
- historical aspects
- population projections
- mathematical/computational models
- demography of national minorities
- theological aspects

This is the third consecutive and most international demographic conference regarding demographic trends in Slovenia. We present our analyses and hypotheses in the top academic environment, openly presenting the worrisome future trends in human lives based on current information and knowledge. Not only that, we also discuss various potential solutions and propose them to our political leadership.

In 2009, due to major internationalization of the conference, we hope to gather various viewpoints from other European countries, creating a base ground for future demographic studies.

In the two previous conferences, the emphasis was on establishing a solid background. We have also managed to visit Slovenian major political leaders and present them our scientific conclusions. While some of the official representatives were very knowledgeable of the subject, like the Slovenian president Prof. Türk, some political institutions still tend to largely ignore the subject as if it is not of major national long- and mid-term problem.

However, in the previous years, a reasonable break-through has happened in Slovenian media. While demography may still be largely underestimated, several of the media tend to publish scientifically correct papers thus influencing overall public awareness.

Janez Malačič and Matjaž Gams, Conference Chairs

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AGEING AND LONELINESS OF URBAN-RURAL-FARM POPULATIONS IN SLOVENIA

Majda Černič Istenič

Družbenomedicinski inštitut ZRC SAZU

Novi trg 2, 100 Ljubljana

Tel.: +386 1 4706 441, Fax: +386 1 4261 493

e-mail: majdaci@zrc-sazu.si

ABSTRACT

The paper presents some of results of the pilot study of Generations and Gender Survey (GGS) for Slovenia carried out in 2007. Its aim is to answer the questions how intergenerational relationships in different social settings (urban-rural-farm) in Slovenia are shaped and what implications these relationships have on the feeling of loneliness among the elderly.

Introduction

Adjustment to demographic change, which besides migrations includes population ageing, is today one of the top issues for a growing number of societies in Europe and also for Slovenia. Demographic trends in Slovenia, similarly as in other parts of Europe, show a growing number of older people. At the end of 1995 the share of people aged 65+ in the total population was 12.5% whereas in 2008 this group already presented one-fifth of Slovenian population. According to EuroPop2008 the share of this age group will increase to 35% in 2060, whereas the share of age group 14 and less will decrease from 13.9% in 2008 to 12.8% in 2060 (Vertot 2008). Due to changes in the shares of these two age groups the ageing index increases: in 1995 its value was 69.5, in 2008 it reached the value of 117.6 (Statistical Office of the Republic of Slovenia, 2009). Even more clear-cut picture presents the data collated for twelve Slovenian regions: in 2008 in five more central regions the ageing index ranged between 100 and 115, whereas in two regions situated in the western part of the state and two regions in the eastern part, with predominantly rural character, this index ranged 130 and more (Statistical Office of the Republic of Slovenia, 2008). Age structure of rural areas is particularly problematic in farm population. According to the 2000 Census of Agriculture (Kerbler 2006) the ageing index of farm population in Slovenia was 135. Referring to general population trends in the last decade it is supposed that its value is even higher at the moment.

Discussions about ageing of society in Slovenia are frequently limited to its (public) financial consequences, but far less attention is given to social and institutional aspects of this phenomenon particularly in different social settings. Ageing of society is not something a priori negative. In fact, above all it means that people are living longer than previous generations which is good and can contribute to the welfare and the quality of life of the entire population. To achieve this, elderly in all social settings should have a

possibility to choose their preferred life style and receive adequate resources and services. However, quality of life of people aged 65+ and 80+ does not depend only on pension and health system, but also on long-lasting care provided by society and primary social groups which greatly contribute to their social inclusion.

Theoretical outline

Urban and rural dimensions have a distinguished pedigree in the field of European ageing studies. There is a number of reasons for thinking that work exploring the rural/urban dimension of ageing might expand further at a significant rate over the next few years. Life in both urban and rural places is being reshaped significantly in different ways due to processes of rapid urbanisation, corresponding depletion of rural populations and more recently a reversal process of flow of capital, goods and opportunities from urban towards many rural areas, described as 'urban-rural shift' or the 'rural turn around' (Murdoch et al. 2003). Undoubtedly, older people are being affected by these processes, but investigations on their effect on urban/rural ageing are still scarce.

There are two types of explanation of differences in terms of the situation of older people in urban and rural areas (Phillipson and Scharf 2005). The first one suggested that rural areas were engaged in a process of catch-up with urban areas. Drawing on modernisation theory, rural areas might be somewhat 'delayed' in their socio-economic development, but in time they would acquire modern, urban characteristics, e.g. multi-generational family structures which are more common in rural areas would gradually give way to the more urban nuclear family type. Intergenerational relations would be marked by the same characteristics in each type of area. The second type of explanation suggested that despite the ongoing process of modernisation differences would remain between urban and rural areas. This type of explanation is particularly closely associated with differences between urban and rural areas in terms of infrastructural aspects, including housing conditions and service provision for older people. These explanations are marked by the basic weakness since they somehow see urban areas as the model to which rural areas should move (Garms-Homolova' and Korte 1993; Schulz-Nieswandt 2000; Schweppe 2000; quoted by Phillipson and Scharf 2005). Thus, similarities between key elements of the ageing process in urban and rural areas—e.g. in relation to

normative aspects of intergenerational relationships—tend to be minimized.

In recent analysis on aspects of urban and rural infrastructures and intergenerational relationships in the case of Germany (Brauer 2002), one of the important points made was the marked absence of urban–rural differences. Other researchers have added (Ritter and Hohmeier: 1999) that the situation of a part of elderly population in rural areas is changing significantly by the weakening of family networks, because the stability of families is declining and the number of small families and single people is increasing. Thus, often contradictory nature of research findings relating to urban–rural ageing has led to the awareness of heterogeneity of old age experiences in rural areas (e.g. Scheweppe 2000; Wahl et al. 2000). This heterogeneity is in part a consequence of declining importance of agriculture; the share of rural non-farm population is increasing, whereas the share of rural farm population is decreasing. For that reason in this paper farm and rural non-farm populations are taken into account separately. Heterogeneity of experiences of old aged in urban areas is also documented (Scharf et al. 2002; Newman 2003; Mumford and Power 2003, Riseborough and Jenkins 2004): ageing within cities, especially deprived inner city areas became unsupportive to the needs of older people since urban planning and urban regeneration are not always responding to the needs of growing ageing population.

For the purpose of this paper the contributions of two comparative researches on the family life in late life phase in Europe need to be stressed too. The first one (Tesch-Römer and von Kondratowitz 2006), pointed out that ageing is not an autonomous, time bound process, but is intertwined with societal structures/institutions and cultural norms/belief system. Family solidarity in late life is an example of culture specific patterns of ageing. Culturally shared standards (perception, thinking, evaluating and acting), considered as obvious among members of a certain culture, function as orientation rules of behaviour pertaining to intergenerational solidarity within families. The second one (Tomassini et al. 2004) showed that indicators of potential family support as intergenerational coresidence, proximity, frequency of contacts, and exchange of help and money are useful tools to identify variability in intergenerational support among different countries. Pertaining to these indications, the ‘familistic’ culture manifested as frequent family contact as well as coresidence, supposed to explain apparently stronger family ties in southern part of Europe in comparison with the northern part.

Hypothesis

On the basis of above presented theoretical outline the following hypothesis is the focus of analysis in this paper:

Intergenerational relationships measured by perceptions, actual conditions (coresidence, proximity, frequency of contacts, care and emotional support) differ significantly among urban, rural and farm populations in Slovenia. Additionally, it is supposed that differences in these respects are related to the feeling of loneliness among the elderly.

Data and methods

The analysis is based on data from a survey “Generations and Gender Relations on Slovenian Farms” (2007), sponsored by the Ministry of Agriculture, Forestry and Food (MAFF) and Slovenian Public Research Agency. Questionnaire of GGS survey was additionally extended by topics, pertaining to the farm social context: ownership, succession, prospects of farm, division of labour and decision-making on farm. All data were collected from the individual perspective.

In order to contextualize intergenerational solidarity from the point of view of perceptions and actual forms of behaviour and statuses the respondents’ characteristics are compared in various social settings. Farm respondents are compared with people who live in the countryside, but are not engaged in farming as well as with residents of urban areas. Therefore, the data are categorised in three major sub-samples of respondents, aged 18 to 83 of both genders. The first sub-sample consists of 275 urban dwellers, the second of 135 persons from rural areas, and the third one of 407 farmers.

Analyzing the differences among the respondents by their age, gender and social setting considering their views on intergenerational solidarity, bivariate analysis with χ^2 test and ANOVA was employed. When the impact of perceptions and actual forms of intergenerational relations (and some other indicators of respondents’ socio-economic status and characteristics of their environment) on the feeling of loneliness was examined a univariate general linear model (GLM) was applied. Variables used in the analysis are described in detail in Černič et al. (2008).

Results

The respondents’ perceptions of intergenerational solidarity

In analysis the expressed expectations were observed through three sets of different statements. The first one pertains to the assessments whose responsibility is to care for dependent family members; for children and for the elderly.

The majority of the respondents (46%) agree that care for elderly is a duty of both society and family, whereas according to 32% of the respondents this issue is a duty of family and 21% agree that this is a duty of society. Collating results by social setting, the data show significant differences among urban–rural–farm settings ($\chi^2= 32,952$; sig.= 0,000): urban respondents in significantly higher share agree that care for elderly is a duty of society and family or that it is just a duty of society (53% and 26%) than farm respondents do (42% and 17%). On the contrary, farm respondents in greater share than urban respondents agree that care for elderly is just a duty of family (41% and 21%). Rural respondents’ views differ from other two groups, but are closer to urban than farm respondents’ views. Considering simultaneously the age and the setting the data show that there are significant differences in views among the respondents aged 54 and less ($\chi^2= 19,602$; sig.= 0,000) and those aged between 55 and 64 ($\chi^2= 11,667$; sig.=

0,000); farm respondents younger than 65 agree more strongly that care for elderly is a duty of family, whereas the respondents aged 65 and above, even more than respondents of the same age from the other two settings, believe that this is a duty of both family and society. Responses to this statement were compared also by gender, but no significant results were found.

More than half of respondents (54%) agree that care for preschool children is a duty of family. That it is equally a duty of family and society is agreed in 35% and just in 11% that it is a duty of society. These answers significantly differ among urban-rural-farm settings ($\chi^2 = 16,978$; sig. = 0,002); farm respondents in significantly higher share agree that care for children is a duty of family than urban respondents do (60% and 45%) and correspondingly agree less with the statement that society (8% and 16%) or both society and family are responsible (32% and 39%). Considering setting, age and gender no significant differences were found.

Adult children's obligations towards their parents

The second set of statements refers to the assessment (applying the five-level Likert scale from 'strongly agree' to 'strongly disagree') of adult children's obligations towards their parents: 'Children should take over the duty to care for their parents in need', 'Children should adjust their work to the needs of their parents', 'Daughters should care more for their parents than sons', 'Children should help their parents when they are in financial difficulties' and 'Parents should move to the place of their children when they can not care for themselves anymore'. In principle the majority of the respondents agree that children are responsible for caring for their parents and financial assistance when parents are in need (70% and 55%). Yet in more concrete statements, such as 'Daughters should care more for their parents than sons', 'Children should adjust their work to the needs of their parents', and 'Parents should move to the place of their children when they can not care for themselves anymore', the shares of disagreement prevail (65%, 41%, and 34%).

Comparing these statements by age and social setting, significant differences are found only in the case of 'Children should adjust their work to the needs of their parents'. Generally, the farm population in a greater share than the urban population agrees with this statement ($\chi^2 = 31,530$; sig. = 0,000). Collating settings with age the results shows significant differences through all three combinations; aged 54 and less ($\chi^2 = 17,114$; sig. = 0,002), aged between 55 and 64 ($\chi^2 = 13,091$; sig. = 0,011) and aged 65 and over ($\chi^2 = 9,340$; sig. = 0,050), which means that irrespective of age farm population in a greater share than the urban population agrees with this statement. However, agreement with this statement is the weakest among the oldest farm respondents. Statements in this set were also observed by gender. Like in the case of the first set of statements no significant differences were found.

Parents' responsibilities towards their children

The third set of statements relates to the assessment (again applying the five-level Likert scale) of parents'

responsibilities towards their children: 'Grandparents should care for their grandchildren when their parents are not able to do that', 'Parents should financially support their adult children in need' and 'Parents should adapt their life when their children are in need'. The majority of the respondents agree with all three statements: 52.4%, 52.4% and 44.3%. According to these results, it is obvious that the view about parents' responsibility towards their adult children prevails. Significant differences by social setting and age are found considering obligations of grandparents towards their grandchildren. The differences among age groups are found among rural ($\chi^2 = 9,759$; sig. = 0,045) and farm population ($\chi^2 = 9,928$; sig. = 0,042), which means that in these two settings the agreement with this statements increases with age.

Significant differences among the settings are found also pertaining the statement 'Parents should adapt their lives to their children in need' ($\chi^2 = 10,313$; sig. = 0,035) and among age groups within urban ($\chi^2 = 11,242$; sig. = 0,003) and farm setting ($\chi^2 = 11,687$; sig. = 0,003). In urban population the oldest respondents agree with this statement in the highest share, while in farm population this is the case for those aged 55 to 64. Comparison by gender indicates that among those aged 54 and less women significantly more than men agree with the statement that parents should assist their adult children when they are in financial difficulties, ($\chi^2 = 7,357$; sig. = 0,025). However, in respect to this statement among the respondents older than 55 and among the settings no significant differences by gender were found.

Actual forms of intergenerational relationships

Living arrangements

In general, care for old and disabled household members seems to be more frequent activity in farm households than it is in rural and urban ones. All respondents in the sample (nine of them) who live with old and at the same time disabled household members (aged 55 and older) were found exclusively in farm households. In fact, 12% of respondents from farm households live with mentally or/and physically disabled persons; whereas in rural and urban households corresponding share is just 5%. Additionally, living arrangements of older respondents also indicate that care for aged family members prevail in farm households. At age 55 and over, living in three-generational households (e.g. with children) is more frequent in farm and rural households than it is in urban ones (35%, 31% and 6% respectively). Comparable values for the respondents aged 65 and over, living in three-generational households, are: 17%, 18% and 6%. Further, living alone at the same age is less frequent in farm than in rural and urban households (8%, 28% and 23%). However, corresponding values for those aged 65 and over living alone are: 28%, 32% and 25%.

From the point of view of younger generation the data show that in the farm population the share of those aged between 31 and 50 who live at least with one parent is 40%, whereas equivalent shares for rural and urban populations are just 7% and 8% (Table 1). At the same time the data show that at this age considerably more men than women are living with their

parents; 60% % of farm men and 11% of farm women; 21% of rural men and 0% of rural women; pertaining urban setting no differences among gender are found (Table 1).

Table 1: Living with parents (at least with one of them)

Age of respondents	18-30		31-50		51 >	
	N	%	N	%	N	%
urban	37	46.8	9	8.3	2	2.3
rural	27	73.0	3	6.5	0	0.0
farm	55	74.3	64	39.8	13	7.6
TOTAL	119	62.6	76	24.1	15	4.8
urban women	16	45.7	5	8.1	2	3.7
rural women	16	76.2	0	0.0	0	0.0
farm women	17	51.5	7	10.6	3	3.2
TOTAL women	49	55.1	12	7.5	5	2.8
urban men	21	47.7	4	8.5	0	0.0
rural men	11	68.8	3	21.4	0	0.0
farm men	38	92.7	57	60.0	10	13.2
TOTAL men	70	69.3	64	41.0	10	7.8

A similar picture is indicated by living arrangement of parents who do not live with the respondent and who live alone. In comparison with other settings parents (fathers and even more mothers) of urban respondents more frequently live alone. This situation is the least frequent among the respondents living in rural areas. However, the custom of visiting non-residential parents do not defer significantly among the settings. Rural respondents in 74% visit their mothers on a weakly basis, the equivalent shares for rural and of farm respondents are 75% and 68%. Considering the visits to non-residential fathers shares are the following: 63% urban, 64% rural and 70% farm respondents. The data also indicate that in view of visiting non-residential parents there is no statistical difference between the genders.

Caring for old household members

Considering the care for old household members no statistically significant differences are found among urban-rural-farm settings. However, the shares pertaining to inapplicability (71.6 % in urban households, 68.1 % in rural households and 65.4 % in farm ones) indicate that this sort of activity is more often carried out in farm households than in rural and urban ones. Considering gender the data show that this kind of activity is mostly in women's domain ($\chi^2 = 24,278$; sig. = 0,000), particularly in farm households. Additionally, the engagement of women as partners in care for old members is more typical in farm households than in urban and rural ones as well as sharing of this activity among the partners. Considering these results and those presented in the previous paragraph (living arrangements) it could be stated that in farm households women (e.g. daughters-in-law) are the main providers of care for the elderly.

Receipt of emotional support

Results pertaining to emotional support the respondents received from other persons in the last 12 months show

significant differences in respect to urban-rural-farm setting ($\chi^2 = 40.716$; sig. = 0.000), gender ($\chi^2 = 21.066$; sig. = 0.000) and age ($\chi^2 = 70.380$; sig. = 0.000). Half of respondents talked about their feelings with other people; the most trustful were urban respondents (60 %), but the least farm respondents (45 %). When farm respondents talked about their feelings, they mostly rely on their family members (children or partner), while urban respondents trust equally their family members and other persons (mainly friends). In general, women are more trustful to others than men, but with age this inclination decreases, whereas for men the opposite tendency holds true.

Corresponding to these results is also the number of persons from whom the respondents received emotional support. Respondents from urban areas reported significantly higher number than other two groups of respondents did (F statistic = 14,492; sig. = 0.000); younger respondents more talked with others about their feelings than older ones (F statistic = 3,700; sig. = 0.025) and women more than men (F statistic = 16,082; sig. = 0.000).

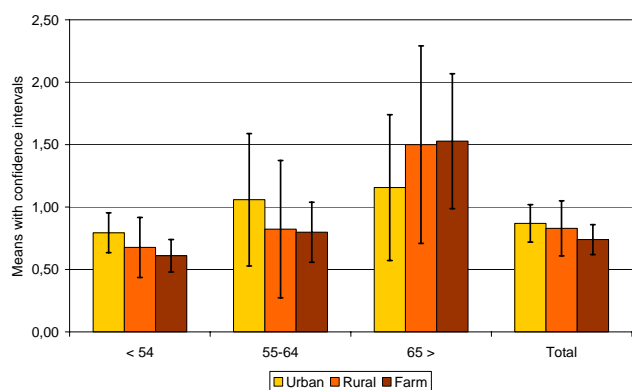
Some additional analyses (due to lack of space not presented in detail here) showed that the respondents expect to receive any kind of social support, in case they would need it, mainly (in 53.2%) from their close family and kin members (preferably from partners, children and parents). On the second place (in 30.1%) a various categories of persons were listed: mainly friends, colleagues and neighbours. Institutions like working organisation or social service were very rarely indicated (in less than 1%). Statistically significant differences were found among all three settings: degree of expected support was the highest among rural and the lowest among urban population. Expected support of close family members was the most frequently indicated by farm population, whereas the highest share of expected support from non-family members was reported by urban population. Data pertaining to support of any kind the respondents offered to other people during the past 12 months showed that in 90% no support was given. But when it was delivered this was mainly to close family (household) members. In this regard no statistical difference among the settings was found.

Perception of loneliness

Feeling of loneliness was identified at 39% of the respondents. It was measured with the following items (applying the answers 'yes' and 'no'): 'There are plenty of people that I can lean on in case of trouble'; 'I experience a general sense of emptiness'; 'I miss having people around'; 'There are many people that I can count on completely'; 'Often, I feel rejected' and 'There are enough people that I feel close to'. For further analytical purposes these statements were merged in one single variable by counting procedure. Severe form of loneliness (four to six items were identified as problematic) was found among 4.4% of the respondents, whereas 16.9% of the respondents reported about mild form of loneliness (one item was detected as problematic). Two and three problematic items were reported 9.5% and 8% of the respondents respectively.

In general, feeling of loneliness is increasing with age (Figure 1). Considering social setting, in younger age groups (< 64) urban respondents most frequently report about this status, whereas among older respondents (65 >), those living in rural and farm settings, most often report about being lonely. However, as confidence intervals indicate these varieties are not statistically significant. Yet, significant difference among the age groups (the youngest and the oldest one) is found in farm population.

Figure 1: Feeling of loneliness by social setting and age



The results of multivariate analysis also show (Table 2) that feeling of loneliness is most strongly predicted by age, but additionally also with abilities of making both ends meet with available income and social characteristics of community/neighbourhood in which respondents live. This signifies that older respondents, those who make both ends meet with more difficulties and those who more often feel that in their neighbourhood every one lives just on his/her own feel significantly more often lonely than younger respondents and those wealthier and more socially embedded in their neighbourhood. Thus, as results show loneliness is concentrated particularly among socially and materially excluded aged people. Levene statistic additionally proves this assessment.

Somehow it could be supposed that loneliness is related also to the respondents' living arrangement: those who live alone show stronger inclination to loneliness than people who live with someone else. Moreover, the respondents' attitudes towards the responsibility of family and/or society in the care for elderly and children (topics presented in the first paragraphs of this section) also indicate some kind of connection with the feeling of loneliness: those believing that family should care for elderly supposed to feel more often lonely than those who see society as more responsible for that. The results further show that feeling of loneliness is rather evenly distributed among all the settings, genders, educational levels, people with various number of children and religious views. Characteristics of environment in which respondents live (traffic connections, access to health services and educational institutions) also show no considerable power in explanation of variability in feelings of loneliness, and last but not least it appears that the

emotional assistance respondents received from other persons has no influence as well.

Table 2: Tests of Between-Subjects Effects with GLM on the Perception of Loneliness (F statistics)

	F	Sig.
Corrected Model	3.975	0.000
Intercept	10.182	0.001
Gender	0.279	0.597
Urban-rural-farm setting	0.369	0.692
Household structure	2.587	0.025
Attendance at religious ceremonies	0.760	0.517
To make both ends meet	4.739	0.000
Respondent's education	1.572	0.208
Traffic connections	0.999	0.318
Community/neighbourhood social environment	6.808	0.009
Access to health services	0.879	0.349
Access to educational institutions	0.245	0.621
Age	7.014	0.008
Number of children	0.885	0.347
Financial support (family or society)	3.961	0.047
Providing care (family or society)	3.901	0.049
Children's duty to support parents	0.047	0.828
Children's duty to care for parents	1.540	0.215
No. of persons who provided emotional support	0.195	0.659
R Squared	0.133	
Levene Statistic	1.283	0.856

Discussion and conclusions

In the present paper the issue who is responsible for the care of the elderly and what factors determine the feeling of loneliness among elderly in Slovenia was investigated. The results about intergenerational relationships observed through perceptions and actual forms confirm the initial hypothesis about significant differences in these relations among urban-rural-farm settings. The assistance for elderly is expected both from family and society, but the role of these two institutions is seen differently throughout urban-rural-farm settings. In farm population considerably more emphasis is given to family, whereas in urban and also in rural population greater importance is assigned to society. The results show that expectations about the care for elderly are often ambiguous. E.g., it is expected that society financially look after the elderly, but at the same time it is also believed that this task is primarily children's duty. In addition, it is expected that parents should adjust their life if their adult children are in need, but in the case if children are in the position to adjust their life to the needs of elderly parents lesser agreement is shown. This ambiguity is more pronounced in urban than in farm population. It could be supposed that in farm setting the patterns of intergenerational relationships, existed already for centuries, still greatly prevail. Namely, farm population is due to its frequent lack and poor pensions still confined to the

financial assistance of their children and other close family members.

More 'traditional' patterns of intergenerational relations in farm population in comparison with that of other two groups is indicated also through living arrangements, expected and actual provision of support to the elderly and allocation of care for elderly among household members. 'Intensity of care' for elderly (where women take the greatest share) is in terms of these indicators again more distinct in farm than in urban population. In this regard rural population is situated somehow in between. But from the point of view of such results it is not simple to state that elderly in urban areas live worse than those living on farms. As analysis on loneliness revealed family is not the only source needed for good quality of life in later life stage, but also assured financial resources and social liveliness of environment are necessary. It seems that this holds true for all social settings. Further research should check it up. By that, meaningfully would it be to take in to consideration not just the division urban-rural-farm as was done in the present analysis, but even more diverse contexts within that division should be applied. In that way the impact of recent social and demographic changes on life of the elderly that take place in urban and rural settings, mentioned in the theoretical part of the paper (e.g. urban-rural shift, depletion of city centres), could be verified. Moreover, as the present results indicate, it would be also recommendable for future research to include the issue of neighbourhood. This recommendation is in line also with some recent findings of Forrest and Kearns (2001). They make the point that neighbours and neighbouring retain great importance for the poor and elderly, which seems to hold in a variety of environmental and cultural contexts. Similarly, Bridge (2002) also makes the point that the debate around social capital has reemphasised the importance of locally based social networks for the quality of life of elderly.

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HOW TO REVERSE NEGATIVE DEMOCRATIC TRENDS?

Matjaž Gams, Jana Krivec

Department of Intelligent Systems

Jožef Stefan Institute, Jamova cesta 39, 1000 Ljubljana, Slovenia

matjaz.gams@ijs.si, jana.krivec@ijs.si

ABSTRACT

Projections about population size and structure are by no means deterministic in particular in longer terms. Not only actual future relies on several parameters, humans actively and deliberately influence future by systematic changes in behavior.

But first we need to understand relations in complex systems in order to efficiently change anything, in particular democratic trends. To do so, we used data mining techniques on country population projection and the projection of the old-age dependency ratio in EU countries. The data was analyzed in various ways. Relevant decision trees are presented and interpreted showing some known and some new conclusions. The iterative use of data mining techniques again proved to be successful in finding complex relations, but still needing expert interpretation.

1 POPULATION PROJECTIONS

Population changes through three main processes: fertility, mortality and migration. Based on the information about these processes, population projections (what-if scenarios of future size and structure of the population) are calculated [11]. Population estimates and population projections play an increasingly important role in the strategic decision-making process of business, professionals, planners, educators, or anyone concerned about the current or the expected size of the population [3]. What will be the population of the European countries at the age 2060?

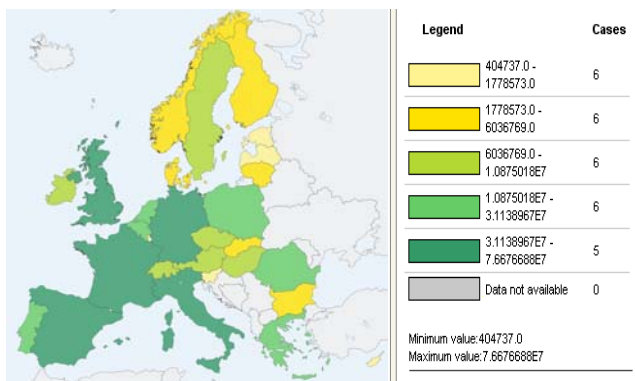


Figure 1. Population growth projection between the years 2010 and 2060. (Eurostat) [5].

From Figure 1 and 2 we can find remarkable differences in the population projection of different EU countries. They can be divided into three groups:

- 1) Countries, where the population is supposed to increase by the year 2060 (Cyprus, Ireland, and Luxembourg; dark green),
- 2) Countries, with the stable population rate (Norway, United Kingdom, Swiss, Sweden, France, Belgium, Spain, Austria, Denmark, and Portugal; light green),
- 3) Countries where the decline of the population is expected by the year of 2060 (Slovenia, Germany, Hungary, Estonia, Poland, Romania, Latvia, Bulgaria; yellow).

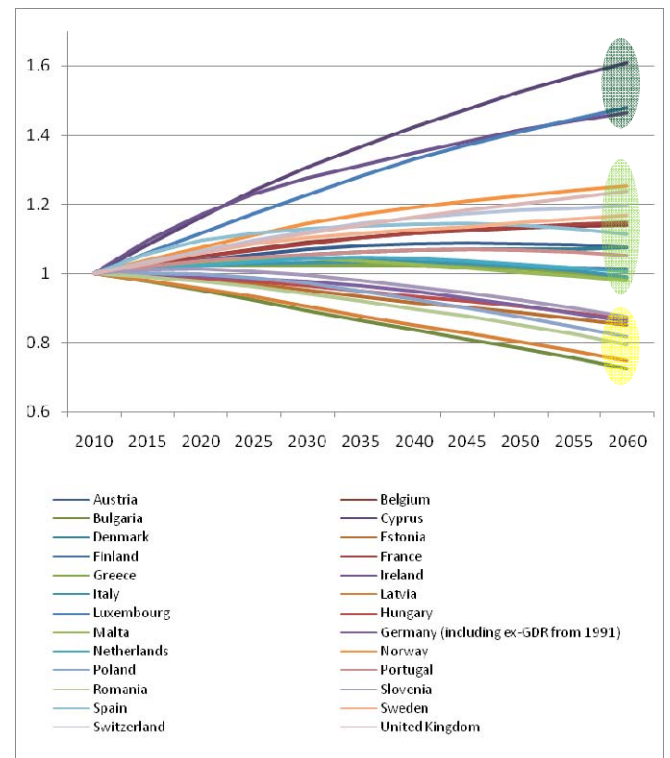


Figure 2: Population projections (in % of the change) in the EU countries (+ Norway and Swiss, - Czech Republic, Lithuania and Slovakia) by the year 2060. [4].

In general, there are more countries with population decline expectation than the ones with population growth.

Experts are discovering possible causes for this phenomenon and try to shape measures to increase the fertility rate and incline population growth. However, there is no unified conclusion about the causes and the best measures the governmental policies should take.

In the first section we will examine which current demographic characteristics of the countries are connected with the population projection rate.

2 OLD-AGES DEPENDANCY RATIO

Long-term demographic projections demonstrate important changes that are observed in the future population structure: life expectancy is persistently increasing, low fertility rates and the baby boom generation is progressively reaching the age of retirement. These three characteristics have been most often associated with the ageing of population [1].

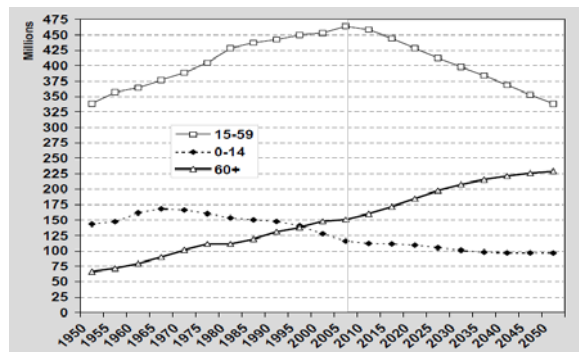


Figure 3: Evolution of the population of Europe by broad age group [10].

If the reductions of fertility and mortality continue, they will reinforce the ageing process because, over time, sustained fertility decline leads not only to decreasing numbers of births and declining proportions of children, but also of young people and eventually of adults of working age. Furthermore, increases in longevity accelerate the growth of the proportion of elderly. Population ageing affects developed countries the most. On the world overall, the population of Europe is already today the oldest, with a median age of 39 years. By 2050, all developed countries are expected to have median ages higher than 40 years according to the medium variant of eurostat projection in 2050 (Figure 4, 5).



Figure 4: Median age in 2005, medium variant (years)* [9].



Figure 5: Median age in 2050, medium variant (years)* [9].

*NOTE: The boundaries shown on the present map do not imply official endorsement or acceptance by the United Nations.

In Europe the number of persons aged 60 or over has surpassed the number of children (persons under age 15). Furthermore, the working age population in Europe reached maximum in 2005 and is expected to decrease steadily in the future. By 2050, Europe is expected to have the lowest support ratio, at 14 persons of working age for every 10 dependants (see Figure 3 and 6) [10].

The rapidly aging population, in the long-run, will place a burden on the economy and the social security system because the pool of younger workers responsible for supporting the dependent elderly population is getting smaller [7].

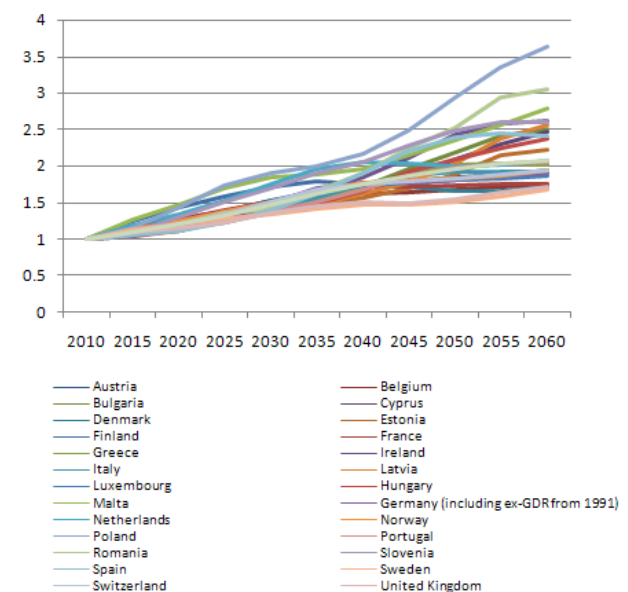


Figure 6: Changes of Projected old-age dependency ratio %. This indicator is defined as the projected number of persons aged 65 and over expressed as a percentage of the projected number of persons aged between 15 and 64 [4].

Since the last decade, when long-term demographic projections have started to highlight the future ageing of population, a large number of reforms have been proposed and partially undertaken. The EU also launched several processes in order to encourage member states to take preventive action against the negative consequences of prospected demographic developments. The common strategy was to reform the social system in order to reduce the cost for the present and future generations, increasing the tax or contribution receipts by pushing up employment rates, growth of GDP and saving now in the public sector to cover the increase of the future expenditure [1]. However, many countries have not achieved much at all and seem to be still far from an ideal or even sustainable position in terms of social, financial and economic goals in a long-term perspective.

In the second part of our paper we explore which current country characteristics are most strongly related to undesired old-dependency ratio projections in European countries.

As usual we used data mining tools for knowledge discovery from data (KDD). In the last decades these techniques proved successful in various fields, including demography [7]. For example, we previously analysed the factors influencing fertility rate of the world countries and got some interesting results [6].

3 DATA MINING IN DEMOGRAPHY

Machine learning techniques are usually used for learning changing of behavior under given conditions and consequently improving performance in new situations. However, in our case the main objective is not to behave better in new situations, but to realize what are the reasons and complex patterns influencing the phenomenon. On the other hand, the tools used are the same.

Two examples of successful scientific and engineering DM tools are Weka [13] and Orange [2]. Both systems provide tens of DM systems, several data preprocessing and visualization tools. From the ML and DM techniques available in Weka and Orange we have chosen J48, the implementation of C4.5 [13], a method used for induction of classification trees, and REPTree, an algorithm for induction of regression trees.

3.1 Data

Data for machine learning and data mining are most commonly presented in the attribute-class form, i.e. in a “learning matrix”, where rows represent examples and columns attributes [12]. In our case, an example corresponds to one country, and a class of the country is presented in the last column. There are the two phenomena we investigate:

1. Population projections of different EU countries. We chose Eurostat's population projections of EU countries. Countries were divided into three classes according to population projection changes. In the first group, there are countries that population tends to grow by the year 2060, in the second group there are countries where population is stable, and the third group represents the countries with population decline.

2. Projected old-age dependency ratio (%). For the regression trees we chose the percentage of the ratio change in the year 2060.

Altogether there are 100 basic attributes and 26 countries. Attributes and their values were partially obtained from the demographic sources such as UN [8] and Eurostat [4]. Several of the attributes were obtained from the internet, based on the assumption that they might show some interesting demographic relation.

Some of our measurements were performed on specific groups like economical factors, unemployment rate, GDP (gross domestic product) (\$) per habitant, GDP growth (%); biological factors (number of habitants, life expectancy rate, and number of men per 1000 women to mention a few of them); “education and R&D (research and development)” factors, type of the country attributes, etc. with There are 11 binary attributes, 6 discrete and the rest numerical.

3.2 Data examination procedure

Our aim was to find the attributes that best describe the phenomenon under investigation - population projection (in the year of 2060) and the old-age dependency ratio at the year of 2060. However, simple DM techniques provide only one tree which they find most accurate for the classification or prediction of the class value or the one that is highly correlated with the class value (regression tree). Furthermore - they take into consideration all the attributes at once. However, some attributes may lower the correlation of a certain attribute combination with the class value.

That is why we include human expert to guide a DM process in a right way. This approach, combining the strength of humans and computers, has been for years in use in our Department, and is recently gaining great attention (IJCAI 2009). In short, humans toss the data, exclude and include attributes and observe how the correlation and accuracy changes in different trees. This procedure is not strictly defined, but in reality carefully engineered. We further describe the procedure for the case of regression tree.

First, from all the attributes or specific meaningful group of attributes we wanted to investigate, we find out, which attribute has the highest correlation coefficient with our class attribute (i.e. population projection rate or the 2060 old-age ratio projection). In the next step we separately add all the other attributes. The attribute combination with the highest correlation coefficient is taken into the further examination. Next, the remaining attributes are separately added to the most powerful combination. The procedure is repeated until all the possibilities are examined, or until the correlation coefficient is not higher if new attribute is added. If two or more attributes gain the same correlation coefficient they are both added to the base attributes. In this case we then execute the removing procedure in which we remove one attribute after another (descending by the correlation coefficient) and observe how the correlation coefficient behaves. One possible way to proceed is to exclude all the attributes, where the correlation coefficient is higher when the attribute is excluded. The other possible continuation is to exclude only the attribute, which exclusion improves the correlation coefficient the most. The procedure is the same and is applied until we use all the attributes or the correlation coefficient stops to improve. When a meaningful correlation is found, we add other attributes (from different semantic group). The tree that correlates best with our class is the tree we take as the best indicator of the class value. We can also find the most significant relations from different meaningful groups of attributes and then try to combine the most significant relations together in order to see if the combination is even better than each one alone. This procedure is executed also with the C4.5. algorithm. The only difference is that in this case, the class is not numeric, but nominal and that tree classification accuracy is considered instead of correlation coefficient.

4 RESULTS

4.1 Population projections

Attributes that are most closely connected with population projections are the following:

- Number of stillborn children per 1000 births (2006): if there are more than 6.89 stillborn children per 1000 births in the country, its population projections are declining.
- Life expectancy (male): in the countries where male life expectancy is lower than 71.71, the population will decline.
- GDP per capita (PPP -Purchasing power parity US\$): where there is less than 12000 PPP \$ GDP per capita, the country population is shrinking.
- Fixed line and mobile phone subscribers (per 1000 people): If there are less than 9264 fixed line and mobile phone subscribers per 1000 people, the country population is declining.

All the above mentioned attributes have 80.7692 % classification accuracy. This means, that on the base of these factors, we can 80.7692 % accurately predict the population projection class the country will be classified in. They are main indicators of population declination (growth) and at the same time, they give us a clue in which direction we must act in order to prevent the population decline.

In short, the above indicates that the European countries that are not as economically developed face the darkest demographic projection.

In the experiment where we took into consideration only economical attributes, we found the following most significant tree:

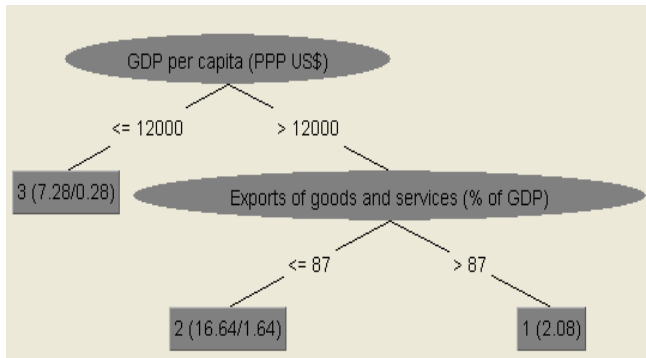


Figure 7. Classification tree, built from the attributes GDP per capita (PPP US\$) and exports of goods and services (% of GDP), and a relative growth of population projection by the year of 2060 as a class value (84.6154%).

From the above tree we may conclude that population is about to decline by the year of 2060 in the countries, where GDP per capita is equal or lower than 12000 PPP \$. If the GDP per capita is higher, and exports of goods and services are higher than 87% of GDP, than the population will grow by the year 2060. In other case, the population is expected to be stable.

The overall conclusion is the same as before – most developed EU countries tend to do better in long-term projections.

Another interesting tree is related to the geo-political situation of a country. From Figure 8 we can see that the population in the countries which had recently a communistic regime (and are consequently less developed) is expected to decline by the year 2060. Similar, yet inverse tree, we get for the capitalistic countries (80.7692 %).

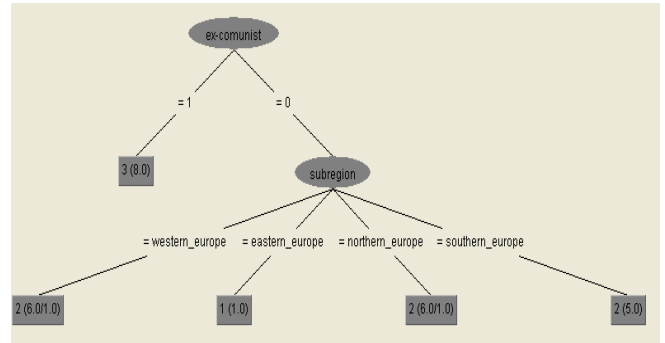


Figure 8. Classification tree, built from the attributes addressing geopolitical situation of a country and relative growth of population projection by the year of 2060 as a class value (88.4615 %).

4.2 Old-age dependency ratio

We present the procedure of data examination on the case of the economical and educational attributes and old-age dependency ratio as a class value.

Procedure of data examination:

1. We checked all the attribute correlations with the class attribute and discovered, that attribute GDP per capita (PPP US\$) has the higher correlation coefficient (ρ) with old-age dependency ratio: $\rho = 0.6456$.
2. We separately added other attributes, and discovered that attribute Inflation GDP Deflator (%) adds the most to the correlation coefficient: $\rho = 0.6924$.
3. We further added one attribute after another, and discovered that when the following attributes are added, the correlation coefficient raises: Percentage of married women (between age 15 and 49) who use contraception: 0.6969, GERD (PPP\$): 0.6976, GERD as % of GDP: 0.7031, GERD Per capita (in PPP\$): 0.7134, Grants of patents: 0.7401, Educational expenditure in Post-secondary non-tertiary as % of total educational expenditure: 0.7002, Educational expenditure Not allocated by level as % of total educational expenditure: 0.7071, Pupil-teacher ratio-Tertiary: 0.6998.
4. We made a tree from the “powerful attributes”: $\rho = 0.718$
5. We proceeded with the “elimination procedure”. Each of the attribute was separately excluded from DM treatment. The one that produced the higher increase of correlation coefficient was permanently excluded from the analysis: GERD as % of GDP: $\rho = 0.7556$.
6. The procedure was repeated without the eliminated attribute. We got another attribute for elimination: GERD (PPP\$): $\rho = 0.759$.
7. With the repetition of this procedure we also excluded attributes: Educational expenditure in Post-secondary non-tertiary as % of total educational expenditure: $\rho = 0.7594$ and Educational expenditure Not allocated by level as % of total educational expenditure: $\rho = 0.7594$. All further

eliminations with any other attribute caused decline of the regression tree correlation coefficient.

The last tree represents the most significant regression tree, showing the strongest correlation of the economical and educational attributes and the old-age dependency ratio.

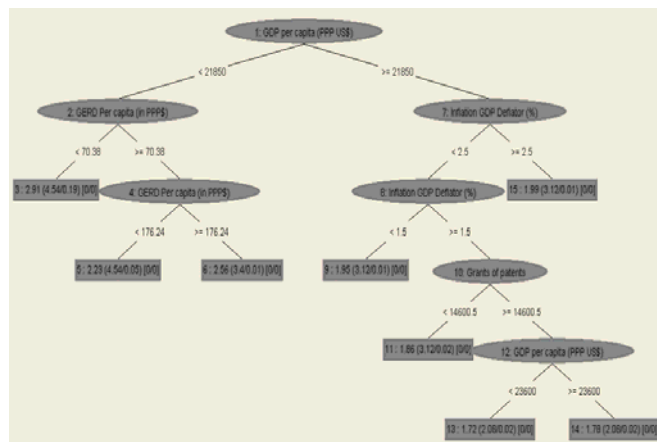


Figure 9. Regression tree, with the old-age dependency value class, considering economical and educational attributes (0.7594%).

From the tree in Figure 9 we can conclude that if GDP per capita is lower than 21850, than the projected old-age dependency ratio is higher. It further depends on the GERD (domestic spending on research and development) per capita; if it is lower than 70.38, than the projected old-age dependency ratio is the highest (2.91).

If GDP per capita is high (higher or equal 21850), than the projected old-age dependency ratio is rather low. In this case it further depends on Inflation GDP Deflator (%) - if it is between 1.5 and 2.5, the projected old-age dependency ratio is the lowest; between 1.72 and 1.86. It further depends on Grants of patents, and GDP per capita (PPP US\$). If the Grants of patents is high than the projected old-age dependency ratio is low, even the lowest when GDP is lower than 23600 PPP US\$ per capita.

It seems that under-average economically developed countries and countries that don't invest their money in research and education are more likely to have high old-age dependency ratio by the year 2060. This means that the population in these countries is getting older faster which will even further hurt their economies. There are many older and less young people and consequently less productive energy in the country.

5 CONCLUSIONS

Trends of population changes in European countries are quite unbalanced, i.e. they are different from country to country, and furthermore, seem to have some different characteristics than when the whole world is analyzed. Unlike in the world-wide scale, richer countries have better demographic and consequently overall projections. The population projections in European developed countries are stable or even growing. The European less developed

countries will be hard hit by the demographic problem in the near future.

Economic factors possibly influence several consequences, such as migrations of young, talented and hard-working personnel from the poorer to the richer countries. It seems that an important basic factor influencing this phenomenon is GERD per capita. The lowest it is, the bigger the chances that the population is aging and vice versa. A potential solution at hand is to provide better conditions for talented working youth and put more money into research and education fields in order to retain younger people to stay in the country.

Another even more important division of the European countries seems to be political or social, in a sense of their political regimes and personal values. In the ex-communistic countries it seems that people have hard times in finding the new established values while being constantly bombarded by the rather primitive versions of capitalism propaganda. Unfortunately, the decline in principles (whichever they are) seems to result in people unwilling to reproduce reasonably and as a consequence dim projections emerge not only in demographic, but also economic and overall terms.

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KOMUNICIRANJE O CEPIVIH S PREDSTAVNIKI STROKOVNE IN SPLOŠNE JAVNOSTI

Karin Kasesnik, Staša Javornik
Enota za nabavo in distribucijo zdravil
Inštitut za varovanje zdravja Republike Slovenije
Trubarjeva 2, 1000 Ljubljana, Slovenija
Tel: 01 2441538; faks: 01 2441430
el.pošta: karin.kasesnik@ivz-rs.si
Department for Drug Purchase and Distribution
National Institute of Public Health
Trubarjeva 2, 1000 Ljubljana, Slovenia
Tel: +386 1 2441538; fax: +386 1 2441430
e-mail: karin.kasesnik@ivz-rs.si

POVZETEK

Cepiva se določenim segmentom prebivalcev dajejo za zaščito pred nekaterimi nalezljivimi boleznimi. Pri komuniciranju z ljudmi, z vplivanjem na njihova stališča in odločitve glede prejemanja cepiv, so na osnovi nekaterih rezultatov iz tujine (2) opisali pomen dvosmernega, nepristranskega, ciljno usmerjenega komuniciranja glede razmerja med koristnostmi in tveganji cepiv. Kljub oviram je pomemben razvoj komuniciranja organizacij z javnozdravstvenim poslanstvom s strokovno in splošno javnostjo. V zadnjem času je bil narejen že znaten napredek, tudi v Sloveniji se razvijajo materiali in druge oblike komuniciranja z javnostmi.

ABSTRACT

The vaccines are given to specific population segments, in order to protect them from some infectious diseases. At communicating with the people, by influencing their standpoints and decisions regarding getting the vaccines, the meaning of two-way, impartial, targeted communicating regarding the relation between the benefits and risks of vaccines was described, on the basis of some results from abroad (2). Despite the obstacles, the importance of the communication development with the professional and general public, by the organizations with the public health mission, has been recognized. A substantial advance has been done recently, also in Slovenia the materials and other forms of communication with the publics have been developed.

1 UVOD

Cepiva se odraslim in otrokom dajejo preventivno, za preprečevanje obolenj zaradi nalezljivih boleznih. Osebe določenih starosti se cepi skladno z imunizacijskim programom za posamezno leto. Strokovnjaki s področja epidemiologije se na nacionalnem nivoju odločajo, proti

katerim nalezljivim boleznim bo potrebno ljudi cepiti. Pri odločanju so pomembne tudi smernice Svetovne zdravstvene organizacije.

Možne resne posledice številnih nalezljivih boleznih se s cepljenjem v veliki meri lahko preprečijo. Dajanje cepiv zaščiti otroke oziroma odrasle ljudi proti nalezljivim boleznim kot so ošpice, norice, mumps, davica, tetanus, meningitis, gripa in druge. V nekaterih primerih se osebo cepi, če se predvideva, da je bila morda pred kratkim okužena in bo lahko obolela, na primer po ugrizu živali, za katero se sumi, da je stekla.

Proti nekaterim boleznim se ni potrebno več cepiti, če na določenem območju ne predstavljajo več grožnje za zdravje ljudi. Na posameznih področjih, v nekaterih primerih celo globalno, so namreč te bolezni s predhodnim racionalnim pristopom k cepljenju že izkoreninili, čeprav so v preteklosti predstavljale velik javnozdravstveni problem.

Cepljenje običajno zajema večje skupine ljudi, pa tudi več izvajalcev. Zaradi tega je zelo pomembno primerno komuniciranje, da se predstavi prednosti in možne pomanjkljivosti dajanja cepiv.

Področje uporabe cepiv je povezano tudi z demografskimi vidiki. Medtem ko so mladi ljudje v veliki meri vključeni v redne programe cepljenja, pa je pomembno osredotočenje na starejše segmente prebivalcev, da se posameznikom pomaga pri odločitvi glede prejemanja cepiv. Tudi v Sloveniji je že viden napredek pri komuniciranju, možne pa so še izboljšave.

2 KOMUNICIRANJE O CEPIVIH S STROKOVNO IN SPLOŠNO JAVNOSTJO

2.1 Komuniciranje s strokovno javnostjo

Pri izvajanju cepljenja velja poudariti velik pomen ustreznega komuniciranja pooblaščenih oseb, ki delujejo v organizacijah s področja javnega zdravja, s predstavniki strokovne javnosti, predvsem z izvajalci cepljenja. Poleg rednih izobraževanj se strokovna vprašanja razrešujejo tudi

s svetovanjem strokovnjakov javnozdravstvenih organizacij.

Inštitut za varovanje zdravja Republike Slovenije ima pomembno vlogo pri podajanju znanj in novih izsledkov. Posebej je pomen tega komuniciranja razviden v kriznih situacijah, na primer pri nastopu določene nalezljive bolezni, katere obvladovanje zahteva dobro sodelovanje med strokovnjaki, ki vodi v zagotavljanje primernega zdravstvenega varstva. Za zagotavljanje varnega cepljenja so zelo pomembna dodatna izobraževanja, to so svetovanja izvajalcem cepljenja o izpolnjevanju zahtev shranjevanja in ravnanja s cepivi ter o urejanju dokumentacije.

2.2 Komuniciranje s splošno javnostjo

Pogosto se o cepljenju in zdravljenju otrok komunicira s starši, podaja se informacije glede cepljenja in cepiv, tudi o razmerju med koristnostmi in tveganji po dajanju cepiv.

Cepljenje je posebna zdravstvena obravnava najprej zaradi vpliva, ki ga ima. Odločitev o cepljenju vpliva na posameznika, pa tudi na zdravje ljudi v njegovi bližini. Odpor proti cepljenju ali cepivom lahko izhaja tudi iz objavljenih primerov poslabšanja zdravstvenega stanja. Nekateri lahko sklepajo na tveganje, povezano s cepivi, pa čeprav vzročna povezava med prejemanjem cepiva in pojavom neželenih učinkov običajno ni bila potrjena.

V zadnjih letih v Sloveniji poročajo (1) le o primerih določenih nalezljivih bolezni, ki jih je mogoče preprečiti s cepljenjem. Nekatero izmed nalezljivih bolezni so se še pojavljale v zadnjem desetletju ali dveh, v zadnjih letih pa beležimo le posamezne primere obolelih, ali pa obolelih sploh ni. Tako so za leto 1991 poročali o 32 primerih ošpic, leta 1995 kar o 398, a v zadnjih letih o obolelih zaradi ošpic v Sloveniji ne poročajo. V letu 2007 so v enem primeru poročali o rdečkah, ki pa se leta 2008 niso več pojavile. V letih 2007 in 2008 so poročali o po enem primeru tetanusa. Iz teh podatkov je razviden pomen visoke precepljenosti proti določenim nalezljivim boleznim. Čeprav, z vmesnimi nihanji, od leta 2001 zaznamo trend padanja števila primerov mumpsa, se je v letu 2008 še beležilo 32 primerov. Število primerov oslovskega kašlja od leta 1991 dalje, z vmesnimi nihanji, kaže trend rasti in je leta 2006 znašalo 551, leta 2007 pa 706 primerov. Leta 2008 je število primerov glede na predhodnji leti nekoliko padlo, na 181. Ta dejstva so vodila v uvedbo dodatnega odmerka cepiva proti oslovskemu kašlju.

Raziskovalci iz tujine so poskušali določiti bolj učinkovite pristope h komunikaciji o cepivih, na osnovi ugotavljanja sedanjih pristopov (2). Običajno so koristnosti dajanja cepiv iz literature manj razvidne, medtem ko se o tveganjih, kamor so zajeti tudi neželeni učinki, veliko objavlja (2).

Cilj komuniciranja o cepivih je ustvarjanje dobro razumljivih in verodostojnih sporočil ter dodeljevanje dobro zasnovanih, vidnih in dostopnih materialov (2). Avtorji so omenjali upoštevanje individualnega pristopa do cepljenih oseb oziroma njihovih staršev, ter družbeni vidik. Predlagali so določitev ciljne javnosti, cilje in dejavnike za

njihovo doseganje, vrste sporočil in materialov, način posredovanja materialov in sporočil ter verodostojne govornike.

S komuniciranjem o cepivih so želeli doseči večje razumevanje staršev oziroma oseb, ki se cepijo (2). V teh prispevkih so omenjali razvoj več materialov in virov ter nadaljnje izboljševanje razumevanja informacij o znanstvenih dognanjih ter nejasnosti.

Komuniciranje o cepivih je celovito in mora zajemati tri področja, to je razpored cepljenja, varnost cepiv in podatke, ki temeljijo na raziskovalnih dosežkih in se neprenehoma razvijajo (2), ter se nanašajo predvsem na učinkovitost cepiv. Kljub razvoju ustreznih materialov o cepivih je osebna komunikacija med starši in zdravstvenimi delavci, predvsem zdravniki, še vedno pomembna.

V Sloveniji, na Inštitutu za varovanje zdravja RS, se razvijajo materiali za obveščanje oziroma izobraževanje predstavnikov splošne javnosti. Na osnovi preteklih izkušenj in že ustvarjenih izobraževalnih materialov se ustvarjajo novi, še bolj specifično zasnovani materiali ter se izvajajo komunikacijske strategije.

S študijo (3) so raziskovalci v tujini preučevali komuniciranje, ki se nanaša na razmerje med koristnostmi in tveganji dajanja cepiv. Čeprav se v določenih državah zakonsko zahteva, da zdravstveni delavci skladno z izjavo o informacijah o cepivih (Vaccine Information Statement) posredujejo te informacije o cepivih, so obseg in vrsto dejanskega komuniciranja določili z raziskavo. Rezultati raziskave (3) iz ZDA so pokazali, da so zdravniki in medicinske sestre pri približno 70 % obiskov zaradi cepljenja pričeli razpravo o neželenih učinkih, o tem, kdaj je potrebno poklicati v bolnišnico ter o shemi cepljenja. Vendar rezultati kažejo, da so zdravniki le v manj kot polovici primerov razpravljali o kontraindikacijah. Raziskovalci so pri tem ugotovili, da so zdravniki pomanjkanje časa navedli kot največjo oviro pri komuniciranju o razmerju med koristnostmi in tveganji uporabe cepiv. Z rezultati te študije so pokazali, da so medicinske sestre porabile znatno več časa za razpravo s starši o cepivih kot pediatri ali družinski zdravniki. Prav tako so ugotovili, da bi tako zdravniki kot medicinske sestre po lastnem mnenju potrebovali nekoliko več časa za razpravljanje s starši o cepljenju. Z analizo rezultatov te študije so pokazali pomembno vlogo medicinskih sester pri komuniciranju o cepivih. Pri raziskavi je 80 % vseh izvajalcev cepljenja predlagalo brošuro za starše, ki bi jo prebrali pred cepljenjem, približno polovica pa je predlagala razpredelnico z navedbami kontraindikacij oziroma določene druge informacije o cepljenju. Izvajalci so predlagali tudi uvedbo materialov s praktičnimi informacijami.

Avtorji raziskave (3) so zaključili, da v preučevanih ambulantah v ZDA obstaja neskladje med zakonskimi zahtevami za podajanje informacij o cepivih in dejansko prakso. Rezultati raziskave namreč kažejo, da kljub razpravljanju o katerem od vidikov glede cepiv, precejšen delež izvajalcev ni omenjal tveganj. Raziskovalci so glede

komuniciranja o razmerju med koristnostmi in tveganji cepiv, v ameriških ambulantah predlagali: strokovnjakom lahko dostopne zakonske in strokovne smernice ter sodelovanje zdravnikov in medicinskih sester, ob upoštevanju omejenega časa za obisk.

V Sloveniji podobna raziskava ni znana. Vsekakor se neprestano gradi strokovna podpora strokovnjakom, ki delajo s cepivi. Obenem se uresničuje strategija za komuniciranje s predstavniki splošne javnosti.

Skrb glede varnosti cepiv je pri uveljavljanju imunizacijske usmeritve poglobljena (4). Veljajo zahteve, da so cepiva proizvedena na način, ki zagotavlja njihovo varnost, čistost in učinkovitost. Namen uresničevanja teh zahtev je zagotavljanje uporabe varnih cepiv, brez škodljivih posledic zaradi napak pri proizvodnem procesu.

2.3 Cepiva in starejši ljudje

V Sloveniji se letno izvaja cepljenje proti gripi. Iz podatkov (5) je razvidno, da je bilo v letu 2007 v Sloveniji proti gripi cepljenih 150.261 ljudi, od tega je bilo 53,0 % kroničnih bolnikov. Proti gripi se je cepilo 81.890 ljudi, starejših od 65 let, kar je pomenilo 54,4 % števila vseh cepljenih oseb. Kar 72,4 % števila oseb, cepljenih proti gripi, je bilo starih več kot 50 let.

Pri starejših posameznikih obstaja večje tveganje obolenosti in smrtnosti zaradi gripe kot pri mlajših (6). V organizmu starejših ljudi se tudi težje ustvari zaščitni odgovor po dajanju cepiva proti gripi.

Lahko ugotovimo velik pomen komuniciranja o cepivih proti gripi s starejšimi ljudmi. Sedanji obseg komuniciranja se lahko še nadgradi. Velja upoštevati vire informacij, ki so starejšim ljudem najbolj dostopni ter učinkovite načine za premagovanje njihovih sedanjih stališč.

3 OVIRE PRI KOMUNICIRANJU

Komuniciranje o tveganjih zaradi cepiv so v določenih študijah povezovali z več ovirami, tudi pri izvajanju kriznega komuniciranja, predvsem z ozirom na vpliv tovrstnega komuniciranja na javnost (2).

V preteklih letih smo tudi v Sloveniji lahko beležili napredek pri kriznem komuniciranju glede cepiv, ki je temeljil tudi na izkušnjah pri pojavu nekaterih nalezljivih bolezni.

V objavljenih rezultatih študij iz tujine (2) so poudarjali pomen dobre priprave, jasnih sporočil, ki jih posredujejo osebe, ki jim ciljna javnost zaupa. Obenem so predlagali močno partnerstvo med javnostjo ter drugimi udeleženci, farmacevtskimi proizvajalci, potrošniki, vladnimi ustanovami, mednarodnimi organizacijami in drugimi.

Podali so smernice aktivnosti za komuniciranje s predstavniki splošne javnosti pri dajanju cepiv (2) :

- dejavnosti naj bodo usmerjene na vse skupine javnosti;
- komuniciranje naj bo dvosmerno, ne enosmerno, dostopno in razpoložljivo, primerno in ciljno usmerjeno, z vplivom na znanje in vedenje;
- komuniciranje naj bo merljivo, privlačno in predstavljeno

na način, da se lahko zapomni;

- komuniciranje naj bo nepristransko.

Ovire pri komuniciranju s predstavniki strokovne in splošne javnosti se poskušajo premagovati s preseganjem sedanjih stališč, s pomočjo poglobljenega znanja o prednostih in možnih neželenih učinkih zaradi uporabe cepiv.

3.1 Premagovanje ovir pri komuniciranju o cepivih

Skladno z izsledki iz tujine (2), obstaja še kar nekaj ovir, ki preprečujejo doseganje učinkovite komunikacije pri dajanju cepiv, in jih je mogoče premagovati:

- z vzpodbudami, jasnimi navodili in razpravami o razmerju med koristnostmi in tveganji cepiv;
- s preseganjem stroškovnih ovir pri izvedbi kampanj za komuniciranje;
- z ustvarjanjem materialov za javnost, ki so na razpolago in vsebujejo dovolj informacij;
- s posredovanjem nekaterih sporočil vsem skupinam javnosti, z upoštevanjem njihove raznolikosti;
- s spremljanjem in poročanjem o posameznih vidikih tveganj;
- z nadgradnjo enosmerne komunikacije v dvosmerno komunikacijo.

Avtorji (2) so ocenili, da so starši upravičeni do informacij o cepivih, ki jih prejema njihovi otroci, vendar morajo tudi sami ravnati odgovorno in iskati informacije o koristnostih in tveganjih cepiv ter ob pravem času poiskati stik s pediatrom. Poudarjali so trud za doseganje skupnih odločitev glede dajanja cepiva otroku. Omenjali so, naj bo informiranje staršev o cepivih prilagojeno boljše, pa tudi slabše informiranim staršem. Kot so ugotovili, starši pogosto niso prepričani, katerim virom o cepivih bi zaupali, oziroma imajo težave pri razlagi podatkov (2).

Na osnovi ugotovljenih potreb po informiranju o cepivih se lahko določi strategijo ustvarjanja sporočil in materialov.

3.2 Komuniciranje z drugimi segmenti prebivalcev

Raziskovalci iz tujine so ugotovili (2) manjšo pozornost področju cepiv za odrasle, v primerjavi s cepivi za otroke, z ozirom na razpoložljivost in vsebino materialov za informiranje teh segmentov prebivalcev. Opisali so tudi pomen bodočega razvijanja sporočil in materialov glede prejetja cepiv za starejše segmente prebivalcev.

4 USTREZNA KOMUNIKACIJSKA STRATEGIJA

Za doseganje učinkovitost se lahko s pomočjo kriznega komuniciranja opredeli tveganje in določi možnosti njegovega zmanjševanja (2). Avtorji so svetovali, naj se tveganje prikazuje kot resno in osebno pomembno, z verjetnostjo ogrožanja zdravja, vendar obvladljivo.

Ko si ljudje ustvarimo prepričanja, se to kaže v našem načinu razmišljanja (2). Prav tako so avtorji navajali, da se je, za uspešno vplivanje na prepričanja o nadzoru tveganj, potrebno osredotočiti na predhodnja prepričanja in miselne vzročne povezave, v nasprotnem primeru ljudje slišijo to, v kar so že prepričani. Poudarjali so, naj se

upošteva, da so ljudje bolj zaskrbljeni zaradi možnih škodljivih posledic zaradi aktivnosti kot zaradi opustitve nekega dejanja; pri tem vedenju niso opazili razlike med strokovnjaki in drugimi ljudmi.

Pri premagovanju komunikacijskih ovir naj se tudi upošteva, da ljudje pogosto neprimerno ocenijo zdravstveno tveganje ter za odločanje o tveganjih potrebujejo številčne prikaze (2). Pri načrtovanju komunikacijske strategije naj se upošteva, kako informacije zaznava oseba, ki informacije prejme, naj se ne gleda z vidika pošiljatelja.

Pogosto cepiva in cepljenje v številnih državah spremlja več objav v medijih. Če je poročanje novinarjev objektivno, nepristransko in razumljivo, vodi v dobro obveščanje javnosti.

Pri komuniciranju o tveganjih glede cepiv so raziskovalci svetovali upoštevanje sedanjega znanja ali prepričan ljudi, povezanih s cepljenjem (7). Ugotavljali so, da so potrebe ciljne skupine ljudi glede informacij različne; nekateri prejemniki materialov o komuniciranju glede tveganj imajo raje kratka, preprosta sporočila, z enostavno razlago koristnosti in tveganj cepiv, drugi pa želijo informacije, ki so podprte z znanstvenimi izsledki. V raziskavi so zaključili, naj komuniciranje udeležencev o tveganjih, povezanih z uporabo cepiv, temelji na soglasnih odločitvah, zaupanje pa je ključnega pomena in vpliva na odločitve glede cepljenja. Ugotavljali so, da je komuniciranje o tveganjih bolj učinkovito, ko so morebitne negotovosti, v okviru dovoljenih znanstvenih meril, opredeljene. Predlagali so odkrit pristop pri reševanju morebitnih negotovosti, ki bo prispeval k zaupanju pri komuniciranju o tveganjih, z namenom zagotavljanja javnega zdravja.

5 DOSEDANJI DOSEŽKI IN NADALJNI RAZVOJ

Doseženi so bili določeni rezultati, še nadalje pa se svetuje razvoj komunikacijske strategije in izvajanje aktivnosti za komuniciranje z javnostmi.

V Sloveniji je bilo v letu 2009 v imunizacijski program vključeno tudi cepljenje proti okužbi s HPV. Pripravljajo se materiali za komunikacijo z javnostjo. Izkušnje s tega področja so že pridobili ponekod v tujini. V objavljenem delu so avtorji svetovali izobraževanje (8) glede bolezni, ki jih HPV povzroča, o nevarnosti in predvidenem širjenju te okužbe. Avtorji so opisali omenjeno cepivo in njegovo dokazano učinkovitost, mehanizem delovanja cepiva ter so omenjali starostne segmente oseb, pri katerih je lahko cepivo najbolj učinkovito, vključno s časom zaščite. Sledila je tudi razlaga varnosti prejemanja HPV cepiva. Že pred uvedbo cepiva na tržišče se zahteva dolgotrajno preizkušanje, vendar so določena tveganja po prejemu cepiva kljub temu možna; zato so navedli tudi morebitna tveganja, povezana s cepivom, tudi možne neželene učinke.

V Sloveniji se poleg že ustvarjenih materialov, v katerih se za predstavnike splošne javnosti opisuje cepljenje in z njimi povezana cepiva, načrtuje še nadaljnjo zasnovo materialov oziroma sporočil. Ti materiali, oziroma druge aktivnosti,

izhajajo predvsem iz javnozdravstvenih organizacij kot je Inštitut za varovanje zdravja RS. Njihova vsebina pa je namenjena izboljševanju javnega zdravja.

6 ZAKLJUČEK

Raziskave in praksa pri uporabi cepiv kažejo, da je dajanje informacij o vseh vidikih cepiv za izvajalce cepljenja in uporabnike cepiv koristno. Ugotovili so učinkovite oblike komunikacije o cepivih, z materiali oziroma drugimi vrstami sporočanja. Tudi v Sloveniji se v organizacijah z javnozdravstvenim poslanstvom, kot je Inštitut za varovanje zdravja RS, deluje v tej smeri. Z nadaljnjimi prizadevanji javnozdravstvenih ustanov za boljše razumevanje informacij o cepivih, tudi ob upoštevanju specifičnih potreb prebivalcev iz posameznih starostnih segmentov, bi predstavniki splošne javnosti lažje ocenili razmerje med koristnostmi in tveganji po prejemanju določenih cepiv.

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FAMILY POLICY IN THE CZECH REPUBLIC WITHIN THE EU CONTEXT

Jirina Kocourkova, Ph.D.

Faculty of Science Charles University
Department of Demography and Geodemography
Albertov 6, 128 43 Prague, Czech Republic
Tel: +420-221951419; fax: +420-224920657
e-mail: koc@natur.cuni.cz

ABSTRACT

In the Czech Republic during the 1990s the former extensive state support of all families was largely reduced without being adapted to new societal needs. The meaning of family policy was not fully understood by then political representatives who want only to stay out of previous political regime. More conservative and refamilization policies were implemented. Recently the reform of parental leave system has only seemingly started the trend towards defamilization.

1 INTRODUCTION

During 2000s public demand raised implementation of series of measures, particularly before parliamentary elections in 2001 and 2005. Politicians have found out introduction of family policies as an easy source of political capital. Although all these activities resulted in adoption of Family Policy concept in 2005, family policy system in the Czech Republic has remained institutionally jointed to social policy which has created barriers to its further development.

2 THREE POLICY DIMENSIONS

Three policy dimensions are usually stressed to be of particular relevance for the reconciliation of work and family life. In combination, parental leave, flexible working time arrangements, and childcare services have been found to significantly affect the ability of parents to combine their career and family responsibilities. Whether public policies facilitate or obstruct work-family reconciliation is strongly dependent on interaction of all three policy fields. Improvement of leave policy arrangements was preferred to development of a mixed package of support for families in the Czech Republic. Scarcity of childcare facilities for children under three years of age has contributed to unbalance in family policy support.

3 STRENGTHENING THE ROLE OF MOTHER

In the 1990s the governments in the Czech Republic took steps toward implementing more conservative, re-familization policies, which support women in their roles as mothers and make it more difficult for them to remain in the labor market. The aim of extension of parental leave in the 1990 and 1995 was to release women from labour market and at the same time to improve well-being of children below three years of age. Even though there are truly equal conditions for both parents to make use of parental leave since 2001, the number of men receiving parental benefit has remained negligible in the Czech Republic. The current government is rather reluctant to introduce effective measures to involve fathers more in childcare.

4 THE LATEST REFORM

The latest reform of parental leave policy in the Czech Republic came into effect in 2008. The aim was to enable parents to choose how long they want to care for their children. Parents may select one of three possible periods of receiving parental benefit: up to 2, 3 or 4 years of age of their child. The length of leave selected determines the level of parental benefit – the shorter the period, the higher the amount paid. Although this new system is more flexible than the previous one, it still does not give mothers a real incentive to return early to work since the government has not made any provisions to provide childcare arrangements. In spite of this rather unique policy development, different from most other European countries, the current parental leave system in the Czech Republic exceeds by far the standards set by the EU in its Directives.

As regards typology, the Czech family policy system has not evolved strictly into one of the Western types of welfare regimes (Esping-Andersen, 1990) or Western models of family policy (Gauthier, 1996). It is rather a mixture of many elements coming from all models. Nevertheless, the most dominant are some conservative characteristics as there was a tendency to return to traditional familial welfare

responsibilities since the 1990s. Recent findings correspond with McDonald's incoherence theory (McDonald, 2006). Accordingly, the conflict between norms supporting high levels of gender equity in education system and labor market, and sustained gender inequality in family has contributed to the persistent low fertility level in the Czech Republic.

5 CONCLUSIONS

The Czech government's position regarding family policy has not changed much after 2006 when EU Member States were stimulated to modernize their family policies. In the Commission's report (European Commission, 2006) a set of policies aimed at increasing fertility was defined within the main strategic objectives "to help families to reconcile their work and family life" and "to develop more efficient employment policies". Despite other Member States the Czech Republic has not followed this new direction adopted on the EU level. The EU requirements for childcare are viewed as renewing the "forced" pattern of combining female employment with childcare outside the family, as such they are widely unacceptable in the Czech Republic, given negative experiences with childcare services before 1990 (Kocourková, 2009). That is why the possibility of taking long parental leave has been retained. The recent governments have been going on with refamilialization policy as there has been no strong public pressure to change the direction. Vast majority of Czechs think that a family with children should receive financial support from the state in order mother might stay as long as possible at home and to care about children. Changes in policy making towards defamilialization could not be expected until the current policies come into explicit conflict with the needs and aspirations of the public.

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THE DEMOGRAPHIC DEVELOPMENT IN THE EUROPEAN UNION AND NEIGHBOURING HINTERLAND: THE IMPORTANCE OF GROWING IMBALANCES

Prof. dr. Janez Malačič
Faculty of Economics, University of Ljubljana

1. Introduction

The population of the world as a whole, as well as of the developed world and especially Europe, has found itself in the first decade of the 21st century in a very important period of transformation. For the second decade in a row the 6.8 billion population of the world has recorded a reduction in absolute growth, which was highest in the 1980s at 844 million. In the ensuing decade this figure dropped to 829 million, and estimates for the current decade are put at 783 million, which is still higher than in the 1970s. Relative growth was greatest four decades ago, when it stood at 2.02% a year, while in the current decade it has fallen to 1.2% (UN, 2007, p. 42).

In the population of the developed world the transformation is even greater. Growth has practically stalled at a level just over 1.2 billion, while at the same time in Europe the population in this decade has started gradually to gain negative momentum, or a declining trend, owing to the continuously declining size of the younger generations in consequence of the low fertility rate in the past. The population of the EU-15 had already started to gain negative momentum around the year 2000 (Lutz, O'Neill and Scherbov, 2003, p. 1991). This negative demographic momentum is also present in EU-27 and in the majority of Member States. All this means that these populations will require greater immigration from the developing parts of the world simply to keep up their current numbers.

The current demographic situation in the developed countries and also in the EU is a consequence of the demographic transition which in the past two centuries led to changes in how the population was reproduced. The traditional method of reproduction, involving high mortality and fertility rates, yielded ground during that period to the modern method of population reproduction, which involves low mortality and fertility rates. In that time the mortality and fertility rates fell from high to low levels. Modernisation, which gained impetus through the industrial revolution, generated a major increase in life expectancy at birth, and spread the conscious deciding about whether to bear children to the entire population. During the demographic transition, the population of the developed countries increased greatly, in some cases more than four-fold. Recently certain demographers have favoured the idea that this first demographic transition was followed by a second, which in the developed countries caused a decline in fertility far below the level of simple reproduction of the

population (Lesthaeghe and van de Kaa, 1986; van de Kaa, 1987; van de Kaa, 1999).

A characteristic of the theory of the second demographic transition is that it explains the great reduction in the fertility rate in developed countries through the fundamental change in the model of starting a family. The new individualist family model explains the major rise in cohabitation, single-parent families, extra-marital births and even the avoidance of having offspring. All this is linked to structural changes in the cultural, technological and also economic sphere. Economic prosperity facilitates emancipation for the modern person, in opposition to the binding social norms, and also to Church and parental authority. Post-materialist values, as well as an orientation towards self-realisation, are spreading.

It would be hard to say nowadays that the theory of the second demographic transition has been generally accepted. It has been the target of considerable criticism. I myself accuse it of improper naming and neglecting of the fact that many factors in the fertility rate decline far below the level of simple reproduction are essentially the same as in the basic demographic transition (Malačič, 1993, p. 242). Certain critics even state that it was not even the second (more like secondary), since there had been several demographic transitions in history, nor was it demographic, because it does not address basic demographic processes comprehensively enough. The aspect of transition is also questioned, since it supposedly describes very diverse processes for which it is not clear whether they are truly irreversible (Coleman, 2004, p. 12–16).

In the developing part of the modern world, however, the first demographic transition is not even complete. The great majority of the less developed countries are in various phases of (the first) demographic transition. In these countries mortality has fallen relatively quickly, if we disregard the Aids epidemic in Africa, while the fertility rate has only been falling slowly, or in some places the drop is actually halting. The population in that part of the world is therefore growing rapidly and is accelerating the changes in global population development. At the same time it appears that owing to certain features of today's developing societies, the second demographic transition is unlikely to gain any traction in that part of the world. It is even possible that it will not happen. In that case, the future demographic picture of the world will differ even more than today's picture.

In this paper the section two discusses in detail the more recent demographic development of Europe. In this discussion, the situation around the world will be included only in outline. The third section focuses on the demographic situation in the area immediately neighbouring the EU, which includes Western Asia and North Africa, as well as part of Eastern Europe and Russia, although the section will not dwell in detail on these last two. The fourth section addresses the question of how important the demographic imbalances are in the EU and in its immediate neighbourhood. The paper closes with a conclusion and literature and sources.

2. The demographic situation in Europe/the EU and the world

In Europe the demographic transition ended roughly in the 1950s. Here we need to consider that the first signs of the transition being completed in pioneering countries were evident back in the '30s, and that the transition in Eastern and South-eastern Europe was somewhat delayed. In other parts of the developed world, too, the demographic transition is complete. The rest of the world is characterised, however, by being in various stages of transition. Some of the least developed countries are right at the beginning, while elsewhere, especially in the more developed parts of this section of the world, the process is already ending.

The developed world is dominated by low fertility and mortality rates and relatively low or even negative population growth. In an increasing number of countries, population growth is a result of positive net migrations and less and less the result of positive natural growth. According to available data for 2006, in Europe there were 10 countries with negative natural growth and 12 countries with negative net migration (VID, 2008).

In recent years the fertility rate in Europe and the EU has indeed been low. The transversal value of the total fertility rate (T_f), which indicates the average number of children born to a woman in her fertile period, was less than 2.1 in all the EU countries in 2006, that is, less than the level ensuring simple reproduction of the population. The specific T_f values in 2006 were between 1.24 in Slovakia and 1.98 in France (VID, 2008). The population growth rates for a model with such fertility indicators are negative. In the model with Slovakian fertility rate, the internal growth rate would be close to -1.9%. A population with this kind of growth rate would be halved in approximately 37 years.

The low European fertility rate is also confirmed by the values of the cohort T_f . The cohort fertility rate shows the final progeny and in the event of a reduction, it lags behind the cross or transversal fertility rate. For the cohort born in 1967, the T_f values are below 2.0 for all countries with available data except for Albania, Cyprus, Iceland, Ireland (1966), Norway, Macedonia and in the then country of Serbia and Montenegro, where this is a consequence of the higher Albanian birth rate in areas inhabited by Albanians. In the greater part of Europe the values of this indicator are

between 1.46 in Germany and 1.99 in France and Slovakia (RDDE, 2006, p. 89).

In the developed part of the world the average age of mothers on the birth of their first child is continuing to rise, while the indicator values of higher birth orders are declining along with indicators of the fertility rate within marriage, and the indicators of extra-marital fertility rates are rising. In places there has also been an increase in the proportion of the population deciding consciously to live their lives without having their own offspring. A fertility rate that mainly lags behind the level of simple reproduction of the population is therefore the dominant feature of Europe and other developed countries at the beginning of the 21st century.

The fertility rate in the least developed countries of the world is still high, although we may expect it to fall. In other developing countries it has already fallen considerably and is continuing to fall, although in some Sub-Saharan African countries the decline has been halted (Bongaarts, 2008, p. 105).

In the major part of Europe, the situation regarding mortality, in contrast to the fertility rate, is the best that humankind has ever known it. The exception to this is the countries that emerged in the territory of the former Soviet Union and certain other former socialist countries. They may be presented briefly by means of life expectancy at birth for men and women ($e_{0,m}$ and $e_{0,f}$). The e_0 growth points to a reduction in the mortality rate. In the second half of the 20th century Europe experienced a high e_0 growth rate, although major differences remained between the genders and countries, if we just limit ourselves to these. Looking at the whole continent, in 2006 $e_{0,m}$ was lowest in Russia, at 60.4 years, and highest in Iceland, at 79.6 years. The average for EU-27 was 74.6, with seven European countries showing a value of this indicator at over 78 years and four countries showing less than 65 years. Between 1996 and 2006 the value of $e_{0,m}$ increased in EU-27 by an average of 3.1 years, with the biggest increase in Ireland, by 4.2 years and Romania, by 4.1 years, while it actually dropped in Belarus, by 0.2 years (VID, 2008).

Female mortality is considerably lower than male mortality, and in 2006 $e_{0,f}$ was no less than 72 years in any European country. In that year the lowest $e_{0,f}$ value was in Moldova, at 72.4 years, and in Russia, at 73.2 years, while the highest was in France, at 84.4 years, and Switzerland, at 84.2 years. In EU-27 the $e_{0,f}$ averaged 80.9 years. The change in $e_{0,f}$ between 1996 and 2006 was positive for women in all countries. In EU-27 there was an increase of 2.3 years, while the smallest increase was in Belarus, of 0.7 years, and the biggest was in Romania and Ireland, of 3.4 years (VID, 2008). The relatively high mortality rate in the majority of the former socialist countries of Europe is mainly a consequence of poor economic development, problems in the healthcare systems during the transition to capitalism, less widespread healthy lifestyles and the greater spread of alcoholism and smoking, just to list some of the main reasons for differences.

The other parts of the world will not be examined in such detail. The mortality rate in non-European developed countries is also falling, with Japan showing the lowest rate in the world, if for males we do not take into account small countries such as Iceland. In 2006 the $e_{0,m}$ and $e_{0,f}$ in Japan were 79.0 and 85.8 years. In the developing parts of the world mortality is still relatively high, although there, too, it is falling. From 2000 to 2005 the average in those parts of the world was $e_{0,m}$ 62.5 and $e_{0,f}$ 65.9 years (UN, 2007, p. 46). The only exception to this is countries afflicted by the Aids epidemic, where mortality has even risen.

Other significant characteristics of the recent demographic development in the developed countries include the rapid ageing of the entire population and its active section, especially the rapid growth in the population over 80 years old, positive net migration and the rapid rise in old-age dependency of the population (P_{65+}/P_{15-64}). In respect of these characteristics, however, we must remember that there are major differences between individual countries which cannot be addressed here. If we illustrate briefly certain of these characteristics in the case of EU-27 for 2006 or for several past years, we may point out that the average annual positive net migrations from 2002 to 2006 amounted to 1.81 million persons, the proportion of those aged 65 and more years in the EU-27 population in 2007 amounted to 17.0 % and the proportion of those aged 80 and over in the same year was 4.3%. By 2030 the proportion of those aged 65 and over is projected to increase to 24.6%, and the proportion of those aged 80 and over to 7.3%. (VID, 2008). Even greater increases in these two proportions are predicted in the latest population projections for the EU up to 2060 published by Eurostat. Compared to the present, by that time the first proportion should double, and the second should increase threefold (Eurostat, 2008). Last but not least, we should add that the population of EU-27 at the beginning of 2007 stood at 493.3 million. By 2030 this is projected to rise to 509.1 million (VID, 2008).

Ageing is slower in the developing countries. The young age structure of the population offers them an opportunity for development in the form of demographic dividends and windows of opportunity. These two expressions point to the fact that the falling fertility rate in that part of the world in the coming few decades will increase the proportion of active persons and reduce the proportion of the maintained population. This will serve to improve the relationship between active and maintained persons in favour of the former, which alongside appropriate economic and other policies in these countries will lead to rapid economic and social development. At the same time this is an opportunity to reduce the development gap in comparison with the developed countries. In that part of the

world the net migration balance is negative, although it is also entirely insignificant in comparison with the total population numbers.

3. The demographic development of the neighbouring hinterland of the EU

Right at the beginning of this point it should be stated that here we will not deal with the smaller European countries, nor thereby with the Balkan countries that are not EU Member States, nor with Ukraine. With the possible exception of Albania and the Albanian population in the region, in terms of the demographic regime these countries do not differ from the other European countries. In their place the focus of discussion will fall on North Africa (seven countries, including Sudan and Western Sahara) and Western Asia (18 countries, including Cyprus, although its Greek part is already in the EU, the Caucasus and Iraq but not Iran) as the traditional regions in the UN divisions. In these regions we will then select Algeria, Egypt, Iraq, Yemen and Turkey, and examine them in greater detail. This area is a kind of demographic hinterland for Europe and the narrower EU area. If in these comparisons we also include Russia, which is an empire all to itself, this hinterland is rounded up.

This immediate demographic hinterland formulated in such a way is based on relative geographic proximity. The primary purpose of formulating it is to highlight the very great differences in the manner of population reproduction and in the growth potential between the EU on the one hand and what is mainly the Muslim world of Western Asia and North Africa on the other hand, and Russia on the third hand.

Table 1 shows selected demographic data for Europe, North Africa and Western Asia in 1950, 2005 and 2050. The UN includes the Russian Federation in Europe. This is no great hindrance, since it still clearly shows the basic demographic contrasts between Europe, with its modern demographic regime, and the other regions with their traditional or in some way mixed earlier transitional and later transitional demographic regimes. In addition to the total population and those aged 0–14 and 65 years and over, the selected indicators show the growth rate r , the total fertility rate T_f , the net reproduction rate R_0 , the probability of infant mortality q_0 , life expectancy at birth for men and women $e_{0,m}$ and $e_{0,f}$ and the rate of net migration nm in ‰. Data for 2005 and 2050 are taken from the middle variant projections of the UN from 2006. For 1950 data from the statistical services are supplemented with estimates from UN experts.

Table 1: Selected demographic data for North Africa, Western Asia and Europe for 1950, 2005 and 2050. Source: UN, 2007, pp. 62–63 and 76–79.

	North Africa			Western Asia			Europe		
	1950	2005	2050	1950	2005	2050	1950	2005	2050
P in millions	53.3	189.6	310.2	51.1	212.1	372.0	584.2	731.1	664.2
P ₀₋₁₄ in %	41.2	33.1	20.5	38.7	33.1	20.8	16.2	15.8	14.6
P ₆₅₊ in %	3.5	4.6	13.9	4.4	4.6	13.4	8.2	15.9	27.6
r (in %)	2.3	1.7	0.5	2.7	1.8	0.7	1.0	- 0.0	- 0.4
T _f	6.8	2.9	2.0	6.5	3.0	2.0	2.7	1.5	1.76
R ₀	2.1	1.3	0.9	2.2	1.4	1.0	1.2	0.7	0.85
q ₀ in ‰	189.0	38.0	15.0	191.0	39.0	11.0	72.0	8.0	5.0
e _{0,m} years	40.9	66.8	74.5	43.7	67.5	76.1	62.9	70.5	77.8
e _{0,r} years	42.8	70.7	79.0	46.7	72.0	80.7	67.9	78.8	84.2
nm in ‰	...	- 0.8	- 0.5	...	0.1	0.1	...	1.3	1.2

The population trend in Europe and the two adjoining regions in the hundred years from 1950 to 2050, which Table 1 shows on the basis of actual statistical data and middle variant projections from the UN, is indeed worrying. In the middle of the 20th century the population of Europe was 5.6 times that in the other two regions, but in 2005 this ratio had fallen to 1.8 and in 2050 it is projected to be 0.97. The population of the selected Asian and African countries is growing rapidly almost without interruption, while in this decade the European population has started to decline. In one hundred years the population of Western Asia and North Africa will probably grow 6.5 times. Such demographic development is a consequence of the basic properties of the modern demographic regime in Europe, with its low fertility and mortality, distinct ageing of the population and positive net external migrations on the one hand, and on the other hand the high fertility, moderate mortality and insignificant migrations in the Asian and African regions.

Of all the demographic characteristics we can see in Table 1, towards the end of the period for which projections have been made, the most pronounced difference will be in the age structure of Europe and the other two selected regions. In 2030 the median age of the population of the two adjoining regions will be 31 years, while that of Europe will be 45.5 years. By 2050 these two indicators will rise successively to around 36 and 47 years, but the difference will still be highly pronounced, significant and in today's circumstances hard to imagine.

There are major differences present among the 25 countries included in the regions of Western Asia and North Africa. Table 2 shows selected demographic data identical to that in Table 1, for selected countries from the two regions for 2005 and 2050. We selected Algeria, Egypt, Iraq, Yemen and Turkey.

The selected countries in Table 2 show that within North Africa and Western Asia there are also considerable differences in demographic development between individual countries. These countries are marked by an intensive demographic transition from the traditional to the modern demographic regime. The demographic transition is practically complete in Turkey, since the total fertility rate according to data for 2005 has fallen to the level of simple reproduction of 2.1. Turkey is followed by Algeria and Egypt. Very probably in the middle of the 21st century these three countries will have a T_f lower than what would be required for simple reproduction of the population. In a few decades the classical demographic transition will also be completed in Algeria and Egypt. Iraq, and especially Yemen, are today still in the earlier phase of falling fertility and partly also mortality. It is evident in the data on mortality in Iraq that the country is in a war. Nevertheless, fertility in these two countries will fall by the middle of this century to a level that will be very close to simple reproduction of the population.

Table 2: Selected demographic data for Algeria, Egypt, Iraq, Yemen and Turkey for 2005 and 2050. Source: UN, 2007, pp. 112–113, 214–215, 262–263, 276–277 and 492–493.

	Algeria		Egypt		Iraq		Turkey		Yemen	
	2005	2050	2005	2050	2005	2050	2005	2050	2005	2050
P in millions	32.9	49.6	72.8	121.2	28.0	61.9	73.0	98.9	21.1	58.0
P ₀₋₁₄ %	29.6	18.2	33.3	20.5	41.5	24.2	28.3	17.5	45.8	28.2
P ₆₅₊ %	4.5	17.6	4.8	13.6	2.8	8.5	5.6	18.4	2.3	5.9
r (in %)	1.5	0.4	1.8	0.6	1.8	1.1	1.3	0.2	3.0	1.5
T _f	2.4	1.8	2.9	1.9	4.3	2.2	2.1	1.9	5.5	2.5
R ₀	1.1	0.9	1.4	0.9	1.8	1.1	1.0	0.9	2.4	1.2
q ₀ in ‰	31.0	11.0	29.0	10.0	82.0	14.0	28.0	10.0	59.0	14.0
e _{0,m} years	70.9	77.1	69.	76.2	57.8	73.8	69.4	76.1	61.1	72.7
e _{0,r} years	73.7	80.9	73.6	80.9	61.5	78.3	74.3	80.9	64.4	77.3
nm in ‰	- 0.8	- 0.3	- 1.1	- 0.7	- 4.3	- 0.1	0.1	- 0.1	- 1.2	- 0.4

The levels of population growth in the selected countries during the period in question are positive for all of them and markedly higher than in the developed countries. Such a result is present irrespective of the negative and relatively high net level of international migrations. The exception here is Turkey, which has low net migration levels. Owing to the aforementioned demographic characteristics, the selected countries show very rapid absolute and relative increases in their total populations. In the period being studied the populations of Yemen and Iraq will probably increase the most. In the 45-year projection period the index for the first will be 274.9, and for the second 221.1.

4. The importance of growing demographic imbalances

The demographic differences between the EU and its eastern, south-eastern and southern hinterland are actually increasing the numerous differences that already exist. These differences can be grasped in the form of the more general concept of a European identity, or the European or rationalist civilisation, or the open spiritual situation. All these concepts presume that outside the EU there are concepts that not only differ from those mentioned, but entirely or partly reject them. In such circumstances the question arises regarding compatibility on the one hand and predominance on the other. The major demographic differences and especially the extensive young population in the Asian and African hinterland can, together with the same differences in the world context, signify a major threat to the aged population of the EU and developed countries in general, and in this way to all those concepts mentioned in the EU context. It is therefore extremely important for the EU and the developed world, as well as individual regions and countries in that part of the world, to maintain a sustainable ratio among the three main contingents of the population, among the young, mature and old contingents. This will facilitate a better basis for development in numerous other important areas, ranging from the economy, defence, culture and technology all the way to science and other areas.

A sustainable ratio among the main contingents of population in the developed countries and the EU is threatened by the excessively low fertility rate, which has dropped far below the level of simple reproduction of the population. In part excessively low fertility can be substituted by immigration from outlying regions and further afield from developing parts of the world, where the population is growing rapidly. Here, however, numerous issues, along with actual and potential problems, arise. The most important issue is, how much immigration is sustainable in terms of normal integration and thereby the survival and absence of threat to the aforementioned European concepts. Equally important is the issue of the quality of migrants. The economies of the developed countries need highly qualified and educated immigrants,

since there are no jobs for others in the labour market. On the other hand there are not even enough such qualified immigrants, nor can they be attracted without doing great damage to their countries of origin. A brain drain from neighbouring and developing countries would further exacerbate the tense relations between the two sides. In view of all this, there is a prevalent conviction today that immigration cannot serve to resolve in the long term the demographic disproportion between the developed and developing parts of the world, nor between the EU and neighbouring regions (Malačič, 2007, 108–112). This is confirmed by the results of demographic research, as well as by the broader debate on population policy at the EU level and in individual Member States. An example of this debate is the Second Demographic Forum, held by the European Commission on 24 and 25 November 2008 in Brussels (EC, Demographic Report 2008).

Among the countries in the wider neighbouring regions, the Russian Federation (RF) is a special case. In 2005 its population stood at 144 million, with a very low fertility rate ($T_f = 1.3$), relatively high mortality, especially among men, positive net migrations and a decline in the population numbers. In the coming decades, this negative growth will probably gain momentum, such that according to the UN middle variant projection of 2006, the population in the RF will drop to just 107.8 million by 2050, which for the biggest country in the world is a very black scenario (UN, 2007, pp. 398–399). All these figures indicate that in future years and decades the RF will be an important country of immigration and a competitor to the EU for educated immigrants. At this point we encounter a fascinating and contradictory question, to what extent will the demographic deterioration of the RF contribute to its approximation to the EU and possibly even to full membership of the EU? From today's perspective this is highly improbable, although developments in this direction cannot be entirely ruled out.

The growing number and intensity of differences will lead to increasing heterogeneity in the community. Such circumstances will also give rise to greater complexity of political functioning and decision-making. If we are having to deal with an economic community or a common market, greater heterogeneity is in principle sustainable. If, however, we are having to deal with the emergence of a federal or confederate community of countries, which is also a major political, cultural and social community, the differences should not become too great and thereby unmanageable. For a long time now, the EU has no longer been merely an economic community. In the age of global operation, not just of markets for goods and services, but also of markets for production factors, being limited to free economic operation is no longer so important, although protectionism is to some extent always present. From this point of view the EU should not accept extremely large and overly diverse countries and populations, since this would start to threaten its own identity.

From the demographic perspective, the highly important issue of the identity of the EU population is linked to the

changing model of forming families. These changes are explained in detail by the theory of the second demographic transition, which has already been addressed in this text. There is no unity among researchers in the developed countries regarding to what extent, how fast and how successfully, if at all, these changes will spread to the less developed countries, to the Asian and African areas neighbouring the EU, and to what extent immigrants from those areas will adopt modern or even post-modern family values in Europe. Many of today's immigrants from non-European and especially Muslim countries have major problems with emancipation from traditional family norms, and from family, patriarchal and religious authority. In some places special immigrant marriage markets have developed, where immigrant men marry girls from their original non-European community, since young European women are simply too emancipated. The question is, to what extent is such behaviour acceptable for European society. If it remains on the margin of society, it can cause very serious problems, but cannot threaten society itself. With increased spread, however, certain traditional non-European social practices, which immigrants might establish too forcefully in Europe, could seriously threaten the cohesiveness of European societies.

The issues being addressed here also need to be viewed from another important aspect. The EU has a predominantly market capitalist economy, which follows the laws of economic cycles. Good times are followed by bad times. Rapid economic growth in a given period is gradually replaced by recession or a crisis of greater proportions. It is precisely during the bad times that it is incomparably harder to integrate immigrants than in good times. An excessive number of immigrants would thus greatly endanger social cohesion and social peace in the EU during a crisis. This element also points to the fact that the demographic problems of the EU and its Member States cannot be resolved and stabilised through immigration. Demographic projections quickly show that this would require simply excessive immigration, which for a whole host of reasons would not be sustainable.

For this reason the EU and Europe as a whole will need to resolve their future demographic problems through their own means. Here it will have to further develop the already identified areas of political operation. First and foremost it will without doubt have to ensure the kind of social conditions in which people in their fertile age will be willing to increase their birth rate to a level close to the simple reproduction of the population. This can be achieved through a predominant norm of two or a little more than two children per family. The second important measure is the universal promotion of employment for all work-capable people in the community. The third measure will need to

ensure a more productive and dynamic economic environment. The fourth measure is tied to the receiving and integration of immigrants. Here the key is for the EU to accept the kind of immigrants who will be more easily involved in the labour market and in society, without being at the margins of society. The fifth measure will need to ensure sustainable public finances in the increasingly aged population of the EU and its Member States. (EC, Europe's demographic future, 2007)

5. Conclusion

The demographic developments of the developed and developing parts of the world are now at a major turning point. In the developing countries, population growth has slowed to a level that allows a reduction of total incremental growth and points to a greater deceleration in growth. In the developed countries, growth is halting and is shifting into stagnation or in some places even a decline. Demographic differences in the world remain great. Similar demographic differences are present between the EU, and Europe more broadly, and Western Asia and North Africa. These two regions are for Europe a kind of hinterland, in which over the last 50 years an entirely different demographic picture has been created, to which we were not yet accustomed in the middle of the 20th century. By the middle of the 21st century, the UN projects that the population of the 25 countries making up these two hinterland regions will exceed the population of EU-27. The rapid demographic growth in these two regions is not sustainable and in various ways it will most probably influence the future demographic and other conditions in the EU and more broadly across Europe.

The current and future demographic problems in the EU and elsewhere in the developed world will have to be solved through population policy. This must ensure that the basic demographic processes can guarantee the long-term sustainable reproduction of the population. With the further reduction in mortality, the key processes will be fertility and migration. Based on today's demographic knowledge it is clear that T_f must be maintained at least at a level between 1.7 and 2.0, if society does not wish to threaten its own long-term survival. Such a fertility level is minimal, and together with immigration it will still ensure the more or less unimpeded reproduction of the population. Immigration into the EU and more broadly into Europe will have to remain at a moderate level, since it will not be possible to integrate in the proper way any greater number of immigrants from culturally and socially different parts of the world. The EU will accept and integrate immigrants, but it will not be able to open its borders and accept countless uneducated people who might want to come to Europe.

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FORMAL CHILDCARE SERVICES IN ROMANIA

Aniela Matei

Department of Social Policies

National Scientific Research Institute for Labour and Social Protection

6-8 Povernei Street, 010643 Bucharest, Romania

Tel: +40 721 509 562; fax: +40 21 311 75 95

e-mail: aalexandrescu@incsmmps.ro, roxalexa@yahoo.com

ABSTRACT

This paper presents an analysis regarding the characteristics of the formal childcare system in Romania and its relationship to the labour market participation decision of mothers. We start with a brief overview of the European debates on this subject. In Section 2 we offer a short description of the social, demographic and economic contexts in Romania. Section 3 contains a description of the child care system in Romania before and after the communism regime. Section 4 will underline Romanian mothers' need for childcare facilities in order to balance their family and professional lives based on the survey data collected by the National Scientific Research Institute for Labour and Social Protection in 2008. The final section, 5 offers a provisional conclusion about the subject.

1 INTRODUCTION

For the purposes of this article, childcare services will be defined according to Eurostat definition: "Formal childcare for the age groups up to compulsory school age includes childcare at day care centers and education at pre-school. Care provided by parents themselves, child minders having direct arrangement with parents as well as child care by grand-parents, other relatives, friends and neighbors are excluded from the definition of formal childcare"[1].

Policies to achieve the objective of work life balance have been debated across the European Union for many years. Various proposals have been tabled for easing the strain on workers trying to balance the demands of family and other responsibilities with the increasingly pressurized work environment. Flexible working arrangements, differing leave opportunities and a wide range of childcare and other facilities have been presented as partial solutions to the problem. In March 2002 The European Council, meeting in Barcelona, took the initiative of inviting Member States to "remove disincentives to female labour force participation and strive, taking into account the demand for childcare facilities and in line with national patterns of provision, to provide childcare by 2010 to at least 90% of children

between 3 years old and the mandatory school age and at least 33% of children under 3 years of age "[2]. The Barcelona targets were designed to promote childcare services largely in order to remove barriers to employment for women. The targets established during the Barcelona summit in 2002 were built on the goals set for female employment rates in the Lisbon Strategy in 2000 and 2008.

In order to raise the coverage and service delivery standards European Union provides practical and financial support to increase investment in childcare initiatives across the Member States. In Romania, as in many other European countries the European Social Fund is used to support existing childcare facilities, increase the number of childcare places and to improve the quality of the services in order to meet the diverse and changing needs in employment, education and training. But the approved projects until now are still at the beginning and the results will be relieved in the future years.

2 AN OVERVIEW OF THE ROMANIAN SOCIAL, DEMOGRAPHIC AND ECONOMIC CONTEXT

Immediately following the end of the communist regime, Romania has been forced to reduce public expenditure in key areas such as cash transfers to families, social care services, education and health. Child allowances in Romania, which had a large governmental cash transfer programme, declined from nearly 3% of GDP in 1989 to less than 1% in 1994, as a report World Bank shows in 1997. The impact has been considerable on families, resulting in rising levels of poverty. In the last years there are, however, signs that the situation has been improved: the percentage of the GDP invested in 2007 in social benefits targeted towards family and/or children was 1.6 [3].

2.1 Family structure

Most Romanian families are traditional, married couples with children, but the number of single parent families

continues to rise. In 2007, the crude marriage rate was 8.78 relatively high among the European countries. The crude divorce rate remained relatively steady: 1.7 in 2007 (in the European context, this level is below average). The proportion of births outside marriages was over 26.7. The average age at marriage was in 2006 —30.8 years for men and 27.2 years for women. In Romania statistic records shows that the number of children per family depended on educational background and place of residence. People with higher educational levels and those living in the cities tended to have fewer children. Most of the families in the cities had one or two children. In the year 2007 the total fertility rate per woman was 1.31.

2.2. Employment situation

In comparing with other developed countries from Europe, in Romania the participation of women has not increased very much in the last few decades. In 2007 the female employment rate stands almost 4 percentage points below the EU average and 5 below the Lisbon target. One of the most important reasons is related to the characteristics of child care system. The growth in occupation rates for female workforce was registered for a number of reasons, the key ones being: women’s preference for financial independence, changes in maternity legislation, need to generate a second income, desire for a career. In Romania, equal rights between men and women are juridical recognized and the gap between levels of education and labour market participation rates for men and women is not large. The figure below shows the evolution of occupational rates of men and women during the period 1976- 2006, according to the several Romanian Statistical Yearbook, evolution who underlines the gap reduction between two men and women in terms of occupational rates.

	1976	1980	1985	1989	2002	2006
Men	65	62,8	60,7	59,6	64,1	64,7
Women	35	37,2	39,3	40,4	52	53

Table 1: *Employment rate by gender, Romania 1976-2006, longitudinal analysis*

Source: Statistical Yearbooks of Romania: 1977 (p. 109); 1981 (p.131); 1986 (p.79); 1990 (p.116), 2007 (p.116).

Employment rates have been rising in most the EU in recent years. According to Labour Force Survey data - 2007, the employment rate in the EU27 was 66% for people aged 15-64 years (73% for men and 59% for women). However, significant differences arise between the EU Member States, ranging from 56% in Malta to 77% in Denmark and the Netherlands. For men, the employment rate varies between 64% in Poland and 83% in the Netherlands. For women, it ranges between 38% in Malta and 73% in Denmark and Sweden. Romania registered a 69% employment rate for men and 53% for women. In 2007 about 17% of workers in

the EU27 were in a part-time job. The proportions of workers who work part time differ markedly between men (7% of the male workforce) and women (30% of the female workforce). Equally large differences emerge between countries in this regard – from 46% of Dutch workers (23% of male workers and 75% of female workers) to 1% of Bulgarian workers (1% of male workers and 2% of female workers). Romania registered a 9% employment rate for men and 11 % for women, 19 percentage points below the EU average.

3 THE FORMAL CHILDCARE SYSTEM IN ROMANIA

Until 1982 childcare services had been completely free in Romania. Beginning with this year, because of the general economic context, the communist regime introduced a Romanian version of “self management” and “self financing” for all state enterprises [4]. In this new socio-economic context parents had to support some of the operational costs of the childcare facilities which, in response to the necessity, also offered extended day care and weekly care. Children between the ages of three months and three years were eligible for the day care and those between the ages of three and six could have attended kindergarten. Given that the demand was greater than supply, children were admitted on a priority basis.

Today the main childcare facilities in Romania for pre-school children are crèches (daycare centers for children between the ages of three months and three years) and kindergartens.

3.1. The childcare system for children between the ages of three months and three years

After the fall of communist regime, the total number of crèches (daycare centers for children between the ages of three months and three years) has dramatically decreased. In 1990 Romania registered a number of 840 crèches and fifteen years later, in 2005, statistic records registered only 291 crèches (all state propriety) with a total number of 14.310 beds for 632.573 children up to three years. Today the crèches are reglemented by the Law no. 263/2007 and we still have a lot of issues unsolved by this settlement. In 2009, the Ministry of Labour, Family and Social Protection through the National Child Protection Authority intends to develop a new legislation in order to settle the childcare services in accordance with the Lisbon targets referring to these issues. But the debates are still in the process.

3.2. Children in kindergartens

In Romania, the educational system covers children over three years in preschool education. This system is free granted for all the children. Between 2004 and 2007, according to the Statistical Yearbook of Romania the total

number of kindergartens drops from 5687 - in 2004 to 1720 in 2007, following demographical tendencies. Immediately after 1990 pre-school enrolment rates have registered significant decreases, between 1990-1995 those value were under 60%. From 1995, the value of - pre-school enrolment rate rise up to 74,9% in 2006, but is still under de Lisbon target.

4 ROMANIAN MOTHERS NEED CHILDCARE FACILITIES IN ORDER TO BALANCE THEIR FAMILY AND PROFESSIONAL LIFES

One of the most significant long term trends in the labor market in many European countries has been the increase in the proportion of working mothers. This trend is also specific for the Romanian situation. As a consequence of these changes parents, especially mothers, must increasingly rely upon individuals and institutions outside of the immediate household for assistance in the child-rearing. In these circumstances *the relationship between the availability and affordability of childcare - labor market participation decisions - child outcomes* has been receiving increasing attention among researchers and policy-makers. As entering the labour market is strongly related with the participation in the child care market, we expect women's entry decision to depend in a great measure on the cost and availability of childcare services. The existence of family friendly policies at work is also an important variable for the mothers' return to the labour market. To confirm these hypotheses we intend to use survey data collected by the National Scientific Research Institute for Labour and Social Protection (NSRILSP), survey regarding the relationship between family policies and return of mothers to the labour market in Romania.

The provision of formal childcare services is an important indicator of work family balance. Due to the raising participation of women with children in paid work, demand for regulated childcare services has been increasing in all over the Europe, including in Romania. The most profound change in Romania, like in others new Member States has been the transition from communist to market economy. Formally, childcare for children from birth to school age was highly subsidized. In the process of transition to the market economy many of these services were closed down. Today a lack of childcare places has emerged and those that exist are often expensive for parents, especially childcare from private sector.

There is a direct link between childcare provision and access for parents to paid employment. Across the European Union, more than six million women aged between 25 and 49 years say they are forced into not working, or can only work part time, because of their family responsibilities. For more than a quarter of them, lack of childcare facilities – or their cost – is the main problem [5]. Access to good quality, affordable childcare operating at hours that suit parents and children is thus a key element in facilitating women's access to the

labour market. Good childcare provision for children of all ages can help parents manage the complex demands of work and parenthood. By widening the context of childcare, it is possible to consider a broader range of employment issues that impact on the demands for childcare services, such as parental leave, care services for other dependants, flexible work patterns, job sharing, part-time work, and the balanced sharing of domestic tasks and family responsibilities between men and women. Childcare provision cannot be developed in isolation and should be explored in the context of other systems that interact with the care of children and the family unit. This will ensure that childcare policy developments support the protection of women's rights and help stimulate active participation in the labour market.

The presence of childcare facilities at a workplace is a boon for working parents and it can make a workplace more attractive for job seekers. According to the 2006 report Working Time and Work Life Balance in European Companies [6], The Netherlands had the largest number of workplaces offering childcare services: 12% of workplaces had their own crèche, while a further 17% offer other forms of childcare assistance. Some other countries had better-than-average provision of work-supplied childcare: the UK (7% of workplaces), Ireland (6%), and Latvia, Greece and Luxembourg (all at 4%). The report shows that public-sector workplaces are more likely to offer such facilities than those in the private sector.

Companies face a daily challenge in striking a balance between the needs of the organisation (increasing market share and innovation, productivity, customer satisfaction,) with the needs and interests of employees (better work-life balance, lifelong learning). For this reason, flexibility initiatives can be an attractive option for both employers and employees. This assumption is confirmed in our survey. A large majority of mothers interviewed, especially those highly educated, confirm the necessity of such flexible initiatives of employers. 74.6% of women highly educated who at the time of the survey were in childcare leave period agreed to return to work before the of the childcare leave if the employers offer them flexible working condition. At the time of the survey over 85% of interviewed mothers who finished the childcare leaves and had returned to work confirm the lack of flexibility in working condition practiced by their employers.

Low educated women are most affected in the relationship with the labour force market, as the figure below shows. For those women, our survey registered the low percentages in returning process to the labour market: 47,1% of these women do not return to the labour market after the end of childcare leave, comparing with 7 % registered for highly educated women.



Figure 2: Percentages of women return and not return to the labour market after the end of childcare leave, by level of education, NSRILSP survey data, 2008

As many researchers underline, women's higher educational attainment is associated with their higher labour market participation. But the women highly educated are those who tend to postpone childbirth and decide less often for children.

In Romania, like in most EU Member States, with the exception of Sweden and Denmark, formal childcare for children aged 0-3 years is much less developed than for children from three years of age to school-going age. Childcare for the 0-3 year's age-group is predominantly informal, being provided by parents, relatives and friends. Although there has been a greater political commitment to pre-school education rather than in the early years (0-3 years), the low take-up of formal childcare for 0-3 year-olds also reflects the strong demand for informal/parental childcare, whether this is because parents prefer such an option or because costs for formal childcare are high. In Romania 67,4% of low educated women, 89,7% of medium educated women and 83% of highly educated women with children under 3 years consider very important and important the necessity of crèches in their lives (according to NSRILSP survey data, end of 2008). Childcare arrangements are an important instrument for women to enter in paid employment. The survey results show that while Romania had advanced in the incorporation of women into the labor market, most of them still have to assume total responsibility for housework and the care of the children.

5 CONCLUSION

In Romania labour force of women participation has increased, partially due to economic pressures, improved educational levels, reduced fertility and changes in their perception of the roles they should play in society. Affordable and quality childcare is important not only for

raising fertility rates but also in order to encouraging higher female employment and for investing in children. When childcare is unaffordable, of low-quality, or difficult to access, parents may opt for atypical work schedules in order to balance care and work responsibilities, with possible negative consequences on the stability of the parental unions and on the well-being of children. Furthermore, mothers' attachment to the labour market may decline, as they opt to care for their children at home. Without sufficient coverage childcare for children from 0 and 6 (7) years is a clear deficit of possibilities for parents to plan for their respective balance of work and family tasks. Initiatives to support a balance of work and family life it is necessary to rely on suitable arrangement of political and corporate aspects (affordable needs based childcare provision, effective financial support combined with incentives to work, family friendly environment).

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STATISTICAL OVERVIEW OF MIXED MARRIAGES IN THE MUNICIPALITY OF BANJALUKA (1987-2000)

Irena Medar-Tanjga, M.A., teaching assistant
Program of studies in geography
Faculty of Sciences at the Banjaluka University
M. Stojanovića 2, 78000 Banjaluka, Bosnia and Herzegovina
Tel: +387 65 955111; Fax: +387 51 319142
e-mail: etnologija@pmfbl.org

ABSTRACT

This paper presents ethnically mixed marriages in the the Municipality of Banjaluka. It reviews the number and structure of marriages between members of the three constitutive nations of Bosnia and Herzegovina: Serbs, Croats and Bosniaks. This research cover three periods of time: five years before the war broke out in the region (1987-1992), the period of the war (1992-1995) and five years after the war (1995-2000). If we have in mind the war that took place in the region, this study can prove to be valuable in overcoming group isolation and problems between the ethnicities.

1. INTRODUCTION

Ethnically/nationally mixed marriages are one way of overcoming group isolation. Field studies of mixed marriages have also shown the crossing of paths of different ethnic groups through spousal relations. Mixed marriages are also bridges between different communities, the bases for new identities and also points of confrontation and contradiction. The significance of mixed marriages depends on the conditions in which they were realized and put to the test.

While studying ethnically/nationally mixed marriages in the area of the municipality of Banjaluka, the focus was on mixed marriages between members of the three constitutive nations of Bosnia and Herzegovina: Serbs, Croats and Bosniaks*. Each of these nations has its own consciousness of their own ethnic origins, individualities and specific traditional culture and system of values, with different religious belongings: Serbs are of the Orthodox religion, Croats are Catholics, and Bosniaks are followers of Islam. What is common for all three nations is that they have the same native language – Serbo-Croatian.¹ Today each nation declares their “own” language: Serbs speak Serbian, Croats speak Croatian, and Bosniaks speak Bosniak, even though in reality they all speak the same language – Serbo-Croatian, “renamed” by each nation according to their ethnic

identities. The official language in the Republic of Srpska is Serbian.²

The only source of data of the number and structure of mixed marriages in the research period are the Registers of marriages kept annually at the Official Registries in Department for Administrative services of the City of Banjaluka. Considering that in the mid 1960s the authorities revoked the administrative obligation of recording the nationality of the spouses in the registry files, the only remaining option is that the “recognition” of such marriages in small settings be carried out by a well trained researcher. As of the year 2000, sections where the spouses state their nationalities and religion have been reintroduced in the Registers of marriages. Therefore, the data in the period of 1987 to 2000 is based on the subjective assessment of the researcher. The national and religious belonging was determined from the names of the spouses names of parents and sometimes even places of birth, while the data for the year 2000 are accurate.

2. STATISTICAL OVERVIEW OF MIXED MARRIAGES IN THE MUNICIPALITY OF BANJALUKA

From the time it was founded, Banjaluka has been characterized by high heterogamy. From the first of censuses to the last ones, we can see that there have been a great number of Serbs, Croats and Bosniaks, which greatly contributed to the high heterogamy in making marriages. Adding to that great class and professional differentiation of the population and urbanization of the city, we get a clearer picture of the very large number of mixed marriages.

No one has tackled yet the problem of ethnically/nationally mixed marriages in the area of the municipality of Banjaluka. Taking into account the civil war that took place in this region (1992-1995), this study can prove to be valuable in overcoming group isolation and problems between the ethnicities that were caused by there events.

* In the 1990s Bosnian Muslims took on the name Bosniaks

¹ Group of authors (1982): Constitution of the Socialistic Republic of Bosnia and Hercegovina with Constitutional amendments I-XII and index registry, Organization for scientific research Official Journal of SRBH, Sarajevo, Article 4, p. 27.

² www.vladars.net/cr/zakon/ustav.html

Table 1. National layout of Banjaluka according to censuses from 1885 to 1991

year	Serbs		Croats		Bosniaks		Others		Total
	Abs. no.	%	Abs. no.	%	Abs. no.	%	Abs. no.	%	Abs. no.
1885	2.237	20	1.885	17	6.905	60	330	3	11.357
1910	3.694	25	3.990	27	6.588	44	528	4	14.800
1921	5.324	30	4.858	27	7.201	40	618	3	18.000
1931	6.769	31	6.486	29	8.039	36	871	4	20.400
1948	10.861	29	8.662	23	5.780	16	11.560	32	29.627
1971	40.874	45	18.166	29	23.616	26	8175	9	90.831
1981	51.839	42	16.314	13	20.916	17	34.868	28	123.937
1991	70.155	49	15.700	11	27.689	19	29.535	21	143.079

Sources: 1885, 1910, 1921, 1931, 1948, 1961, 1971. godina Smlatić S. (1978): Banjaluka – the city and its functions; 1981 and 1991, group of authors (1995): the population of Bosnia and Herzegovina – ethnic composition in local communities

2.1. Mixed marriages in the period of five years before the war (1987-1991)

In the five years before the war a very large number of marriages was made in general, going from 760 marriages in 1991 up to 976 marriages in 1988. Of the total marriages

made in this period, mixed marriages accounted for a quarter, while homogenous Serbian marriages always made up a half or slightly more. Homogenous Croatian marriages accounted for around 10%, and Bosniak marriages between 12 and 15% of total marriages made in one year.

Table 2. Number and structure of marriages made in Banjaluka in the five years before the war (1987-1991)

Year	Mixed marriages		Ethnically homogenous marriages						Total number of marriages
			Serbs		Croats		Bosniaks		
	Abs. no.	%	Abs. no.	%	Abs. no.	%	Abs. no.	%	Abs.no.
1987.	238	25	482	50	95	10	140	15	955
1988.	225	23	503	51	106	11	142	15	976
1989.	224	25	455	52	85	10	116	13	880
1990.	222	25	471	52	96	11	107	12	896
1991.	178	23	392	52	79	10	111	15	760

Source: Registries of marriages for the years 1987, 1988, 1989, 1990 and 1991, Administrative services of the City of Banjaluka

Table 3. Number and structure of mixed marriages made in Banjaluka in the five years before the war (1987-1991)

Husband Wife	Serb Croat		Serb Bosniak		Croat Serb		Croat Bosniak		Bosniak Serb		Bosniak Croat		Serbs, Croats and Bosniaks with „others“		Total
	Abs. no.	%	Abs. no.	%	Abs. no.	%	Abs. no.	%	Abs. no.	%	Abs. no.	%	Abs. no.	%	
1987.	48	20	44	18	54	24	8	3	41	17	17	7	26	11	238
1988.	54	23	38	17	49	22	7	3	34	15	8	4	35	16	225
1989.	39	17	26	12	54	24	8	4	32	14	14	6	51	23	224
1990.	39	18	29	13	42	19	12	5	31	14	13	6	56	25	222
1991.	28	16	38	21	25	14	12	7	26	15	10	6	39	21	178

Source: Registries of marriages for the years 1987, 1988, 1989, 1990 and 1991, Administrative services of the City of Banjaluka

If we look at mixed marriages we can see that the most common mixed marriage was between Serbs and Croats, and the least common between Croats and Bosniaks. During the first period of the research Serbo-Croatian marriages made up a half of the mixed marriages, only to drop to a third by 1991. Mixed marriages between Croats and Bosniaks always made up around 10%. The percentage of mixed marriages where a Serb, Croat or Bosniak was one of the spouses and a member of other nations living in Banjaluka was the other, went up in this period from 11% in 1987 to 25% in 1990.

The large number of changes in name and last name in marriages made between Serb husbands and Bosniak wives points to the fact that these marriages continued to exist in Banjaluka, but in such a way that the wives adapted to the community where they lived by changing their names, which meant concealing their national identities or even changing it. In cases of marriages between Serb women and Croat men, and Serb women and Bosniak men, the husbands altered their identities by changing their exceptionally

national names into Serbian names and taking the surname of their wives.

2.2. Mixed marriages during wartime (1992-1995)

During this period, the total number of marriages made has dropped, making 1994 the year with the least marriages made. Only 512 marriages were made during that year, which is half the average for marriages per year in Banjaluka. This is not surprising, taking into account the war and hardship in life in general.

When the war started in this region, Croats and Bosniaks were displaced from the area of the Municipality and Serbian refugees were relocated to Banjaluka. These migrations, as well as the negative attitudes towards “others”, who remained in the city, led to a decrease in mixed marriages during and after war conflicts in ex-Yugoslavia.

Homogenous Serbian marriages account for two thirds of marriages, while homogenous Croatian marriages drop from

5% in the first year to 0%, and Bosniak from 10% to 1% in 1995. The percentage of mixed marriages dropped from

25% in the previous period to 13-22%.

Table 4. Number and structure of marriages made in Banjaluka during the war (1992-1995)

Year	Mixed marriages		Ethnically homogenous marriages						Total number of new marriages Abs. no.
	Abs. no.	%	Serbs		Croats		Bosniaks		
			Abs. no.	%	Abs. no.	%	Abs. no.	%	
1992.	129	19	452	66	32	5	66	10	679
1993.	112	13	665	77	25	3	57	7	859
1994.	112	22	375	73	5	1	20	4	512
1995.	102	17	492	82	2	0	5	1	601

Source: Registries of marriages for the years 1992, 1993, 1994 and 1995, Administrative services of the City of Banjaluka

Table 5. Number and structure of mixed marriages made in Banjaluka during the war (1992-1995)

Husband Wife	Serb Croat		Serb Bosniak		Croat Serb		Croat Bosniak		Bosniak Serb		Bosniak Croat		Serbs, Croats and Bosniaks sa „ostalima“		Total Abs.
	Abs. no.	%	Abs. no.	%	Abs. no.	%	Abs. no.	%	Abs. no.	%	Abs. no.	%	Abs. no.	%	
1992.	22	17	36	27	14	11	10	8	10	8	2	2	35	27	129
1993.	24	21	25	22	11	10	6	5	12	11	5	4	29	27	112
1994.	36	31	12	11	16	14	1	1	14	13	3	3	30	27	112
1995.	25	25	20	20	15	15	0	0	5	5	2	2	35	33	102

Source: Registries of marriages for the years 1992, 1993, 1994 and 1995, Administrative services of the City of Banjaluka

If we look at mixed marriages we can see that the most common mixed marriage was between Serbs men and Croat women, and Serb men and Bosniak women. In 1994, marriages between Serb men and Croat women account for 31%, and in 1992 marriages between Serb men and Bosniak women account for 27% of mixed marriages in this year, which is slightly strange considering the war surroundings and a large number of relocated Bosniaks and Croats. This fact was probably the cause of the smallest percentage of marriages between Croats and Bosniaks, which were around 10% in the first two years, dropping to 2-4% in the following two years. The percentage of mixed marriages where a Serb, Croat or Bosniak was one of the spouses and a member of other nations living in Banjaluka was the other was between 27 and 33%. The cause of such a high percentage is the presence of foreign troupes and organizations in the municipality of Banjaluka, with mainly local women marrying foreigners.

This period also shows a certain number of changes in name and surname mainly in marriages between Serbs and Bosniaks. It was mainly the Bosniaks that changed their names which were characteristic to their nationality to neutral names. Men commonly took on their wives' surnames. These changes also occurred in the brides' and even the grooms' fathers. In a period of life-threatening situations, this sort of mimicry helped preserve the family, and even life in cases where families remained in a territory where one of the spouses belonged to the majority nation. Names and surnames were mainly drawn from the majority nation. After the war ended, some of these people took their original names back.

2.3. Mixed marriages made in the five years after the war (1996-2000)

In the period after the war, the total number of marriages increases again, ranging from 722 in 1996 to 885 marriages in 2000.

Table 6. Number and structure marriages made in Banjaluka in the five years after the war (1996-2000)

Year	Mixed marriages		Ethnically homogenous marriages						Total number of new marriages Abs. no.
	Abs. no.	%	Serbs		Croats		Bosniaks		
			Abs. no.	%	Abs. no.	%	Abs. no.	%	
1996.	64	9	653	91	2	0	3	0	722
1997.	79	10	686	89	3	0	4	1	772
1998.	82	11	654	87	5	1	5	1	746
1999.	155	19	645	79	5	1	5	1	810
2000.	148	17	705	79	6	1	26	3	885

Source: Registries of marriages for the years 1996, 1997, 1998, 1999 and 2000, Administrative services of the City of Banjaluka

Mixed marriages accounted for 9-19% of the total number marriages, while homogenous Serbian marriages were exceptionally dominant, making up more than 80% every year. Homogenous Croatian and Bosniak marriages were very low, which is understandable considering forced migrations of all three nations. Displacing Croats and

Bosniaks from Serbian territories, and receiving Serbian refugees to Banjaluka, made the city an almost ethnically homogenous area. Still, in each year covered in the research at least one homogenous Croatian and Bosniak marriage was made, pointing to the fact that Croats and Bosniaks kept on living in Banjaluka.

Table 7. Number and structure of mixed marriages in Banjaluka in the five years after the war (1996-2000.god.)

Husband Wife	Serb Croat		Serb Bosniak		Croat Serb		Croat Bosniak		Bosniak Serb		Bosniak Croat		Serbs Croats and Bosniaks with „others“	Total	
	Abs. no.	%	Abs. no.	%	Abs. no.	%	Abs. no.	%	Abs. no.	%	Abs. no.	%	Abs. no.	%	Abs.
1996.	15	23	12	19	12	19	0	0	4	6	3	5	18	28	64
1997.	17	22	11	14	7	9	1	1	9	11	0	0	34	43	79
1998.	15	18	9	11	18	22	1	1	5	6	2	2	32	40	82
1999.	16	10	15	10	11	7	1	1	5	3	2	1	105	68	155
2000.	12	8	12	8	9	6	3	2	9	6	1	1	102	69	148

Source: Registries of marriages for the years 1996, 1997, 1998, 1999 and 2000, Administrative services of the City of Banjaluka

In the small number of mixed marriages the most common marriages were between Serb men and Croat women, and Serb men and Bosniak women, but also Croat men and Serb women. The percentage of marriages between Bosniaks and Croats is still low. The percentage of mixed marriages where a Serb, Croat or Bosniak was one of the spouses and a member of other nations living in Banjaluka in this period was the other was still very high, ranging from 28% in 1996 to 69% in 2000. This increase of marriages with “others”, mainly foreigners is caused by two facts. The first is the increased number of foreigners who have arrived to the Republic of Srpska as part of the Peace Mission. Many citizens of the Republic of Srpska have emigrated abroad because of the war, and married with the citizens of those countries. Data on these marriages were delivered and recorded in the Registry office of Banjaluka, causing in a great deal the increase of mixed marriages with foreigners.

Also characteristic for this period is a small number of changes in names and surnames with spouses. This can be explained by the fact that couples who were getting married after the war were fully aware of their respective national characteristics and those of their spouses. Developing national awareness didn't happen for these couples after getting married, as it did for couples that got married before the war, so they knew exactly who they were marrying and what to expect from them.

3. CONCLUSION

Up until the beginning of the war in the territory of ex-Yugoslavia, Banjaluka can be characterized as a very heterogenic environment. People of all nations that lived here had the same rights, same status and equal conditions for heterogamy, while the development of economy, increased level of education of the population, and a growing number of people living in cities, reducing the influence of tradition, were favorable for an increase of the number of mixed marriages. Traditional ethnic characteristics that have been seemingly lost and absent have started to resurface when the war broke out in ex-Yugoslavia. When the war started, ethnic relations in the regions have started to change in the general social plain. The presence of certain nations in Banjaluka has become an interference, but also mixed marriages were no longer desirable. The negative attitudes towards heterogamy, along with the displacement of Croats and Bosniaks from the territory of this municipality and the relocation of Serb refugees to Banjaluka, have contributed to a reduced number

of mixed marriages during and after the war in ex-Yugoslavia.

It is impossible not to mention here the fate of mixed marriages which were existing when the war broke out in the Republic of Srpska. Marriages where the husband was a Serb mainly remained to live in the Republic of Srpska. It was often the case that wives changed their names into Serbian ones. It was the opposite in marriages where the husband was non-Serb. Failing to be drafted into the army of the Republic of Srpska, these men were usually left without a job, which caused them to leave the Republic of Srpska. It was usually whole families that left. It wasn't rare that only the husband would leave, while the wives and children staying behind to look after their properties. After the war ended, some of these men returned, while others remained to live in their “new homelands”, most often with a “new wife”.

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SETTLEMENTS WITH UKRAINIAN POPULATION IN WIDER URBAN AREA OF PRIJEDOR

Ms. Tanja Mišlicki, MBA, Senior Assistant

Geography Study Program at the Faculty of Science, University of Banja Luka

M. Stojanovic Street, No. 2, 78000 Banja Luka, Bosnia and Herzegovina

Phone: +387 65 575314, Fax: +387 51 319142 e-mail: mislickitanja@yahoo.com

ABSTRACT

In early twentieth century, Ukrainian immigrants from southern Bukovina and western Galicia, have formed ethnic, physiognomic, and functional entity in the Municipality of Prijedor, located in North-West of Republika Srpska, specific with its characteristics in sense of anthropogeography and ethnology. Based on the archive documents, written sources and materials collected in the field, this Paper presents problems of ethno-demography development of five settlements (Orlovača, Čirkin Polje, Gomjenica, Urije, and Puharska) located in the wider urban area of Prijedor, and two settlements (Ćela and Miljakovci) partly falling under urban area.

1. INTRODUCTION

Prijedor, as a town, is an administrative and functional centre of the Prijedor Municipality (834 square kilometers), located in the West of Republika Srpska (25,053 square kilometers), and encompassing 71 settlements. Together with the surrounding centers (Kozarska Dubica, Novi Grad, Oštra Luka, Gradiška, Kostajnica ...) it makes a relatively compact space. In 1990s the urban area of Prijedor (area of 4,787 Ha) was divided for the purposes of urban planning and development, into narrower urban area, whose settlements in the administrative-territorial sense have been combined by the cadastral unit of Prijedor I (1,751 Ha, making 36.57% of total municipal area) and wider urban area, which is commonly made up of cadastral unit of Prijedor II (1,315 Hectares or 27.47%), and parts of cadastral units of Čejreka, Puharska, Ćela, Rakovac, Rizvanovic and Miljakovac, (total area of 1,721 Hectares or 35,95%).

2. SETTLEMENTS WITH UKRAINIAN POPULATION IN WIDER URBAN AREA OF PRIJEDOR

ORLOVAČA - Orlovača is located about three kilometers eastern of Prijedor, on the right bank of the Gomjenica River. It is connected with the municipal center by the highway (Prijedor - Omarska - Banja Luka). According to the census from 1961, there were 511 residents, out of which 49 Ukrainians, or 9.58%, and in year 1991, out of totally 1,105 residents, there were 41 Ukrainians, making 3.71% of total population.

Family Name	Full name of a House Owner	Number of Family Members		Year 2007					
		1963	2007	Sex		Large Age Groups			
				M	F	Up to 19	20-39	40-59	60 andover
Harasim	Harasim Stefan	-	9	3	6	2	4	3	-
Jacišin	Jacišin Slavica	-	2	1	1	-	1	1	-
	Jacišin Vlado	2	-	-	-	-	-	-	-
Kreška	Kreška Marija	-	1	-	1	-	-	-	1
Luć	Luć Stefanija	-	1	-	1	-	-	-	1
	Luć Josif	4	-	-	-	-	-	-	-
Malašić	Malašić Nikola	6	2	1	1	-	-	-	2
	Malašić Petar	-	2	1	1	-	-	-	2
Marčuk	Marčuk Vlado	-	5	3	2	2	-	2	1
Pećuh	Pećuh Petar	5	-	-	-	-	-	-	-
Muzička	Muzička Emilija	-	1	-	1	-	-	-	1
Grabovski	Grabovski Slavko	-	3	1	2	-	1	2	-
Harasim	Harasim Vasilj	7	-	-	-	-	-	-	-
Sajdak	Sajdak Ivana	-	1	-	1	-	-	-	1
	Sajdak Petar	4	-	-	-	-	-	-	-

	Sajdak Franjo	4	-	-	-	-	-	-	-
Stahov	Stahov Petar	4	-	-	-	-	-	-	-
Teljega	Teljega Mitar	-	1	1	-	-	-	-	1
	Teljega Nikola	3	-	-	-	-	-	-	-
Vavrek	Vavrek Katarina	-	1	-	1	-	-	-	1
	Vavrek Anton	-	3	1	2	-	1	2	-
	Vavrek Aleksandar	-	4	1	3	2	-	2	-
	Vavrek Nikola	4	-	-	-	-	-	-	-
Zarvanjski	Zarvanjski Tanasije	-	1	1	-	-	-	-	1
	Zarvanjski Antonija	6	-	-	-	-	-	-	-
Zombra	Zombra Aleksandar	-	4	1	3	-	2	1	1
Summary	26	49	41	15	26	6	9	13	13

Nowadays in this village live 13 families, the two of known migration origin, Harasim and Luć that immigrated around year 1905 from County Drohobič and Litina village. Other clans are of unknown origin: Kreška, Luć, Malašić, Marčuk, Mužička, Grabovski, Sajdak, Vavrek, Zarvanjski, Zombra, and Teljega.

URIJE - This settlements is located two kilometers northeast of Prijedor, that it is connected with via local road (Urije - Čirkin Polje - Prijedor). It represents a strong concentration of employment, the presence of high- profit private companies, and intensive use of space.

Family Name	Full name of a House Owner	Number of Family Members		Year 2007					
		1963	2007	Sex		Large Age Groups			
				M	F	Up to	20-39	40-59	60 and over
Beben	Beben Igor	-	3	2	1	1	2	-	-
Binjaš	Binjaš Franjo	-	5	2	3	1	2	2	-
	Binjaš Marija	-	1	-	1	-	-	-	1
Dudar	Dudar Ana	3	-	-	-	-	-	-	-
	Dudar Sofija	7	-	-	-	-	-	-	-
Komarnici	Komarnicki Filip	-	4	2	2	2	2	-	-
Krečkovsi	Krečkovski Ilija	4	-	-	-	-	-	-	-
Romančuk	Romančuk Antun	4	2	1	1	-	-	-	2
Radonjić	Radonjić (Pećuh) Marija	2	-	-	-	-	-	-	-
Romanović	Romanović Josifa	-	2	1	1	-	1	-	1
Simčišin	Simčišin Petar	4	-	-	-	-	-	-	-
Summary	11	24	17	8	9	4	7	2	4

In this settlement there are two families of known migration origin, Komarnicki (from County Turk, village Komarnik) and Romančuk (from County Ternopilj, village Luke), and the following clans are of unknown migration origin: Beben, Binjaš, and the families displaced in the last decade of the twentieth century, Simčišin, Dudar and Krečkovski.

ČIRKIN POLJE - This settlement is located about three kilometers northeast of Prijedor, crossed by local roads Prijedor - Čirkin Polje - Gornji Orlovci, and Puharska - Čirkin Polje - Orlovača. Based on the 1961 census, total population was 687, consisting of 23 Ukrainians, or 3.34%, and in the 1991 census Ukrainians made up 0.05% of total population which then was 1,996.

Family Name	Full name of a House Owner	Number of Family Members		Year 2007					
		1963	2007	Sex		Large Age Groups			
				M	F	Up to 19	20-39	40-59	60 and over
Fedoš	Fedoš Nada	-	1	-	1	-	-	-	1
Kindi	Kindi Zenjo	4	-	-	-	-	-	-	-
Mužička	Mužička Miroslav	4	-	-	-	-	-	-	-
Nidogon	Nidogon Ivan	5	-	-	-	-	-	-	-
Zombra	Zombra Dmtar	6	-	-	-	-	-	-	-
	Zombra Franjo	4	-	-	-	-	-	-	-
Summary	6	23	1	-	1	-	-	-	1

There is one family Fedoš living nowadays in this village that settled in from the neighboring place called Trnopolje of unknown origin. Other displaced and biologically extinguished families are: Kindi, Muzička, Nidogon and Zombra.

GOMJENICA - Gomjenica is located southeastern of Prijedor at a distance of around two kilometers. It is connected with urban center via local road Tomašica - Čela - Prijedor. Based on 1961 census, this settlement had 1,077 in total, out of which 33 Ukrainians, or 3.06%, and based on the 1991 census, out of total population of 2,949 there were 16 Ukrainians making 0.54%.

Family	Full Name of a House Owner	Number of FamilyMembers		Year 2007					
		1963	2007	Sex		Large Age Groups			
				M	F	Up to 19	20-39	40-59	60 and over
Bakaj	Bakaj Petar	4	-	-	-	-	-	-	-
	Bakaj Gregor	8	-	-	-	-	-	-	-
	Bakaj Stefan	5	-	-	-	-	-	-	-
Ditkun	Ditkun Vlado	-	5	3	2	1	2	2	-
	Ditkun Ivan	7	-	-	-	-	-	-	-
Kostecki	Kostecki Mihajlo	-	2	1	1	-	-	-	2
Karasi	Karasi Vladimir	-	2	1	1	-	-	-	2
Teljega	Teljega Josif	9	5	2	3	1	1	2	1
Vavrek	Vavrek Vasilj	-	2	1	1	-	-	-	2
Summary	9	33	16	8	8	2	3	4	7

There are five families living nowadays in this settlement: Ditkun (settled in in year 1905 from Zbariv County, village Lopušenica) and Karasi (from Zbaraž County, village Dobrovode), of known migration origin, while Kostecki, Teljega and Vavrek are of unknown migration origin. In year 2007 one displaced family Bakaj was reported in this village.

PUHARSKA - Puharska is located about 2.5 kilometers northern of Prijedor that is it connected with via local road Prijedor - Puharska - Great Palančište. Based on the 1961 census total population was 671, out of which 23 Ukrainians or 3.42%, and based on the 1991 census total population was 615, with 20 Ukrainians making 3.25% of total population.

Family	Full Name of a House Owner	Number of FamilyMembers		Year 2007					
		1963	2007	Sex		Large Age Groups			
				M	F	Up to 19	20-39	40-59	60 and over
Bartoš	Bartoš Nikola	-	2	1	1	-	-	-	2
Beć	Beć Ljudvig	-	4	3	1	-	2	-	2
Črnjavski	Črnjavski Antonija	4	1	-	1	-	-	-	1
	Črnjavski Mihajlo	-	2	1	1	-	-	-	2
	Črnjavski Stanislav	-	3	1	2	-	1	1	1
Doskoč	Doskoč Vladimir	-	3	1	2	-	-	2	1
Lepki	Lepki Franjo	3	-	-	-	-	-	-	-
Stahov	Stahov Ljupko	-	2	1	1	-	-	-	2
	Stahov Tomo	-	1	1	-	-	-	1	-
	Stahov Teklja	4	-	-	-	-	-	-	-
	Stahov Silvester	5	-	-	-	-	-	-	-
	Stahov Sofija	4	-	-	-	-	-	-	-
Šobot	Šobot Marija	-	1	-	1	-	-	-	1
Vavrek	Vavrek Zorica	-	1	-	1	-	-	-	1
Summary	14	23	20	9	11	-	3	4	13

There are seven families living nowadays in this settlement, as follows: Bartoš, Beć, Črnjavski, Doskoč, Stahov, Šobot and Vavrek.

MILJAKOVCI - Miljakovci is located about four kilometers southeastern of Prijedor that it is connected with via local road (Tomašica - Rakelići - Prijedor). Ukrainian families have been recorded in two hamlets of Kecman and Glamočani, and Laurin and Šamro households were displaced in the 20th century and biologically extinguished. Based on the 1961 census, total population was 734, with 28 Ukrainians or 3.81%, and based on the 1991 census out of totally 628 inhabitants, there were 5 Ukrainians making 0.79% of total population.

Family	Full Name of a House Owner	Number of Family Members		Year 2007					
		1963	2007	Sex		Large Age Groups			
				M	F	Up to 19	20-39	40-59	60 and over
Ditkun	Ditkun Mihajlo	9	-	-	-	-	-	-	-
	Ditkun Jovan	-	2	1	1	-	-	-	2
Liščinski	Liščinski Teodor	6	-	-	-	-	-	-	-
	Liščinski Vasilj	7	-	-	-	-	-	-	-
	Liščinski Tatjana	-	3	-	3	1	1	-	1
Laurin	Laurin Karolina	1	-	-	-	-	-	-	-
Šamro	Šamro Vasilj	5	-	-	-	-	-	-	-
Summary	7	28	5	1	4	1	1	-	3

There are two families living in this settlement today, as follows: Ditkun from Zbariv County, Lopušnica village, and Liščinski of unknown migration origin.

ĆELA- Ćela is located five kilometers southeastern of Prijedor, which it is connected with via road Tomašica - Rakelići - Prijedor. Based on the 1961 census total population was 1,684, out of which five Ukrainians, or 0.29%, and based on the 1991 census total population 2,147 with eight Ukrainians making 0.37% of total population.

Family	Full Name of a House Owner	Number of Family Members		Year 2007					
		1963	2007	Sex		Large Age Groups			
				M	F	Up to 19	20-39	40-59	60 and over
Lebed	Lebed Gavriilo	5	-	-	-	-	-	-	-
	Lebed Zoran	-	4	1	3	2	2	-	-
	Lebed Vasilj	-	3	2	1	-	2	1	-
	Lebed Nikola	-	1	-	1	-	1	-	-
Summary	4	5	8	3	5	2	5	1	-

There is one Ukrainian family existing in this village today, that is family Lebed originating from Brodi County, Batkju village.

3. CONCLUSION

The Paper analyzes ethno-demography development of seven settlements (Ćirkin Polje, Orlovača, Urije, Gomjenica, Puharska, Ćela, and Miljakovci) located in the wider urban area of Prijedor, wherein was recorded Ukrainian population during year 2007.

The largest concentration of Ukrainians in Prijedor centre was recorded in year 1931 (1,122 Ukrainians), and thereafter this number has been continuously reducing. In the period from 1963 thru 2007, the number reduced for 37.5%. During the census conducted in the field in year 2007, there were 108 Ukrainians living in 43 households recorded in wider urban area. The migrations of population represented a key factor to the transformation of settlements, particularly in socio-economic sense, as well as main factor in the biological dynamics leading to the closure of many households and rapid downsizing of total Ukrainian population.

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DEMOGRAPHIC DESERTIFICATION IN RURAL AREAS – A CHALLENGE TO THE INFORMATION SOCIETY

MOREIRA, Graça⁽¹⁾; SERDOURA, Francisco⁽¹⁾; RIBEIRO, Jorge⁽²⁾

⁽¹⁾Prof. at FAUTL; Researcher at CIAUD; gmoreira@fa.utl.pt; fs@fa.utl.pt

⁽²⁾Prof. at FAUTL; Researcher at CERENA; jribeiro@fa.utl.pt

ABSTRACT

This paper presents a part of a study that is being developed about the magnitude and potential impact of the information society development and the need of reorganisation of public services in a region going through social desertification in the south of Portugal – the Alentejo region.

In order to know the mechanisms that led to the present situation, the region is analysed under different points of view as the evolution of local and regional economy, the demographic evolution and local policies.

With the intention to evaluate the potential of the region, a linear regression model is used to assess the bias of population trends, using data from the past 50 years.

Using the national rules about the location and sizing of the public services like primary schools, sport pitches, health services, etc. the evolution of the population of several municipalities is analysed to evaluate the potential of growth or decrease and of use of the public services at the level of the municipalities and “freguesias” (communities).

It is noticed that many of the activities and buildings must be adapted or modified, in what concerns its use and/or capacities, if the trend of the evolution of the population remains unchanged.

It is a target of the reorganization of the different parts of the territory, as well as the existing public services, going through a process of fast desertification to regenerate those that show potential for recuperation.

The skills of the information society are very important to increase the local economy, to support the reorganization of the territory and to advertise new uses of the public services. This analysis is made by the study of the regional and municipalities websites recently developed.

1 INTRODUCTION

This paper analyses the possible positive impact of information society in a large rural area in a region of the interior of Portugal with problems of environmental and social desertification. The traditional agriculture of this area created conditions enabling the acceleration of the process of environmental desertification when the fields were abandoned, due to the rural – urban migrations characteristic of the second half of the XX century in Portugal.

These migrations originated the social desertification, through the disappearance of the existing active population, and on a longer term, making more difficult any economic development that requires local labour.

The study analysed has been elaborated according to the concepts of sustainable development within its three components: environmental, economic and social.

The south interior of Portugal, the Alentejo, is a vast agricultural area producing cereals, olive trees, cork trees and holm oaks, Mediterranean agriculture that once abandoned expose the soils to important erosive mechanisms. This region had also some important mines of iron, copper and zinc whose production stopped in the 70's due to the decrease of mineral commodity prices and to the depletion of mineral reserves.

Since the 50's of the XX century the region has been losing population in favour of the metropolitan areas, mainly the Lisbon area, presenting today a population quite aged that keeps a traditional agriculture, mixed with big domains with a profitable agriculture that requires few labour.

The economic changes that took place in the country and in the area are politically framed by the change of regime in the mid 70's of the last century and by Portugal joining the European Union in 1986 along with the socio economic transformation that the country entered (Rosa, 2002) (2). In the region a new big copper mine opened in the beginning of the 80's in the municipality of Castro Verde slightly increasing its population calling a few people from other parts of the country.

2 FRAMEWORK

Considering the evolution of the population in the region, it is studied the location and size of some public services such as schools and social services, aiming the evaluation of the distribution according to the previous population, because during the second part of the 70's and the 80's a big effort to increase the offer of public services was made by local authorities with the intention of keeping and if possible increasing the population, which didn't happen as can be seen now. The local governments of the region have developed active public policies to increase the quality of life in most of the villages and towns of the region supported by the European Funds that Portugal has received since middle 80.

On the other hand the central government had passive policies when supporting some investments without any critical point of view and while not having any control over the number of schools but being in charge of the teachers salaries, allowed some of them to keep very few pupils.

Only in last 5 years schools with less than 10 pupils have been closed.

A linear regression model was used when the population data was decreasing to forecast the number of inhabitants in the near future (2011 and 2021) and according to the unchanged rules reorganise the public services.

At the same time to evaluate how the implementation of information society in the region namely by central government and city councils allows the population to access some public services using internet.

It is also investigated how some buildings have new uses by other services despite having been built with other purposes like primary schools..

3 CASE STUDY

The region analysed is the district of Beja in southeast of Portugal that is divided in 14 municipalities with very different population size but where all of them lost population since 1950 (fig.1).

3.1 socio economic evolution

This situation was related to the crisis of the agriculture sector, partly because of natural crisis and environmental problems, partly because the population tried to find better economic support in the industry that was in development in the Metropolitan Area of Lisbon. Even when a new mine was opened, as in Castro Verde in the 80's, the trend remains the same. This situation is not a simple rural urban migration but one of a whole region including its capital, the municipality of Beja, where the tertiary jobs are more important, lost population. In 1930 the population was 242687, twenty years later in 1950, was 291024 and fifty years later in 2001 the population of the district was 135105, the projection to 2011 is 88136 and to 2021 is 54798, in 70 years the probable rate is -81%.

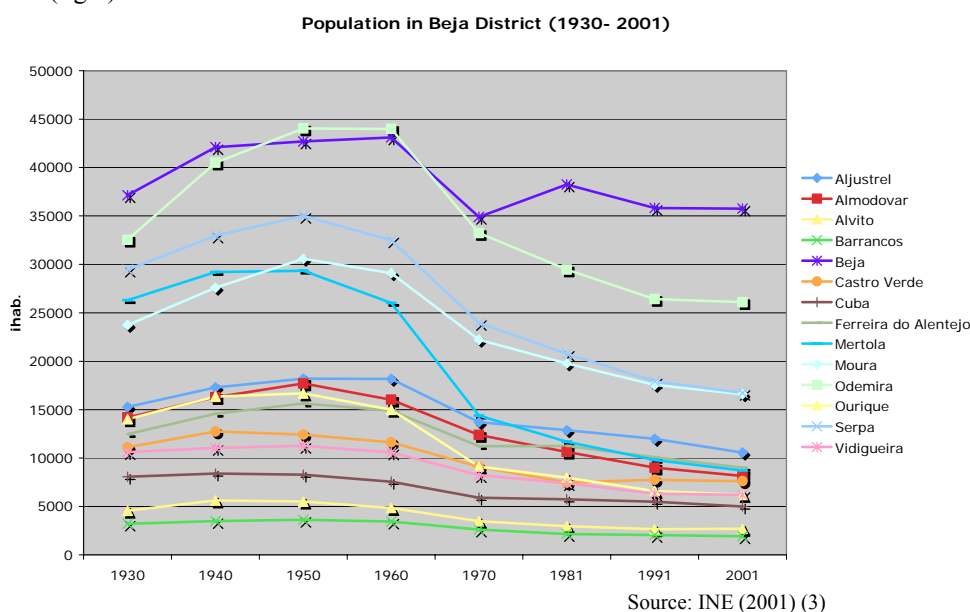


Figure 1: Evolution of the population in the area

Municipalities	Primary schools	
	2001	2011
Aljustrel	7	6
Almodovar	13	5
Alvito	2	1
Barrancos	0	0
Beja	21	20
Castro Verde	16	1
Cuba	3	2
Ferreira do Alentejo	10	5
Mertola	21	5
Moura	6	5
Odemira	51	13
Ourique	6	3
Serpa	7	3
Vidigueira	7	4
total	170	73

Fig.2 Example of the projection of primary schools to 2011 in the District of Beja

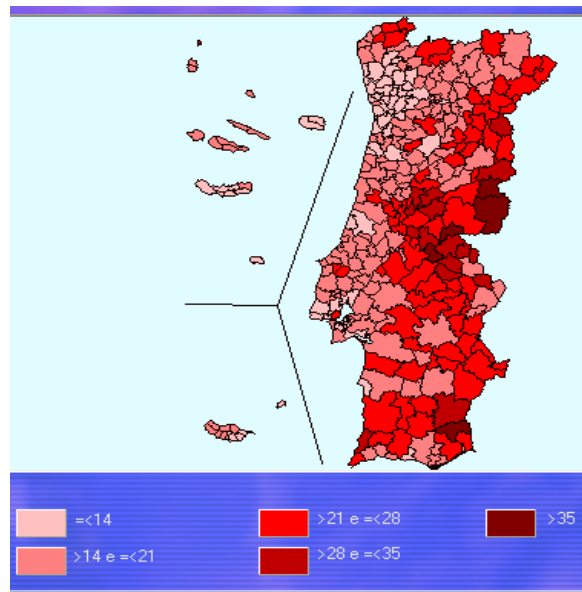


Fig.3 Percentage of the population in Portugal with + 65 years old in 1998

3.2 evaluation of the situation of schools

When it is evaluated the situation of the primary schools in the district it is clear that they are now very badly distributed according with actual distribution of the population. During the second part of the XX century the effort was to alphabetise (4 years of school) the population in general and with special care to the children. As the transports were poor the distribution of schools in the territory was very important. So the larger, in area, municipalities had a big number of schools even when they don't have so much children. The number of primary schools was 170 in 2001 and the needs to the population using the projection of population in 2011 is 73 (fig.2) (DGOTDU, 2002) (1). This projection also considers the new possibilities of school transports.

In this work it is also analysed the possibilities of a new use of some of the buildings closed by the reorganization of the school system. When it is necessary to close some buildings the best ones were chosen to install the service which is even the case when schools must be closed in the same town or village.

As the development of the social support to elderly people, a very important group in the region (Fig.3), is not so well developed as the support to children, because the more recent change of the age-structure, some buildings can be and have been adapted to day centres to the old people of the village or to new kind of social support.

3.3 Information Society

It is in this demographic situation that in 2004 was created a program to implement the development of information society in the region (Beja Digital) (4) and at same time were opened public places supported by the central government and ruled with the support of the municipalities to allow the population who doesn't have

computers with internet at home to have access to this service.

On the other hand many of the public municipal services were accessed by Internet namely some social services like the social support to children and elderly people.

4 CONCLUSION

After this study can be concluded that:

- The social desertification is very serious in this part of the country, not only in rural areas with the loss of jobs but also in the town with city councils.
- The reorganization of public facilities can help new developments but until now not able to change the trend of the evolution of the population.
- The population has conditions to access some civic services by Internet and that can make their lives easier.
- The desertification is a very serious handicap to the economic development and in some places some basic services are disappearing.

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DECLINE OF FERTILITY IN CROATIA

Ivo Nejašmić

University of Zagreb
Faculty of Science
Department of Geography
Marulićev trg 19/II, 10000 Zagreb, Croatia
[Tel: + 385 1 4895431](tel:+38514895431); fax: + 385 1 4895440
e-mail: nejasmic@geog.pmf.hr

ABSTRACT

The paper examines changes in the dynamics of fertility in Croatia. The analysis covers the period from 1850 to 2007; however the emphasis is placed on the period after WWII, and especially on current happenings and processes. The specificities of the fertility transition are indicated, and causes of this change are explained. The author established that all regions (counties) in Croatia have a low level of fertility. Croatia is characterised by a “lowest-low fertility”, which together with a negative migration balance is leading to the diminution of Croatia’s overall population.

1 INTRODUCTION

The fertility is a positive component of natural population dynamics. It is of prime importance for the humankind and human survival. Through long periods of development, human populations have survived and numerically increased thanks to hard labour that led to a general progress, but also due to maximum achieved fertility, which fell below its full potential only as a result of mortality, sterility or diseases among women of childbearing age. There is no doubt that the same happened in the framework of the current territory of the Republic of Croatia, whose population, through long and turbulent centuries, not only survived, but also numerically increased.

During the 20th century fundamental changes occurred in the fertility of the population on the territory of Croatia. In a relatively brief period, the process of demographic transition, in regard to fertility, was completed (Gelo, Akrap, Čipin, 2005). What changes took place in the dynamics of fertility? Were there any specificities in this process, and what were their causes? Do the differences exist in the spatial distribution of birth rates and, if so, how significant are they? This paper will attempt to answer these and similar questions. And this brings us to the primary objective of the paper – to contribute to our scientific comprehension of the

basic traits of fertility in Croatia. The analysis covers the period from 1850 to 2007. However, the emphasis will be placed on happenings and processes after WWII, and especially on current conditions.

2 CHANGES IN THE DYNAMICS OF FERTILITY

2.1 Fertility from the mid 19th to the mid 20th century

Table 1: Crude Birth Rate (CBR) and Total Fertility Rate (TFR) of the Population of Croatia, 1850-1945 (current territorial extent)

Year	CBR	TFR
1850	39.7	-
1857*	47.2	6.2
1865	44.2	-
1869*	42.6	5.8
1875	42.2	-
1880*	41.1	5.7
1885	44.3	-
1890*	38.6	5.9
1895	42.4	-
1900*	40.0	5.6
1905	38.4	-
1910*	38.2	5.4
1915	23.8	-
1921*	35.6	5.0
1925	34.0	-
1931*	31.6	4.2
1935	27.2	-
1941	20.8	-
1945	15.4	-

*Year of Census;
Source: Gelo, 1987

Until the 1880's Croatia was characterised by a traditional system of demographic reproduction. This was a period of high (non-economic) crude birth rates, high death rates, and (for the most part) low natural growth. The period of demographic transition, or modernisation of the demographic reproduction system, began in the 1880s. At that time, specifically, the crude death rate fell under 30 per thousand. However, a high crude birth rate was maintained for a few more decades.

After the First World War a significant decline in the crude birth rate took place. Besides general factors (as for instance decline of infant mortality) that had led to a change in the attitude towards the number of children in families, this decline was influenced by the war (especially by casualties in the younger population), as well as by a delayed effect of intense emigration in the first decade of the 20th century (i.e. a decrease in the population contingent of childbearing age, and thus a reduction in the number of births). During the 1930's a transitional period in fertility began. The crude birth rate fell below 30 per thousand (to 29.5 per thousand in 1933) and continued to rapidly decline (to 22.8 per thousand in 1940).

We can confirm that in the period from the mid 19th century to WWII a significant reduction of the birth rate took place on the territory of the Republic of Croatia. Together with penetration of capitalism in the Panonian rural regions (Moslavina, Slavonia), there appears limitation of children number in family ("one-child" system).

2.2 The Period 1946–2007

After WWII, in Croatia (just as in other countries that had been hit by war-time adversities), there was an interval of compensational fertility (the "baby boom"), which lasted until 1954. In this period, the average crude birth rate was about 23 per thousand (1946–1953). Yet by 1958 the Croatia's population entered into a late transitional sub-phase. The birth rate fell to under 20 per thousand (to 19.0 per thousand).

Let us consider some other data. In 2001 there were 40,993 live births in Croatia, whereas in 1950 there had been 95,500, although the population was larger by 660,000 in 2001 than in 1948. Moreover, the number of births in 2003 was only 39,668. Before this, a number of live births less than 40,000 occurred only in the distant year 1726, when 37,748 children were born. Yet at that time the territory of present-day Croatia had nearly five times less inhabitants than today (an estimated 892,600) (Gelo, Akrap, Čipin, 2005). The effect of divergent development of the total population and of the number of live births is reflected in the crude birth rate, which in the period 1950–2001 declined two and a half times – from 24.8 per thousand to only 9.2 per thousand in 2001.

The total fertility rate (TFR), which is the most widely used aggregate indicator of fertility (and is also a good approximation of the number of children in families), shows a very significant decrease. In 1961 this rate was 2.15, which assured at least (theoretically) the basic reproduction. However, already in 1965 Croatia found itself among the first countries of the world that registered total fertility rates under 2.1 (UNPD, 2003). In 2001 the TFR declined to 1.37, and as a result Croatia's population entered into the zone of "lowest-low fertility" (Kohler, Billari, Ortega, 2001).

Table 2: Crude Birth Rate (CBR) and Total Fertility Rate (TFR) in Croatia 1946-2007

Year	CBR**	TFR***
1946	19.1	-
1947	22.3	-
1948*	23.5	3.0
1949	25.3	-
1950	24.8	-
1951.	22.6	-
1952.	23.5	-
1953*	22.9	2.7
1957	20.0	-
1961*	17.8	2.2
1965	16.7	-
1971*	14.6	2.0
1975	14.9	-
1981*	14.7	1.9
1985	13.5	-
1991*	10.8	1.6
1995	11.2	-
2001*	9.2	1.4
2002	9.0	-
2003	8.9	-
2004	9.1	-
2005	9.6	-
2006	9.3	-
2007	9.4	-

*Year of Census

**Source: State Bureau of Statistics; From 1998 the data was collected and processed without the contingent of external migrants.

*** Calculated by the author by tallying age-specific fertility rates.

The graphic depiction (Figure 1) shows that from the beginning of the 1950's, when a compensational fertility was still effective, to the end of the 1960's, the reduction of the crude birth rate was practically linear. By the beginning of the 1970's the birth rate stabilized, which was linked to the fact that the large generation born in the post-war

compensational period reached the childbearing age (the so-called echo effect). However this situation was only temporary, since already by the beginning of the 1980's the birth rate entered into a period of further reduction. Around the middle of 1990's there was a slight increase in the birth rate, but this was also a temporary phenomenon. It involved an increased inflow of the more numerous offspring from the "baby boom" generation into the population of childbearing age (the so-called secondary echo effect).

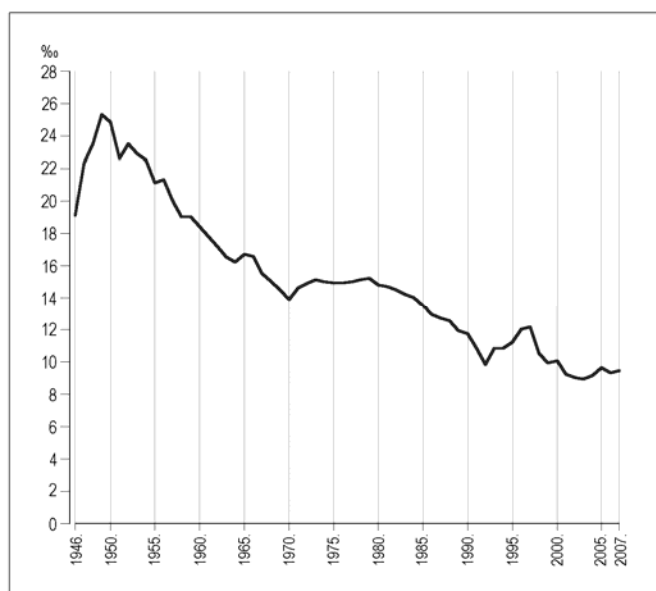


Figure 1: Crude Birth Rate (CBR) in Croatia 1946-2007

In 1985 Croatia entered into the post-transitional stage of its demographic development. The crude birth rate fell under 14 per thousand (to 13.5 per thousand), and from that time on it has shown a distinct declining trend (figure 1). From this we can infer that the entire transitional process in regard to fertility in Croatia lasted for only half a century, from 1933 to 1985, and this period is twice or three-times shorter than in most European countries (cf. Wertheimer-Baletić, 1999).

As it is known, the post-transitional stage corresponds primarily to the post-industrial society (Bongaarts, 2002). However, in Croatia's case, it is obvious that demographic changes preceded considerably ahead of changes in general development. Essentially this was a situation of "quasi-transition", of induced transition, brought on by specific factors that considerably accelerated "normal" demographic dynamics (Wertheimer-Baletić, 1992). The explanation here is very simple. The modern demographic picture of Croatia was strongly influenced by external factors from previous periods (which theories of demographic transition neglect), such as the continuous and intense emigration, as well as heavy war losses. It has been estimated that in the period 1880–2001 the negative external migration balance included 1,194,000 persons, which amounted to 33.5% of the average

population of Croatia in that period, and to 40.7% of the country's cumulative natural growth (Nejašmić, 2005). Thus in a time-span of twelve decades Croatia lost, on the average, 10,000 people a year, mainly the persons of younger childbearing age. As for war losses during the 20th century, it has been estimated that direct demographic losses (war mortality) amounted to 427,000 persons, and to about 193,000 less births (losses in the fertility due to wars) (Nejašmić, 2008). Undoubtedly this was a great loss for a relatively small population. Yet we must bear in mind also the long-term (delayed) destructive results of wars, which were reflected in the age structure of the population. Eroded war generations were noticeable on the population's age-sex pyramid for a long time after the wars and provoked negative effects in particular contingents of Croatia's population, especially in its (bio)reproductive dynamics.

A diminishing of fertility is usually closely linked to a general socio-economic development, which means to the industrialization and urbanisation (Haines, 1979; van de Kaa, 1987; Mason, 1997). In the case of Croatia this involved also an intense migration of the population, primarily from the villages to the cities, which considerably influenced and reduced the fertility – in two ways. On the one hand, such a change in the social environment led to abandoning the traditions and to the population's adaptation to new conditions. On the other hand, the rural exodus depleted the age structure of the rural population, and so villages could no longer carry out their role of being "demographic incubators". The main source of (bio)reproduction therefore irreversibly shifted from the villages to the cities, although the later were not prepared for such a development. Moreover, municipal crises, a lack of housing, increased costs of living and other factors acted to decrease the fertility in the urban population, and thereby also the fertility of total population (Oliveira-Roca, 1989).

Since 1996, the governments have implemented a series of pronatality policy measures. But as the demographic situation in Croatia has continually been less and less favourable, the expected results evidently failed to occur.

3 REGIONAL CHARACTERISTIC OF FERTILITY

In all Croatian counties, levels of fertilities are low (table 3). There is not one county in Croatia in which the crude birth rate surpasses 14 per thousand and which, given the current mortality (11.5 per thousand was the average crude death rate in 2001-2003), could assure even a basic reproduction of its population.

Variations in the TFR range between 1.0 and 1.6, which means that no county in Croatia can assure the renewal of its present generations.

Table 3: Crude Birth Rate (average 2001-2003) by County and Total Fertility Rate 2001.

County	CBR	TFR*
Zagreb	9.4	1.3
Krapina-Zagorje	8.7	1.3
Sisak-Moslavina	8.2	1.3
Karlovac	7.6	1.2
Varaždin	9.3	1.4
Koprivnica-Križevci	9.3	1.4
Bjelovar-Bilogora	8.7	1.3
Primorje-Gorski kotar	7.5	1.0
Lika-Senj	8.0	1.4
Virovitica-Podravina	9.2	1.4
Požega-Slavonia	9.8	1.5
Brod-Posavina	9.9	1.6
Zadar	9.6	1.5
Osijek-Baranja	9.0	1.4
Šibenik-Knin	8.3	1.4
Vukovar-Srijem	9.7	1.5
Split-Dalmatia	10.2	1.5
Istria	7.6	1.1
Dubrovnik-Neretva	9.7	1.5
Međimurje	10.8	1.6
City of Zagreb	9.1	1.2
Croatia	9.1	1.4

Source: State Bureau of Statistics, Zagreb

*Calculated by the author by tallying age-specific fertility rates

On the level of the smallest administrative-territorial units, i.e. communes and city administrations, differences in fertility are, as expected, greater than between counties. Yet it should be stressed that these differences all enter into the framework of low crude birth rates. Specifically, only in fifteen administrative-territorial units (from a total of 547) did crude birth rates amount to 14 per thousand or more (according to average values for 2001-2003). These were mainly suburban municipalities near the largest cities, in which higher crude birth rates were largely the result of immigration of younger age groups of the population. Communes with low crude birth rates are very numerous in the interior of Istria, in Gorski Kotar, Lika, Žumberak, Kordun, Banovina, the Dalmatian Hinterland, and on the islands.

4 CONCLUSION

The process of fertility transition lasted for only half a century, which represents one of the specificities in the

development of Croatia's population. Moreover, Croatia was one of the first countries in the world to register a decrease in its TFR, to under 2.1. By the beginning of the 1990's, a marked reduction of the crude birth rate, together with a moderately increasingly crude death rate, led to negative population growth. Since that time, (bio)reproductive depression is increasingly profound. As a result, in all Croatian counties birth rates are low, and the process of spatial homogenization on the level of low birth rates is pronounced. The situation of "lowest-low fertility", in circumstances of more intense emigration than immigration, inevitably is leading to a reduction of the total population of Croatia.

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THE STUDY OF "ADMINISTRATIVE SURVIVORS" AMONG SLOVENE CENTENARIANS, NONAGENARIANS AND OCTOGENARIANS

Apolonija Oblak Flander

Statistical Office of the Republic of Slovenia
Vožarski pot 12, 1000 Ljubljana, Slovenia
Tel: +386 1 2340882; fax: +386 1 2340860
e-mail: apolonija.oblak@gov.si

ABSTARCT

Slovenia has been faced with the intensive increase in the number of octogenarians, nonagenarians and especially centenarians in the population since the mid-1990s which is also a result of more numerous generations born after the 1st World War¹. The data analysis since the 1980s has shown that the emergence of centenarians is not a new phenomenon in Slovenia, however there is a question of actual longevity in Slovene society; or is it possible that the growth of the number of centenarians (and also of nonagenarians and octogenarians) is only a fact of so-called "administrative survivors"² in the administrative records, which represents the basic data source for the population statistics.

The actual existence of the oldest person in Slovenia is verified yearly at the administrative units. At the Statistical Office of the Republic of Slovenia the existence of centenarians, nonagenarians and octogenarians, the data on which are disseminated by population statistics, was proved by linking data of individual records stored in selected databases – individual records from the Central Population Register, which represents the source for the population statistics, were linked with data on people receiving pensions. For checking the data quality also data collected with the 2002 Census of Population were used.

The analysis of the data on the basis of data-linkage of various data sources as of 31 March 2002 and for 2005, 2006 and 2007 showed that in Slovenia the most problematic data seem to be for centenarians and partly also for nonagenarians. On the basis of several analyses estimations were made that the centenarians in the quarterly population statistics are overestimated by about 15-20% and the nonagenarians by about 2-3%.

¹ See also M. Šircelj: *Rodnost v Sloveniji od 18 do 21. stoletja*, pp. 55-56.

² Under this expression the persons who haven't been removed from the official administrative sources (i.e. CPR) but should be due to emigration, death, etc., are considered, which are used as a source for the population statistics.

1 WHY STUDY CENTENARIANS, NONAGENARIANS AND OCTOGENARIANS?

Due to the ageing of populations in the developed countries and the increase in the number of the persons aged 80 or over there is a tendency among national statistical institutes to disseminate also the population by the oldest age-groups (90 or over, 100 or over) and even more, to cross-tabulate these age groups with socio-economic topics. It is well known that the uncertainty and unreliability of the population estimates and population counts are higher for the oldest age-groups.

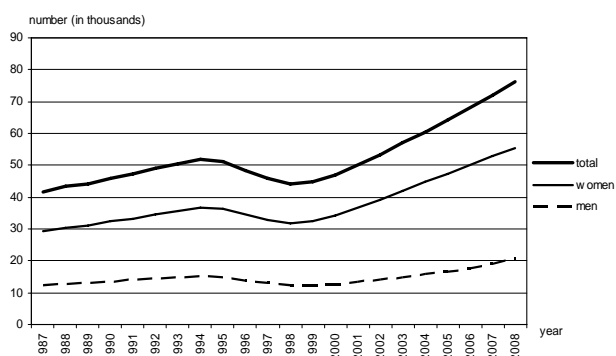


Figure 1: *Population aged 80 year or over in Slovenia by sex, 1987-2008 (31 December)*

Sources: Statistical Office of the RS, *Population of Slovenia by single-age groups*, data sets on population of Slovenia for the 1987-2008 period as of 31 December.

Therefore at Slovene national statistical institute the analysis of potential "administrative survivors" in the age group 80 or over was done in order to improve the quality of the population count.

Among other reasons (mostly connected to the study of longevity), the centenarians (and also nonagenarians) represent a small population group but are one of the fastest growing population groups in more or less all developed countries. James Vaupel of the Max Planck Institute for Demographic Research and Bernard Jeune of the University of Southern Denmark found out that »the number of persons in a country achieving the century mark

in a given year is about double the number achieving that milestone 10 years earlier, and that it would seem, by extension, that the number of centenarians in a country doubles with each decade»³ (Vaupel, Jeune, 1995). Slovenia is not an exception in this context. At the 2002 Census of Population centenarians represented 0.003% of the total population of Slovenia and at the end of 2008 0.008%. Slovenia has been faced with an intensive increase in the number of centenarians in the population since the mid-1990s. Between 1995 and 2007 the average yearly growth of the number of centenarians was 14.4% and has been constant with the exception of the year 2000. In the last ten years alone the number of centenarians increased by threefold (and has not only doubled!), the recorded average population growth of centenarians was 13.1%, while it was 0.2% for the whole population. As in other countries also in Slovenia the growth of the number of centenarians is mostly female dominated. »This disproportionate share of women aged 100 and over occurs because death rates are higher for men than women at virtually every age. Although both women and men have experienced dramatic improvements in mortality at the oldest ages over the last few decades, gains for males have typically been smaller than those for females« (Vaupel, 1997).

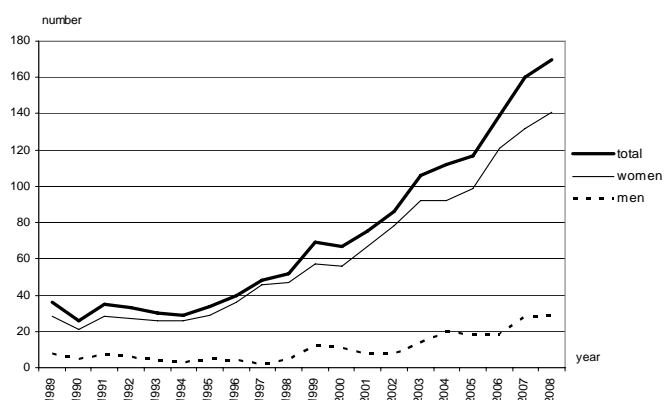


Figure 2: Centenarians in Slovenia by sex, 1989-2008 (31 December)

Sources: Statistical Office of the RS, Population of Slovenia by single-age groups, data sets on population of Slovenia for the 1989-2008 period as of 31 December.

The data analysis since the 1980s has shown that the emergence of centenarians is not a new phenomenon in Slovenia; however, there is a question of actual longevity in Slovene society. The research question was: Is it possible that the growth of the number of centenarians (and also of nonagenarians and octogenarians) is only a fact of so-called "administrative survivors" in the

³ This assertion was based on the data from 10 European countries and Japan.

administrative records, which represents the basic data source for population statistics?

A comparison with other countries on the emergence of centenarians was difficult since statistics on the age groups over 100 years of age have been introduced in the statistical dissemination in many countries only in the last decade. In literature and on websites the estimations and not the real data on centenarians are predominant. A valuable source of data on centenarians is the Kannisto-Thatcher database⁴. For a more precise comparison whether the Slovene growth of the number of centenarians is really that extreme, the example of the growth of the number of centenarians in Denmark was taken. Denmark seemed to be suitable for this comparison as Denmark and Slovenia are in the group of countries with a wide use of administrative sources for statistical purposes.

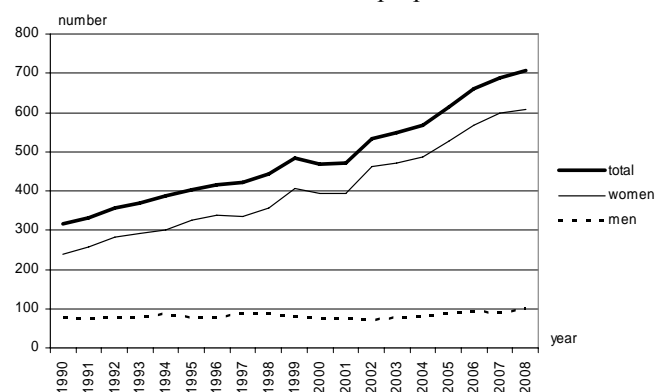


Figure 3: Centenarians in Denmark by sex, 1991-2008 (1 January)

Source: Statistics Denmark, URL: <http://www.dst.dk/HomeUK.aspx>. (Cited on 26 October 2008)

Data analysis for Slovenia and Denmark in the 1999-2008 period (as of 1 January) showed that the low average annual growth of the population is significant for both countries (0.1% in Denmark and 0.2% in Slovenia), while the average annual growth of centenarians was much higher (4.4% in Denmark and 13.1% in Slovenia, respectively). The average annual growth of the number of centenarians was lower in Denmark than in Slovenia but the growth of the number of centenarians is more intensive than the growth of the population in both countries.

Although the population of Slovenia, according to the baseline variant of the EUROPOP2008⁵ projections, will

⁴ Kannisto-Thatcher Database on Old Age Mortality at the Max Planck Institute for Demographic Research. URL: http://www.demogr.mpg.de/data_bases/ktadb/introduction.htm. (26 October 2008)

⁵ Baseline variant of the Eurostat projections of the population for Slovenia by sex and age, 2008-2060, EUROPOP2008. SI-STAT data portal of the Statistical Office of the Republic of Slovenia. URL: http://www.stat.si/pxweb/Database/Demographics/05_population (Cited 13 July 2009).

be increasing only until the beginning of 2020 and then start to decrease, the number of centenarians is projected to grow until the end of the period for which the projection was made (see Figure 4). The number of centenarians will be increasing rapidly until 2061 with two slight drops in 2016-2020 and 2046-2047 periods due to the lower number of children born during the 1st and the 2nd World War. The number of centenarians in Slovenia would, according to the baseline variant of the abovementioned projections, from 170 (1 January 2009) rise by almost 2000% until 2061. For the beginning of 2061 the number of centenarians in Slovenia is projected to be 3,297, among them 78.7% women.

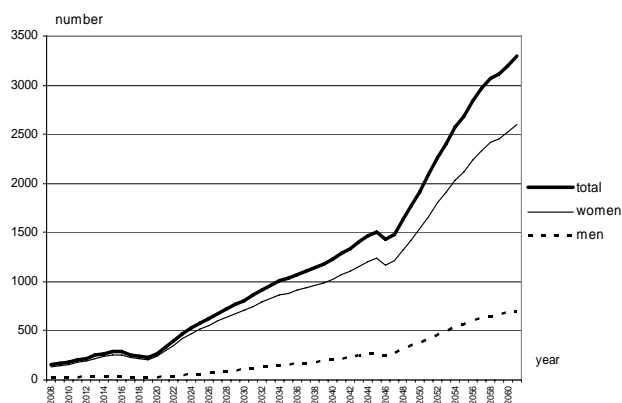


Figure 4: Centenarians in Slovenia by sex, baseline variant of the EUROPOP2008 Projection, 2008-2061 (1 January)

Source: Baseline variant of the Eurostat projections of the population for Slovenia by sex and age, 2008-2060, EUROPOP2008.

2 THE NUMBER OF CENTENARIANS, NONAGENARIANS AND OCTOGENARIANS IN SLOVENIAN STATISTICS – THE REFLECTION OF THE REALITY?

Since the last Census of Population and Housing in Slovenia in 2002 was conducted on the basis of a combined method (data partly obtained from administrative and statistical sources and in addition field enumeration was conducted), the census data are very valuable and offer a unique opportunity for the quality check of the administrative sources used for population statistics in Slovenia. For the census reference date 31 March 2002 in Slovenia two datasets of population data were published – the population data from the census count and the data on population obtained from the administrative sources only.

In the census data 55 centenarians (among them two persons with unknown citizenship) and in the quarterly population statistics 75 centenarians were found (among them two persons with foreign citizenship). In general, it could be concluded that the majority of the difference in the number of centenarians in the census and quarterly population statistics could be explained by methodological differences. At the 2002 Census of Population and

Housing the concept of one year usual residence was implemented, while in the quarterly population statistics a person was included in the population on the day they registered residence in Slovenia (regardless of the length of actual stay in the country). Therefore the recorded difference (and explained to the public) in the total population between the census and quarterly population statistics was 1.5% in favour of the quarterly population statistics. But the difference in the number of centenarians recorded at the census and in quarterly population statistics was 26.7% in favour of the quarterly population statistics. This raised a question of what has been happening in the quarterly data on population.

Since the absolute number of centenarians in Slovenia is small, data analysis and quality check was extended also to the number of nonagenarians and octogenarians. The difference recorded between census data and quarterly population statistics for these two age groups together was even lower (0.9%) than for the population in total (1.5%). The difference was bigger in the age group 90-99 (2.1%).

Table 1: Centenarians – comparison of figures from the Census of population 2002 and quarterly population statistics for selected age groups, 31 March 2002, Slovenia

Data source and age group	Number	Diff. (in %)
Census of population - total population	1,964,035	1.5
Quarterly population statistics - total population	1,994,861	
Census of population – centenarians (population aged 100 or over)	55	26.7
Quarterly population statistics – centenarians (population aged 100 or over)	75	
Census of population - population aged 80 or over	50,570	0.9
Quarterly population statistics - population aged 80 or over	51,044	
Census of population - population aged 80-99	50,515	0.9
Quarterly population statistics - population aged 80-99	50,969	
Census of population - octogenarians (population aged 80-89)	43,616	0.7
Quarterly population statistics - octogenarians (population aged 80-89)	43,927	
Census of population - nonagenarians (population aged 90-99)	6,899	2.1
Quarterly population statistics - nonagenarians (population aged 90-99)	7,042	

Sources: Census of Population, Households and Housing in Slovenia in 2002, Statistical Office of the RS; Population of Slovenia, 31 March 2002, Rapid Reports, Statistical Office of the RS.

From Table 1 it is evident that the difference in the number of population from the 2002 Census and quarterly population statistics is higher for higher age groups - nonagenarians and centenarians, while the difference in the number of octogenarians is even lower than for population in total.

The lower difference could be explained with the stability of the population at higher ages, if we talk from the methodological point of view. Not many people aged 80-89 enumerated in the 2002 Census (and present also in the CPR) were at the stage of data processing excluded from the population (for example due to long-term emigration). Of course, for some it was found with the field enumeration that they don't actually exist on the territory of Slovenia due to emigration in the past, due to death, etc. The difference in the number of population between the census and quarterly population statistics among nonagenarians and especially centenarians seemed to be most likely due to errors in the CPR.

3 DATA-LINKAGE – THE METHOD USED TO CHECK THE ACTUAL EXISTENCE OF PERSONS (INHABITANTS OF SLOVENIA) ON THE TERRITORY OF SLOVENIA

To check the actual existence of persons (inhabitants of Slovenia) aged 100 years or over and in addition of persons 80 years old or over (separately for octogenarians and for nonagenarians) the data-linkage among various databases was used.

Firstly the comparison of individual data in the 2002 Census and in quarterly population statistics was done, since both surveys refer to the same reference date (31 March 2002). The advantage of this comparison was that the census was conducted on the basis of the combined method – before the census a pre-census database was established, in which the frame of persons to be enumerated at the census on the basis of the CPR data was created. To the persons in the pre-census database also some attributes from the CPR and other administrative sources were added. Persons included in the pre-census database were in addition contacted with field enumeration (door-to-door interviews) at the time of the census count. With this action for all persons in the CPR information was collected whether they live at the address as registered in the CPR, whether they are present on the territory of Slovenia or whether the person died, emigrated, etc.

The disadvantage of the comparison with the help of the data-linkage was that the comparison of individual records was possible for Slovene citizens and for persons with unknown citizenship only, since data on foreigners for quarterly population statistics were only available in aggregated form to the Statistical Office of the Republic of Slovenia at that time.

At the 2002 Census there were no centenarians with foreign citizenship but two were with unknown citizenship, while in the quarterly population statistics there were two centenarians with foreign citizenship. For example, among nonagenarians and octogenarians the number of foreigners was higher: at the 2002 Census among 43,616 octogenarians 210 were foreigners but they represented only 0.5% of all octogenarians, and furthermore for 95 octogenarians counted in the population of Slovenia the citizenship was unknown. In quarterly population statistics there were 242 (0.6%) foreigners among octogenarians. Among 6,899 nonagenarians at the 2002 Census 35 were foreigners and they represented 0.4% of all nonagenarians. There were further 27 persons with unknown citizenship, while in the quarterly population statistics there were 66 (9.4%) foreigners among nonagenarians. See Table 2.

Table 2: Centenarians, nonagenarians and octogenarians – data-linkage of the 2002 Census and quarterly population statistics for Slovene citizens and population with unknown citizenship, 31 March 2002

Statistical survey	Population				Linked records*	Non-linked records
	total	Slovene citizens	foreigners	unknown		
Centenarians						
Census of population	55	53	0	2	53	20
Quarterly population s.	75	73	2	0		
Nonagenarians						
Census of population	6,899	6,837	35	27	6,832	147
Quarterly population s.	7,042	6,976	66	0		
Octogenarians						
Census of population	43,616	43,311	210	95	43,226	459
Quarterly population s.	43,927	43,685	242	0		

*of population - citizens of the RS and persons with unknown citizenship

Sources: Dissemination database of the Census of Population, Households and Housing in Slovenia in 2002, Statistical Office of the RS; Population of Slovenia, 31 March 2002, Rapid Reports, Statistical Office of the RS.

Among centenarians 53 records linked. Two records couldn't link because there were no records of persons with foreign citizenship in the database of individual records for the quarterly population statistics. So of total 73 individual records among centenarians 20 did not link. Among nonagenarians 147 and among octogenarians 459 records did not link.

Who are the persons who were not linked in the process of data-linkage?

To check who were the persons aged 80 years or over on the census reference date and were not found in the census but were found in the quarterly population statistics, data-linkage of non-linked records with the data on persons for whom information was collected with field enumeration at the 2002 Census that they had died, were abroad, were unknown at the address, etc., was conducted.

Among all **centenarians** in the quarterly population statistics as of 31 March 2002, the persons for whom it was found at field enumeration that they had died, were living abroad or were unknown at the address, but were counted in the quarterly population statistics, represented 12% of all centenarians (all together 9 persons)(see Table 3). For eleven centenarians who were included in the quarterly population statistics as of 31 March 2002, and represented 14.7% of all centenarians, it was not possible to find out whether they were really present on the territory of Slovenia or not. On the basis of this analysis it could be possible with great reliability to make an assertion that the number of centenarians in the quarterly population statistics as of 31 March 2002 in Slovenia was overestimated by 12%. For additional 14.7% of centenarians the actual presence on the territory of Slovenia remained unexplained. Overall it could be estimated that the number of centenarians in quarterly population statistics in Slovenia as of 31 March 2002 was overestimated by 15-20%. Non-linked records among **octogenarians** represent 1.1% of all octogenarians recorded in the quarterly statistics as of 31 March 2002, while among **nonagenarians** 2.1%. For 91.7 % of non-linked records among octogenarians with field enumeration (door-to-door interviews) the information was found. For 57.3% of these octogenarians the information was collected that they were whether permanently or temporarily abroad, 52.2% were not found because they were deceased and 16.2% of them were unknown at the address. For 95.9% of non-linked records of nonagenarians the information was found with field enumeration. It is interesting that among non-linked nonagenarians the percentage of deceased (41.1%) was higher than the percentage of those for whom the information that they were (temporarily or permanently) abroad (36.9%) was higher.

Table 3: Results of data-linkage of non-linked records of centenarians, nonagenarians and octogenarians between the 2002 Census and quarterly population statistics for Slovene citizens and population with unknown citizenship linked with the database on enumerated persons at the 2002 Census, 31 March 2002

Non-linked records by type	Among centenarians	Among nonagenarians	Among octogenarians
TOTAL	20	147	459
Information collected at the 2002 Census:	9	141	421
person at another address	0	0	6
person unknown	5	31	68
person died	1	58	106
person abroad – more than 1 year	0	25	127
person temporarily abroad	3	27	114
For persons no information at the 2002 Census collected	11	6	38

Sources: Dissemination database and Database on enumerated persons - Census of Population, Households and Housing in Slovenia in 2002, Statistical Office of the RS.

In the second step a check of the existence of persons aged 80 years or over on the territory of Slovenia was done by linking data of individual records stored in selected databases. Individual records from the CPR, which represents the source for the population statistics, were linked with data on people receiving pensions. Since Slovenia is a welfare state, almost everybody at later ages has the right to one of the pensions which exist in Slovenia (there are many kinds of pensions in Slovenia: old-age pension, disability pension, survivors pension, part-pension, state pension, allowance for help and care, etc.) Therefore it is almost 100% sure that a person aged 80 or over included in the population of Slovenia (with a permanent or temporary residence in Slovenia) would appear in the database of people receiving pensions or pension-related benefits. The exceptions are foreigners. Not all of them are entitled to receive a pension or pension related benefits in Slovenia. Therefore in the process of data-linkage the records on foreigners were counted as linked record.

Individual data on people receiving pensions were available for 2005, 2006 and 2007 and were linked with individual records on citizens included in population statistics as of 31 December 2005, 2006 and 2007. The results of data-linkage for 2007 are shown - separately for centenarians, nonagenarians and octogenarians - in Table 4.

Table 4: *Linked and non-linked records of centenarians, nonagenarians and octogenarians – data-linkage of the database of individual records on people receiving pensions in 2007 with population of the Republic of Slovenia as of 31 December 2007*

	Number	Prop. (in %)
	centenarians	
Total	160	100.0
foreigners	4	2.5
Linked records	118	73.8
Linked records (foreigners counted as linked records)	122	76.3
Non-linked records	38	23.7
	nonagenarians	
Total	6,662	100.0
foreigners	31	0.5
Linked records (including foreigners, receivers of pensions =3)	6,355	95.4
Linked records (including all foreigners - receivers and not receivers of pensions)	6,383	95.8
Non-linked records	279	4.2
	octogenarians	
Total	65,345	100.0
foreigners	367	0.6
Linked records (including foreigners, receivers of pensions =81)	63,671	97.4
Linked records (including all foreigners - receivers and not receivers of pensions)	63,957	97.9
Non-linked records	1,388	2.1

Sources: Population of Slovenia, 31 December 2007, Statistical Office of the RS; Database of individual records on people receiving pensions, 2007.

The analysis of data obtained by the data-linkage of above mentioned databases of population aged 80 or over and pension receivers for 2005, 2006 and 2007 showed that among centenarians the percentage of non-linked records was between 23.7% and 25.6%, among nonagenarians the percentage of non-linked records was more than five times lower (between 4.2% and 4.4%) and among octogenarians even lower (between 2.1% and 2.3%). The results showed again that for centenarians data in the regular population statistics are less reliable and that also some improvements should be made in the data for nonagenarians.

5 CONCLUSIONS

Although the number of persons aged 80 years or over in Slovenia is on the rise because the old-age survival has increased substantially due to improvements in mortality⁶

⁶ See also J. W. Vaupel et al.: *Biodemographic Trajectories of Longevity*, pp. 17.; J. Kingdom: *Longevity: Mortality improvement* (URL: www.the-actuary.org.uk/790581, cited 14

(which is reflected also in the improved life-expectancy) the data analysis with the help of data-linkage showed that Slovenia has some problems with overcounting in the age groups 90 or over and especially among centenarians. The estimations made on the basis of the results were that the number of centenarians in quarterly population statistics is overestimated by 15% to 20% and the number of nonagenarians by around 2% to 3%. For octogenarians it would be difficult to say with great certainty that the overestimation in the annual population statistics is by around 1% since the analysis is also a subject of random errors.

Since the Statistical Office of the Republic of Slovenia has not been in charge of the maintenance of the CPR since 1999 (and therefore has no direct influence on the quality and stability of the main source for population statistics), a message on the findings of the present analysis has been sent to the Ministry of the Interior, which is at present in charge of the maintenance of the CPR. On the basis of the findings they through regular administrative procedures already started to check in 2008 the real existence of the centenarians on the territory of Slovenia and improvement has already been noticed in the data on population as of 31 December 2008.

September 2009); A. Božič: *Health and health care in Slovenia*, pp. 21.

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FINANCING CONSUMPTION THROUGH THE LIFE CYCLE

Jože Sambt

Faculty of Economics, University of Ljubljana
Kardeljeva ploščad 17, 1000 Ljubljana, Slovenia
Tel: +386 1 5892630; fax: +386 1 5892698
e-mail: joze.sambt@ef.uni-lj.si

ABSTRACT

The text briefly introduces results for Slovenia using the National Transfer Accounts (NTA) methodology, which comprehensively analyzes the flow of economic resources among different age groups. The key concept of the NTA is life-cycle deficit, which is defined as the difference between consumption and labor income. People have to cover the surplus of consumption (over production) through economic flows among age groups – in the form of public transfers, private transfers, or age reallocation based on the assets.

1 INTRODUCTION

In the early stages of the life cycle, children and adolescents have to rely on transfers from their parents or other members of society for their survival and satisfaction of their basic needs. Those transfers also heavily determine the success and quality of their future life. When older, people often receive transfers in form of pensions, health care, or long-term care, which affect the quality of individuals' lives as well. National Transfer Accounts (NTA) define the life-cycle deficit by age groups as a difference between the consumption and the labor income of that particular age group. As already explained, there is a pattern in young and old age groups that individuals consume more than they produce. The resultant positive life-cycle deficit has to be covered through economic flows among age groups. In between, there is a period when people consume less than they produce, and the surplus is used to cover deficits in the other two groups that are economically dependent. In time, the patterns (i.e., age profiles) of consumption and production can change a lot, and they can vary considerably among countries of the same development level but even more among countries of different development levels.

The NTA methodology is being developed in an international project that included 28 countries as of August 2009. For 23 of those countries, at least some basic results are available already, and for others, results are comprehensive and detailed already. We present basic methodological elements of the NTA and the basic results for the case of Slovenia. For a more detailed analysis of the Slovenian case see [1].

2 NATIONAL TRANSFER ACCOUNTS

Previously, the NTA analyses of the transfers among different age groups were partial. From various approaches and methods, we can highlight the method of generational accounting that analyzes comprehensively the transfers among different age groups through the public system [2]. Despite the criticism of generational accounting (above all, a reaction to the very ambitious aim of generational accounts to replace public debt and government debt) [3, 4], critics have recognized their importance and usefulness. They have been prepared for many different countries worldwide [5, 6] but also for Slovenia [7].

The NTA are synchronized with the System of National Accounts (SNA), which is internationally standardized and has been established in practically all countries worldwide. Adjustment of aggregate NTA categories to the SNA values greatly increases the relevancy and international comparability of the results. Aggregate controls are thus predominantly taken from SNA; however, some other required data sources are used for categories for which the data are not available in SNA (e.g., administrative data, public finance data). Usually, the data about aggregate controls distributed over the age groups are not available. Survey data are usually used to calculate relative age profiles. If aggregate controls are not available in any other data source, they can also be estimated from the survey data. However, we have to be aware of serious under- or overestimation that can occur in this case.

The main data source of the survey data is a household expenditure survey (HES), but data on expenditures (and sometimes incomes) are available at the household level only. With methods such as equivalence scales or regression, the household data are assigned to individuals, as an individual is the accounting unit in the NTA.

In the past, research on intrahousehold transfers had been scarce and partial, as it was based on data from special surveys. However, the levels of what was included in the intrahousehold transfers variable varied greatly among studies. In the NTA, there is a huge advantage, as intrahousehold transfers can be calculated with a residual

approach. This is possible because all other forms of reallocation flowing between the age groups are adjusted to the aggregate controls. In each age group, inflows equal outflows. This is also the case for the central NTA's budget identity, which holds at the household level, and for individuals, every age group, and the whole economy:

$$YL + YK + YM + T_g^+ + T_f^+ = C + I_K + I_M + T_g^- + T_f^- \quad (1)$$

On the left-hand side of Equation (1) is total income, which consists of labor income (YL), returns on capital (YK), returns on land and credit (YM), transfer income from the public sector (T_g^+), and transfer income from the private sector (T_f^+). On the right-hand side of Equation (1) are total expenditures, which consist of total (private and public) consumption (C), investment in capital (I_K), investment in credit and land (I_M), transfer payments to the government (T_g^-), and transfers to the private sector (T_f^-). Inflows (on the left-hand side of Equation (1)) thus match outflows (on the right-hand side of Equation (1)). For further details about the methodology, see [8]. The NTA try to include all transfers among different age groups in monetary form. Thus, for example, time devoted to other family members is not included, though it is being considered for inclusion in the future.

There are intrahousehold transfers from those household members whose consumption is less than their disposable income to household members who have a consumption deficit. The concept of the head of the household is also relevant. By definition, the head of the household owns all the assets and some kinds of income; for example, interhousehold transfers are assigned to the head of the household. Consequently, there are some intrahousehold transfers between the head of the household and other household members when transfers from or to assets are involved. For example, the head of the household may take a loan or sell assets to cover total household consumption in excess of the total household disposable income. On the contrary, when the household's disposable income is in excess of the household's consumption, it can be invested or used to repay a loan. Also, inflows in the form of children's allowances, for example, are assigned to the head of the household, as he or she can freely choose the goods for which they are used. If those inflows are indeed spent on children, this is recorded as an intrahousehold transfer – from the age of the head of the household to the age of the receivers of those transfers.

3 BASIC RESULTS FOR SLOVENIA

Figure 1 presents the basic NTA results: age profile of consumption, age profile of labor income, and the life-cycle deficit representing the difference between the former two categories.

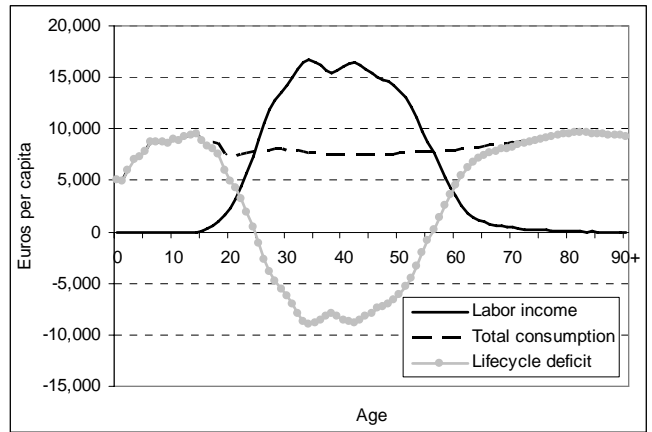


Figure 1: *Age profiles of consumption, labor income, and life-cycle deficit for Slovenia, 2004*

As expected, the life-cycle deficit is positive in younger ages and increases to about age 15. Thereafter, it starts to decline and becomes negative at age 25. The lowest values are reached between about age 35 and age 45. Again, as expected, in older age groups, the life-cycle deficit turns positive again. This happens at age 56, thereafter increasing into the highest ages. Thus, there is a long period of life during which people in Slovenia consume more than they produce. According to data for 2004, people in Slovenia produce more than they consume for a period of only 31 years (from age 25 to age 56). This is a strikingly short period, taking into account that, in Slovenia in 2004, the life expectancy at birth was 74 years for males and 81 for females. Further, at age 56, life expectancy was 22 years for males and 27 years for females (calculated from [9] and [10]).

All that consumption has to be covered somehow. The remaining part not financed through the labor income can be covered through the following three sources. First, through public transfers in kind (e.g., education, health) or transfers in cash (e.g., pensions, unemployment benefits). Second, huge transfers are also in form of private transfers, among which intrahousehold transfers (i.e., transfers among members of the same household) are, in most countries, by far most important. Third, reallocation flows are also in the form of asset-based reallocation (i.e., the net inflows [inflows less outflows] from assets). Figure 2 presents the listed three components.

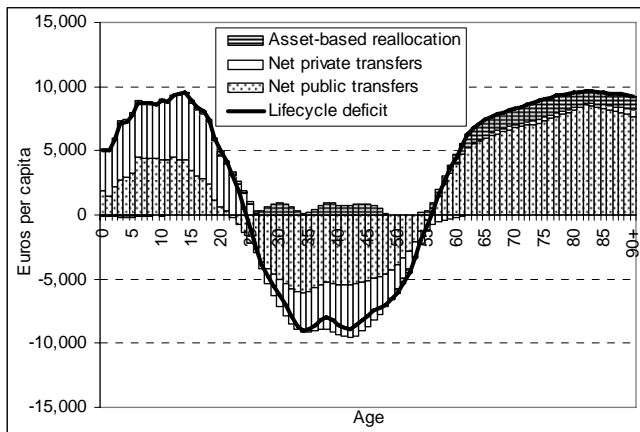


Figure 2: *Life-cycle deficit and its decomposition to sources through which it is covered, for Slovenia, 2004*

In demography, three broad age groups (i.e., contingents) are formed for easier interpretation. First is the group of young people who are predominantly not yet in the labor market. This was usually an age group 0–14 years but lately, in developed countries, 0–19 years is considered more adequate from the economic point of view. In developed countries, most people complete (or at least are involved) in secondary education, and a large share of them continue to even tertiary education. Therefore, the age boundary of 20 years instead of 15 years is more realistic for delimiting this and the next age group. Second, the age group 20–64 years represents people of working age. Third, people aged 65 years and over (65+) are predominantly not in the labor market any more because most of them are already retired.

Figure 3 presents the results from Figure 2 with respect to those three age groups. It also adds the labor income category, and all the results are expressed as a percentage of total consumption in those age groups.

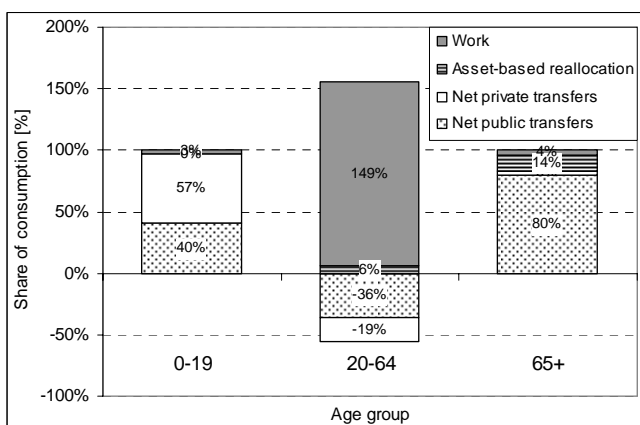


Figure 3: *Financing of consumption by three economic age groups (0–19 years, 20–64 years, and 65+), for Slovenia, 2004*

The results show that children's consumption is predominantly financed through public transfers (57%). Of the remaining share, 40% is financed through private transfers, and the remaining gap is financed through labor income and asset-based reallocation, as some people aged 15–19 already receive some income from those two sources.

In the prime-age group (20–64 years), people produce about 49% more than they consume. Furthermore, they receive positive net asset-based reallocation in amount of 6%, expressed relative to their consumption. Thus, in this age group, there is a 55% surplus of inflows from the two sources with respect to that group's consumption. They use the surplus to cover the life-cycle deficit of children (aged 0–19) and the older age cohorts (aged 65+). About two-thirds of the life-cycle surplus (36%, expressed relative to the consumption of that age group) are public transfers, and about one-third (19% relative to the consumption of that age group) is used for intrahousehold transfers.

The consumption of the 65+ cohort is predominantly covered through public transfers. They use neither asset-based reallocation nor private transfers from prime-age descendants to support their consumption. It could be that they adjust consumption to available sources because they do not want to rely on transfers from their children and/or do not want to use (or do not have) assets to support their consumption. However, because the consumption age profile shows that the consumption of people age 65+ does not decrease (as compared to the consumption of the prime-age group), this is a less likely explanation. It is more likely that the public system is generous enough that they simply do not need to use resources other than public ones to support their consumption.

The results provided by the NTA are interesting per se and also have policy implications. The age dimension, which the NTA introduced into the SNA, is crucial information for further analyses related to the age structure of the changing population, which is already ongoing, but it will be much more rapid in the future [11]. Sensitivity tests reveal that those projections are not a consequence of pessimistic assumptions but a very robust outcome, predominantly driven by the existing population structure [12]. Assuming some kind of development of age profiles through time (it would be simplest to assume that they are unchanged), many further calculations can be provided (e.g., the first and second demographic dividend showing the demographic impacts on economic development [13]). Furthermore, because the NTA methodology has been consistently applied on data from many different countries, international comparison of the results can reveal many interesting features of individual countries and overall patterns.

CONCLUSIONS

The NTA methodology introduces an age dimension to the SNA and, through its comprehensive approach, provides consistent estimates of private transfers, which previously were only partial and had limited comparability. As such, the NTA provide a complete picture about how people finance their consumption over the life cycle. According to the data for the year 2004 in Slovenia, there is a very short period of only 31 years when people produce more than they consume – only from age 25 through age 55. At all other ages, people are economically dependent. This is a striking result, given that life expectancy in Slovenia in 2004 was 74 years for males and 81 years for females. The consumption of children (age 0–19) is primarily financed through private (57%) and public (40%) transfers, whereas consumption of the elderly (age 65+) is predominantly financed through public transfers (80%) and, to a limited extent, through asset-based reallocation (14%).

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GENDER, EDUCATION AND EMPLOYMENT CASE STUDY: ROMANIA

Sănduleasa Andra-Bertha

Department of Social Insurance and Social Assistance Policies
National Scientific Research Institute for Labour and Social Protection
Povernei 6-8, Bucharest, Romania
Tel: +40 21 3124069; fax: +40 21 3117595
e-mail: sanduleasa@incsmmps.ro

ABSTRACT

This paper intends to provide a brief picture about the educational qualifications of women in Romania, but also about the issues of women employment in Romania (and especially the issue of wages) in the context of demographic challenges which this country experiences. The present analysis is supported by a series of demographic and economic indicators on the background of the fact that the Romanian law guarantees equal opportunities and access to education and to the labour market and also the right to equal payments for work of equal value. We refer hereby to the principle of equality between women and men, one of the fundamental principles promoted by the European Union since its establishment and integrated by the Romanian government under the national laws.

1 INTRODUCTION

Year 2008 was the first year when high school graduates were young people who have not lived any moment in Communism. This data is important socially and economically, as generations born in Romania after 1989 are smaller than the previous ones. This decrease will soon affect the education system at tertiary level and also the labour market as the number of high school graduates drops significantly: in 2008 there were 30,000 graduates less than in 2007. Problems that will affect universities: as the number of students will decrease, some universities will have to close certain departments or to reform their system. On the other hand, the share of female population graduating a higher education form in Romania grew significantly in the last years. Female population is majoritarian among the population graduating higher education. So, as the number of female population graduating higher education has increased, universities also have to take into account that their educational offer must encounter female population aspirations but also labour force needs, because, we must never forget the fact that a qualification that is not comply with labour market needs is useful.

In the present paper we refer to what is formal education, meaning the one that *"is done through teaching and*

training designed and conducted by personnel specialized for leadership based on default objectives in educational institutions hierarchically structured, by age criteria and performance criteria, within a system of education (or school)" [1].

The principle of equal pay for men and women stipulates that, under conditions of equal work or work of equal value, should be eliminated all forms of gender discrimination on all aspects of pay and conditions [13].

The methodology used in this paper work: secondary analysis of statistical data.

Data source: National Institute of Statistics from Romania (Continuing Vocational Training Survey and Statistical yearbook 2007), EUROSTAT (Statistical Office of the European Communities - online data base on education), UNESCO Institute for Statistics (statistical branch of the United Nations Educational, Scientific and Cultural Organization, Data Centre - online data base), World Economic Forum (online papers, research reports).

2 GENDER EQUALITY IN THE FIELD OF EDUCATION IN ROMANIA

Gender equality in the field of education involves the provision of equal conditions in terms of access for women and men at all levels of education and training, including apprenticeship at work or improvement and continuous training as a whole.

In Romania, all Romanian citizens have equal rights by law to education at all levels and all forms, regardless of gender, race, nationality, religion or political affiliation and regardless of social or economic status. This right is provided in the Law of Education no. 84/1995 with subsequent amendments.

Educational institutions at all levels, social factors involved in the educational processes and all other providers of training and advanced training in Romania are required to establish, in their activity, un-discriminatory practices based on the criterion of gender and concrete measures to guarantee equal opportunities and treatment between women and men. Moreover, it is prohibited by law from requesting candidates to any form of education of a pregnancy test and / or signing a pledge not to remain pregnant or not that will arise during their studies.

Regardless of sex, Romanian citizens are guaranteed equal rights by law to follow courses and professional programs: initiation, training and retraining, advanced and / or specialization. The employer is obliged to grant leave with pay or without pay for training and further training. Equal treatment of men and women as regards access to basic and advanced vocational training in Romania is guaranteed by: National Law no. 202/2002, Government Ordinance no. 137/2000, the National Labour Code.

3 PRINCIPLE OF EQUAL PAY FOR MEN AND WOMEN FROM ROMANIA

Regarding employment, the Romanian Constitution, the Labour Code, Law 202/2002 on equal opportunities between men and women, the Law no. 137/2000 on preventing and sanctioning all forms of discrimination, collective labour agreement at national level for years 2007-2011 include provisions relating to discrimination on grounds of gender in terms of salary and work in general. 75/117/CE Directive adopted by the European Council in 1975, provides for the principle of equal pay for men and women, which means that in equal conditions of work or equivalent, there must be eliminated all forms of sexual discrimination on all aspects and conditions of pay. So, if they do the same work that men do, women in Romania can not be discriminated against men, according the Romanian law.

4 ACCESS AND PARTICIPATION IN EDUCATION

Gross coverage rate in education of school aged population is an indicator often used in international statistics, in order to show the general level of participation of young people in education [12]. Gross coverage rate in education in all levels of education is the total number of children / young people included in all levels of education regardless of age, as a percentage of the total population of official age group corresponding to all levels of education (3-23 years). A high *gross coverage rate* indicates a high degree of participation in higher education. A value of 100% indicates that the education system has the capability of schooling the whole school population. If the indicator exceeds 90%, the number of seats available is close to the number required to allow universal access to education for the population of official age group.

The figure below plays the evolution of this indicator during the period 1999-2006, for the level of school age population aged between 19 and 23 years in Romania (higher education). As can be seen, this country experienced a positive development, meaning that it has increased the coverage degree of higher education in the school age population of 19-23 years in both male population and female population case. Note that *the coverage rate in higher education is greater for the female population than for the male population.*

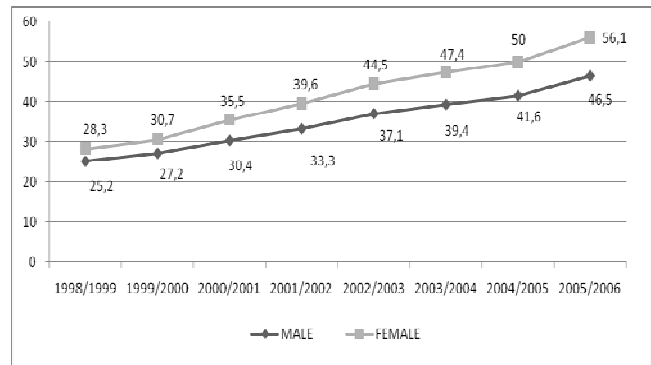


Figure 1: *The evolution of the gross coverage rate in education of school aged population (19-23 years and above), by gender, during 1998-2006 (%).*

In other words, the female population have a greater desire to continue and deepen studies, especially when referring to higher education.

The graph below plays the *evolution of graduated female population rate on levels of education* in the period 1995-2005, rate calculated of total population in each educational level.

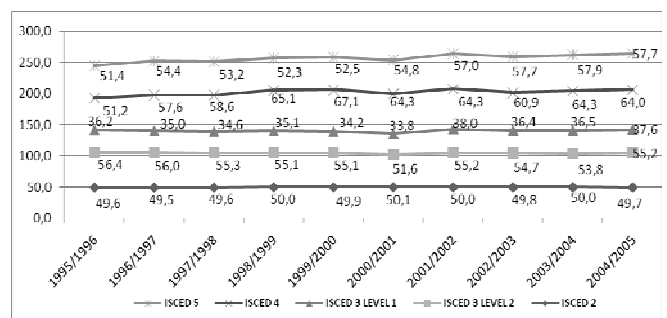


Figure 2: *The evolution of the population female graduates, by educational levels, within the total population in each educational level in the period 1995-2005 (%).*

Thus, we see that the share of female population increases with educational level, which confirms the idea that the female population tends in a greater proportion compared with male population, to pursue a tertiary education. And this trend was accentuated in recent years, as indicated in the figure above.

School life expectancy is another indicator that characterizes the development level of the educational system [12]. The indicator represents the expected number of years of schooling. A higher school life expectancy indicates a higher probability that students take more years of school and spend a longer period of education.

The graph below plays the evolution of school life expectancy (years) from primary education to tertiary level in Romania during 2000-2005. Observe an upward trend in both the female population and male population, but note that the value of school life expectancy for female population has come to be one year longer than the male population in year 2005.

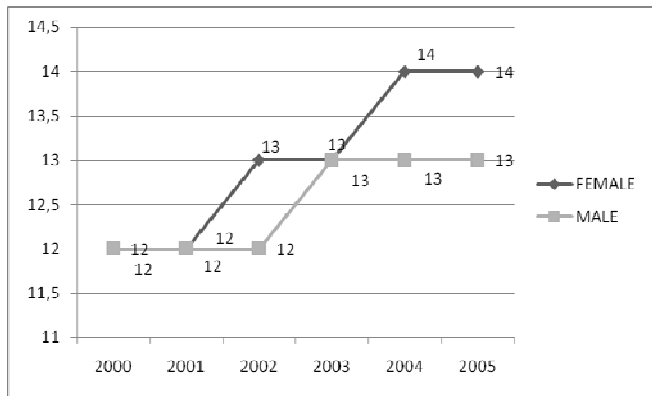


Figure 3: The evolution of life expectancy at school, from primary to the tertiary education, during 2000-2005.

Gross graduation rate for ISCED 5A level of education is one of the indicators of high-level knowledge for the given country [12]. Countries with a high graduation rate at tertiary level, as a rule, are developed and have a highly qualified workforce. A high graduation rate indicates the efficiency of the system of education. This is relevant if it is interpreted as complementary to the adequacy of specialties from the labour market needs.

In Romania, both female and male population have seen a trend upward in recent years, meaning that the graduation rate has increased. However, noted that there is a major difference between graduation rate of the population female and male population, which reinforces previous findings in this paper: female population is more willing to pursue education in order to provide a higher qualification.

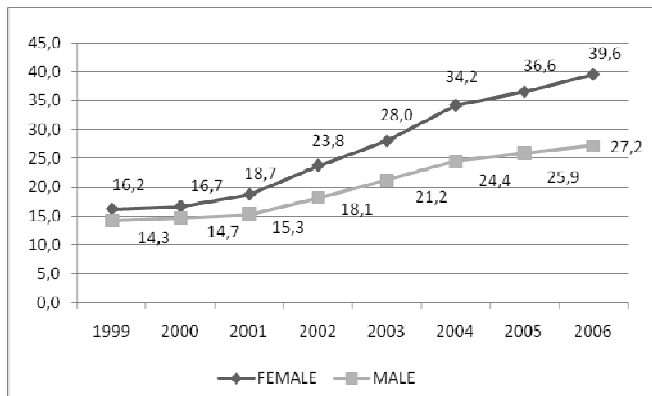


Figure 4: The evolution of gross graduation rate for ISCED 5A level of education, by gender, during 1999-2006.

5 QUALIFICATION, EMPLOYMENT AND PAY FOR THE FEMALE AND MALE POPULATION IN ROMANIA

Women in Romania are generally oriented towards other areas of specialization than men. The first signs we obtain by analyzing the distribution of graduates of vocational education (ISCED 2-3¹). Thus, girls tend to specialize in

¹ Levels of education, in accordance with International Standard Classification of Education - ISCED 97

areas such as *small industries and services, tourism, catering, trade, light industry, chemical industry*, while boys tend to specialize in areas such as *transport, construction, energy, metallurgy, electrical and electronics*. There are also differences between the sexes regarding post-high school education and foremen education (ISCED 4). Thus, girls tend to specialize in areas such as *services, welfare, education, health, light industry*, while boys tend to specialize in areas such as *agriculture, transport, construction, electrical and electronics*.

As regards tertiary education graduates (ISCED 5), the trend is that the female population is specializing in areas such as *education, health, sciences and humanities fine arts, social sciences, business and law*.

Regarding the employment, the trend in Romania is similar to the European average in the sense that the share of female employed population is around 47% in total employment in recent years. The trend is that female employed population in Romania focus on sectors of *agriculture and services (financial intermediation, education and health and social)*, while the male population tends to concentrate in sectors of *industry and construction*.

Analyzing the structure of employment, as a whole, by gender and educational levels, we see that, in Romania, women generally dominate numerically the employed population with low educational level, while men dominate the employed population with high educational level (post-high school, foremen and even above), despite the fact that most people of higher education graduates are female.

Moreover, the employment rate of the population with working age shows percentage of differentiation between the sexes with higher values to those occupied by males. Differences in percentage points between the sexes are a constant trend that seems not to be remedied.

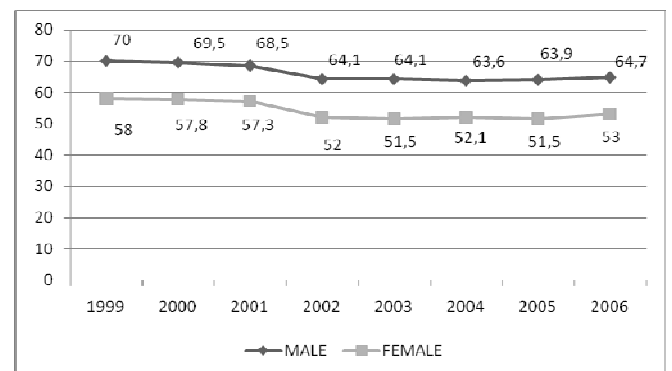


Figure 5: The evolution of the employment rate calculated for the working age (15-64 years) during 1999-2006.

By the level of education, it is notable that in Romania, women with educational level similar to that of men generally have average gross salary smaller, regardless of educational level [11].

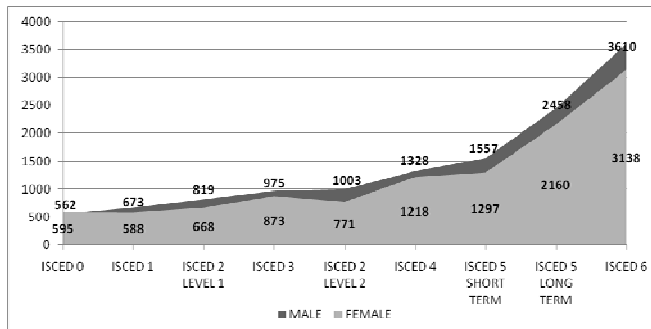


Figure 6: Average gross gain in October 2006 by levels of training and gender (RON – national currency).

From the point of view of occupational groups of employees, by gender, we see that trend in terms of wage differences between men and women are maintained to women disadvantage [11].

Another important indicator for our analysis is the *gender wage disparity (gender pay gap)*. Gender wage disparity is defined as the difference from 100 of the ratio between gross wage gains made by women working age² who work full time and gross wage of men working age who work full time³. Therefore, this indicator practically measures the spread pay between men and women [11]. The figure below plays, therefore, the evolution of this indicator during the period 2000-2007. There is a downward trend in the indicator value, which, in the period 2000-2004 has been higher (17-18), and then started a downward trend.

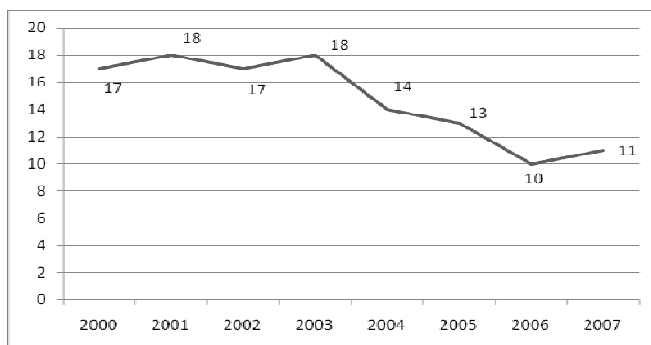


Figure 7: The evolution of gender wage disparity during 2000-2007.

6 CONCLUSIONS

- ❖ Female population graduating upper secondary education and tertiary education is majoritarian and increasing.
- ❖ There are gender differences in the choice of studies specialties in Romania.
- ❖ Promoting equal opportunities for men and women in the Romanian educational system is reduced to providing access to education.

² Persons working age are considered persons of 15-64 years

³ Full time program is working 15 hours per week.

- ❖ Women generally dominate numerically the employed population with low educational level, while men dominate the employed population with high educational level despite the fact that most people of higher education graduates are female.
- ❖ Due to the demographical changes and in order to respond to the increasing need of labour force, Romania must take measures in the educational field.
- ❖ Romanian educational strategy must take into account the importance of the relationship of socioeconomic development and demographics.
- ❖ There is urgent need to establish a connection between educational policy and labour market policy taking into account gender issues.
- ❖ Ignoring the gender dimension in education is a serious barrier in personal and professional self affirmation both for boys and girls.
- ❖ Taking into account the gender dimension can be an important measure for activation of labour resources.

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UKRAINIAN WOMEN IN THE “NEW WORLD DOMESTIC ORDER”: OUT-MIGRATION OF FEMALES FROM UKRAINE AND ITS SOCIAL IMPLICATIONS

Alissa V. Tolstokorova
Head of Research Experts Group
International School for Equal Opportunities
Do zapytannya-124, Kiev, Ukraine UA 03124
Tel. +38 097 6382446
e-mail: alictol@yahoo.com, talissa@ukr.net

ABSTRACT

The paper spotlights the issue of labour migration of Ukrainian women to domestic and care work in EU and traces social impact of this process on social welfare in Ukraine. The project is based on the analysis of materials of 12 biographical interviews with Ukrainian labour migrants working in EU (work in progress) and 25 expert interviews made in summer 2008 in Kiev and Lviv through a project “Care-work and welfare internationalisation. Transnational scenarios for the welfare of the future”, carried out by Centro Studi Politica Internazionale (CeSPI), Rome, Italy¹. Additionally, given that the gender dimension of economic mobility represents an under-researched area in the Ukrainian scholarship, the interviews were supplemented by the analysis of information available from disparate secondary sources spotlighting issues of labour migration in gender perspective. The project was financially supported by the National Scholarship Programme of Slovenská akademická informačná agentúra (SAIA).

The past few decades have been benchmarked by unprecedented acceleration of urban growth in many countries of the world. The year 2007 brought an unexpected world record – according to the UN Population Fund, for the first time ever the urban population (3,2 billion) exceeded the rural population (3.1 billion) (UNFPA, 2007).

The processes of urbanisation have to some extent been shaped by gender roles and relations. Megalopolises or “world cities” (Friedman, Wolff, 1982.) represent a high concentration of business head offices and banking firms,

¹ The experts interviewed covered a wide range of specialists, including top officials at the Italian embassy in Kiev; researchers at state research institutions and National Academy of Sciences; representatives of independent analytical think-tanks and research centres; policy-makers at Ministries, local administrations and state employment centres; representatives of international organizations, like IOM, Amnesty International etc.; NGOs activists working in the area of care services, social work, women’s issues and migration policy; journalists, etc.

media companies, etc. employing highly paid, skilled professionals working long hours. These “world cities” are vital to the smooth functioning of the global capitalism. To be able to afford full-time jobs, employees in these highly competitive urban sectors are forced to transfer a growing share of “domestic care work” from the household onto the market place, which means a need to purchase goods and services and to hire “domestic care labour” for their households. To sustain this sector of the high-skilled labour market and to enable the professionals to work long hours, an army of low paid workers is required – starting with office and house cleaners to domestic workers and carers for the children and elderly in families of the high paid workers.

Thereby, the growth of these high pay sectors is accompanied by a concurrent growth of low-paid and low-status workers, who are often illegal and marginalized and largely recruited from deprived social groups – women, retired persons, migrants arriving from poorer countries. Thus, “world cities” depend upon immigrants, primarily females as traditional careers, operating within very different socio-economic circuits of the global economy. They are being preferred to native candidates for two major reasons: 1) because of cheap cost of their labour as a result of predominantly illegal and insecure position in the labour market and 2) given that they left their own families at home they, unlike native domestic workers, have no daily care obligations in hosting countries and hence can perform “love labour” (Akalin, 2007) more efficiently. Thus, a new type of “care migration” emerged, based on the so-called “care drain” (Hochschild 2000) and leading to the outflow of women as major providers of care services in sending countries of immigrants.

The rising demand in people working in private homes is accompanied by the growing number of agencies, offering supply of domestic workers and those doing personal care. Employment agencies nowadays often have a “home care” division, including services for cleaning, cooking and picking up the children from school. The fact that employment agencies have moved into providing domestic services signals that a global labour market has emerged in this area, a so-called „care economy“ (Himmelweit, 1999; Folbre, 1995) as a component part of

global “service economy” (Gershuni, Miles 1983), which rests mainly on the shoulders of female labourers. With this gendered and racialised international division of caring labour, globalisation has crafted a “new world domestic order” (Hondagneu-Sotelo, 2001).

Care policies and the provision of care services are intrinsically related to the achievement of equality between women and men. The lack of affordable, accessible and high quality care services and the fact that care work is not equally shared between women and men have a direct negative impact on women’s ability to participate in all aspects of social, economic, cultural and political life. In this context, the quality of care, and the pay and working conditions of care workers, have become contested policy issues. Therefore, the dynamics of care is receiving increasing attention from activists, researchers, and policy-makers internationally. However, in Ukraine this issue did not yet gain currency, either among migration experts, gender researchers or social scientists, despite increasing “care drain” from the country. Scholarship on this issue is restricted but to individual papers. At the same time international scholars speak about an increasing “ukrainisation” of migration taking place in Europe, which in many cases is accompanied by a tendency toward a feminisation of the migration stream (Chaloff, 2005; Kindler, 2008). Current Global Financial Crises (GFC). Within this framework “feminization” refers less to an increase in numbers of migrant women, and more to the qualitative change in their role as providers (UN-INSTRAW, 2007).

But for reflections of women’s greater political visibility and agency, there are also economic and social pressures underpinning academic and policy interest in this area. Thus, in conditions of GFC there is evidence that even in more affluent countries among the first to lose jobs are women, mostly from low and lower middle class. The latter (and in some cases the former) category are those who could afford hiring migrant women for domestic work in their households to allow full-time jobs on the labour market to their female employers. Now that these women-employers are increasingly losing their own jobs, they are coming back to their households and to compensate for the lost share of their contribution to the family income will have to assume if not all, than probably a big share of domestic work, earlier delegated to hired migrant domestic workers. This induces the latter to leave their positions, and, probably to go back home, since securing a new job might be problematic for migrants in current conditions of GFC. Therefore, in such countries, as for example, Italy and Greece, where females constitute a large share of migrants stock, an out-migration of females may be observed in the first place. And the remaining share of domestic work, which may be still required, is more likely to be taken by newly unemployed native lower class women. At the same time, there are no grounds to expect that migrants women will be willing to go back home to such country as for example, Ukraine since GFC here is severely worsened by a profound political crises. So, most probably they will start searching for a new

niche for themselves, allegedly in such ahead-looking countries as, for example, Canada, which is currently more-migrant -friendly, than other post-industrial nations. Thus, the **goal** of the paper is to analyze a gender dimension of “care economy” and its implications for the situation of Ukrainian women labour migrants in conditions of GFC.

- migration flows from Ukraine;tion of Ukrainian labour migration in the context of “global care chains”;
- c. to identify the social effect of female out-emigration in Ukraine in terms of its impact on care services sector and welfare provision;
- d. to identify perspectives and trends in migration flows from Ukraine and to lay out a prognosis regarding their possible scenarios for the future;
- e. to outline research and policy gaps on Ukrainian scholarship and policy making on migration issues;
- f. to offer relevant policy proposals for efficient migration policy and managed with consideration of its gender dimension.

Conclusions:

Analysis of profound expert interviewing allowed to identify the following **challenging areas** in the Ukrainian migration policy and practice in terms of feminization of migration as one of current trends in migration flows from the country:

1. Lack of awareness at practically all the levels of society of the problem itself, i.e. the impact of feminization of labor migration from Ukraine on welfare and the labor market of care services in Ukraine. As a result - absence of any public discussion in the media, any focused research on the issue or any attempts to approach this obvious problem on the decision-making level.
2. Lack of reliable database of information about both documented and undocumented labor migration from Ukraine.
3. Closed character of work of agencies involved, un-transparency of their outcomes and absence of an integrated approach in sharing data on labor migration. As a result, information generated by different institutions is often contradictory or even incompatible. Thus, there is no efficient system for collecting, processing, and analyzing statistics and socio-demographic data on labor migration.
4. Absence of a socioeconomic and welfare framework for migration policy, management and research on the state level. Migration regulation is restricted to the area of law and legislative issues, but does not cover socio-economic aspects of labor migration.
5. Lack of a tradition and research history in Migration Studies as an academic domain. This field of expertise is but an emerging field in Ukraine and therefore lacks its own methodology, theory and practice. There are no academic institutions which provide teaching or professional upgrading for those involved in migration studies. There are practically no experts in the country who

have professional training in this area as a major, most of specialists being qualified as experts in related fields, like sociology, demography, public administration etc.

6. Lack of *qualitative* research on social issues in general and no tradition of both research and teaching in social anthropology as a discipline, especially in connection with migration issues and gender issues.
7. Lack of awareness among experts about labor migration as both globally and locally gendered phenomenon. For this reason there no attempts to mainstream gender either into migration policy-making or into social policy and social work aimed at migrants.
8. Lack of both state and international funding for migration research in general and on its social dimension in particular. Consequently, its unequal, uncompetitive and un-transparent distribution among different actors involved. As a result finances for migration scholarship are concentrated in narrow circles of researchers, close to the level of decision-making and state governance.

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WHY DO LONG-TERM COUPLES DECIDE TO BREAK-UP?¹

Marta Vohlídalová

Institute of Sociology

Academy of Sciences of the Czech Republic

Jilská 1, 110 00, Praha 1, Czech Republic

Tel: Tel: 004202 224 240 603

Fax: 004202 222 220 143

e-mail: marta.vohlidalova@soc.cas.cz

ABSTRACT

The Czech Republic belongs to the countries with the highest divorce rate in the EU. As the share of (young) people who decided to live and give birth to a child within unmarried cohabitation increases, one can expect that the real number of long-term relationships that end by breaking up is significantly higher. Unfortunately, the data on the reasons of break-ups available from the Czech Statistical Office are very limited; they only involve a minor part of divorced marriages but not any cohabitation break-ups. Also a sociological study of individual reasons and incentives leading to dissolution of (marital) relationships within the particular Czech context has been missing so far. In this paper we present and discuss the findings on subjective reasons leading to marriage and cohabitation dissolutions as declared by people, which are based on a unique survey conducted in 2009 in the Czech Republic with a representative sample of respondents.

1 INTRODUCTION

In the past twenty years the Czech Republic has experienced fundamental changes in its demographic structure in connection with the country's transformation to Western-type democracy. These changes have proved disturbing to many social policy-makers, sociologists, and demographers. Alongside the sharp decline in the birth rate and the continuously growing proportion of elderly people in the population, the family structure in the Czech Republic has been dramatically transformed. The increase in instability and fragility of contemporary partnerships and marriages is an important aspect of this transformation.

The Czech Republic has one of the highest divorce rates in all of Europe. At present the total divorce rate is around 0,49 (data for 2007, CZSO 2008), which means that today roughly one-half of all marriages end in divorce. In an international comparison for the year 2003 (Eurostat), a

higher total divorce rate was recorded only in Sweden (0,54), Belgium (0,54), and Finland (0,51). With the growing prevalence of cohabitation in the Czech Republic in recent decades it is reasonable to expect that the number of break-ups of long-term relationships is likely to be even higher than official statistics for divorce suggest.

While reasons, incentives and consequences of divorce has been broadly explored by (mainly American) sociologists, any sociological study dealing within this topic within the particular Czech context has been missing so far. At present, the Czech Statistical Office (CZSO) has rather limited data concerning the reasons for why couples divorce. Moreover, these data refer only to reasons of divorce ascertained by the court. Such data only exists for a minority of marriages ending in divorce and doesn't involve reasons why relationships of cohabitation end in a break-up. Within the Czech Republic there has been to date no individual level sociological analysis of what are the main factors leading to the dissolution of relationships based on marriage or cohabitation.

2 DATA

The findings presented here are based on the data obtained from quantitative survey conducted in 2009 with a representative national sample of 1 086 adult respondents (over 18 years of age). The data on the partnership life, break-ups and divorces were collected as a part of a regular periodical survey of Public Opinion Research Centre of Institute of Sociology. The part of the questionnaire concerning the partnership life involved exclusively a long-term partnerships that were defined as marriages or unmarried heterosexual cohabitations, in which partners lived in a common household for at least 6 months. The percentage of people who experienced a break-up or divorce of this type of long-term relationship was rather low - 390 respondents (35% of the total sample). Our particular findings concerning declared reasons of divorces and break-

¹ This paper was prepared under the auspices of "Reasons leading to the marital dissolution and break-ups of the cohabitation in the Czech Republic", a project kindly supported by the Grant agency of Charles University (contract No. 9864/2009).

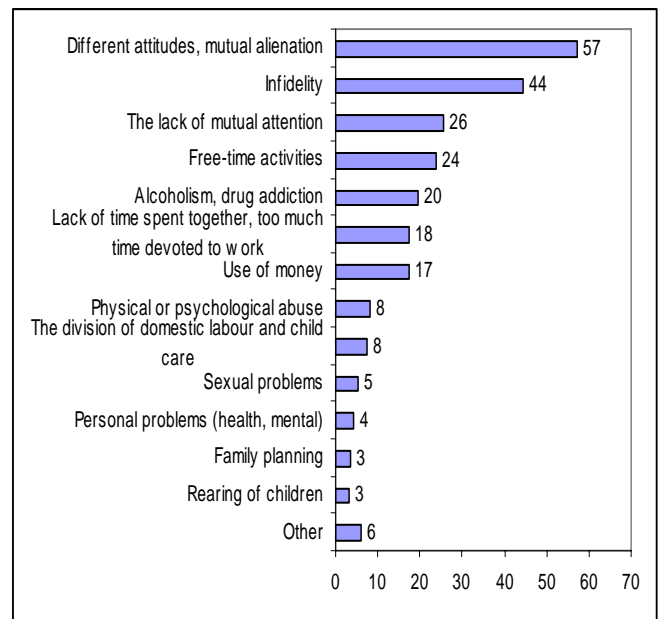
ups presented in this paper are therefore based on these respondents.

The respondents were asked to refer to three most durable heterosexual partnerships / marriages in which they were living for at least six months. Each respondent was asked to indicate the two most important reasons for each break-up / divorce from the list of items.

3 WHY DO PEOPLE DIVORCE OR BREAK UP?

Many social philosophers explain a general increase in the instability of contemporary marriages and cohabiting partnerships in terms of two main factors: (a) individualising effects of Western societies, and (b) fundamental transformation of the family institution. Instead of transmitting material goods, the primary functions and goals of the ‘modern’ family are emotional satisfaction and the individual growth of all family members. In such circumstances, the relationships between couples appear to have become more fragile and less stable (Bauman 2002, Giddens 1992, 2000, Singly 1999, Beck, Beck-Gernsheim 1995). Alongside this “macro” level perspective espoused by social philosophers, where the reasons for divorce are set at the cultural and societal level, it is also possible to adopt a “micro” level standpoint where the focus is placed on individual incentives leading to divorce and the break-up of long-term cohabiting partnerships.

According to the survey conducted in 2009, the most common reasons for partnership and marital dissolution declared by respondents in the Czech Republic were *different attitudes and mutual alienation* (mentioned by 57% of respondents) and *infidelity* (44% of respondents). A relatively high proportion of partnership dissolutions was declared as a consequence of *a lack of mutual attention* (mentioned by 26% of respondents), *disagreement concerning free-time activities* (24% of respondents), *alcoholism and (drug) addiction* (20% of respondents), *lack of time spent together* (18%) and a *disagreement concerning the use of money* (17%). Other reasons of break-up or divorces, (e.g. *physical or psychological abuse, the division of domestic labour etc.*) were mentioned substantially less often (see Figure 1).



N (respondents) = 390

Figure 1: *Particular reasons for partnership break-up or divorce (in % of respondents)*

4 GENDER, EDUCATION, AGE AND TYPE OF RELATIONSHIP MATTER

Individual level survey data from Western Europe and the United States reveal that perceptions, as to why marriages and long-term partnerships end, are strongly associated with a persons’ position in society, or more formally their socio-demographic characteristics. Men and women (Hetherington and Kelly 2003, Vaughan 1990, Amato and Prevetti 2003), people with different socio-economic status (Kitson 1992), or people of different ages or marriage cohorts (Graaf and Kamijn 2006) express different reasons for the divorces or break-ups. In part these subgroups differences may be attributed to varying individual level incentives toward ending long-term partnerships. Overall, the Czech data fit with the individual level incentive explanations proposed in Western Europe and the United States.

Women indicated *alcoholism, drugs (or some other form of addiction) and physical or psychological abuse* as the main reasons leading to the dissolution of a partnership more frequently than men.² These gender-based differences most probably reflect the fact that women have more likely been the victims of ill-treatment in a domestic setting. Moreover, courts have ascertained the alcoholism and other forms of addictions to be primarily associated with men when making divorce judgements (CZSO 2008).

People with higher levels of education mentioned more often than all others the *lack of time spent together, the lack of mutual attention and different attitudes and disagreement*

² All statistical dependencies mentioned below are tested by χ^2 tests; stat. sig. $\alpha = 5\%$.

concerning free-time activities. The infidelity was indicated as the reason for divorce or break-up mainly among couples with lower levels of education. As for the age differences, the problem of *alcoholism, (drug) addiction and physical or psychological abuse* concerns mainly elder people, whereas the *disagreement concerning free-time activities* is more typical for people less than 35 years of age.

Stronger emphasis on the “relationship” aspects of a long-term partnership and on the role of free-time activities appears to be a particular feature of the responses given by the younger age cohorts and well educated people. This suggests that these two subgroups place higher expectations and demands on partnerships than those who are older and less educated. Significant differences among young and older couples support the thesis concerning the family transformation towards emphasizing everybody’s individual growth and satisfaction (Bauman 2002, Giddens 1992, 2000, Beck, Beck-Gernsheim 1995).

There are substantial differences in perceptions as to why marriages and cohabitations end in break-ups. Whereas marriages end more often as a result of *the lack of time spent together, the lack of mutual attention and different attitudes, alcoholism, (drug) addiction and physical or psychological abuse and infidelity*; unmarried cohabitations are more often ruined by *disagreements concerning free-time activities*. It could be reasonably argued that these differences stem from differences in the duration of these different types of relationship. However, this is not the case. The survey findings suggest that unmarried cohabitations represent a special form of partnership with particular dynamics, values and role assignments (Seltzer 2000).

5 CONCLUSION

It can be concluded that, unsurprisingly, ‘relationship’ problems appear to be the main reasons for break-ups. This is true for both married and cohabiting couples within contemporary Czech society. This finding fits in broad terms with the evidence produced by CZSO based on the analysis of court records that a personal incompatibility is the most common reason for a divorce applications..

Fortunately, survey research gives a more detailed picture of why breaking up is not always for the same reasons. It seems that age, gender, and education play an important role among reasons given by Czech people as grounds for relationship breakdowns and divorce. It seems that couples of younger and more educated people focus on “relationship” problems and the role of free-time activities, whereas older and less well educated couples tend to break-up for “behavioural” reasons, i.e. alcoholism, (drug) addiction or infidelity.

Sociological research has the capacity to delve deeper and give some more specific reasons as to why people break up. Such research is important because it demonstrates that from the point of view of public social policy there are no “quick fixes” to break-up and divorce problems. A broader

more nuanced perspective will be basis of what, if anything, can be done, to provide greater support for Czech families whatever their structure.

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DEMOGRAPHIC CHALLENGES OF THE POST-SOCIALIST SOCIETY IN SERBIA

Gordana Vojković

Faculty of Geography, University of Belgrade

Department for Demography

Studentski trg no.3, 11000 Belgrade, Serbia

Tel: +381 11 2637421; fax: +381 11 182889

e-mail: gocica@eunet.rs

ABSTRACT

Demographic challenges that the post-socialist society in Serbia is facing have been the effect of the long-term demographic trends (today they are sublimated into inadequate regeneration of population, explicit demographic ageing and unbalanced territorial deployment of inhabitants), but also a direct expression of recent happenings in Serbia during the crisis of the 1990ties. Aiming to respond to the set task, the work, on one side presents global review on how the violent social and political ferments and economic crisis at the end of the XX and the beginning of XXI century reflected to all demographic movements in Serbia and on the other side to show what demographic limits, weaknesses and treats the society in transition faces in the attempts to concept and implement strategy of the spatial, regional and economic development.

1 INTRODUCTION

The large changes in dynamic, reproduction and spatial deployment of the population in Serbia happened in the second half of the XX century. The process of demographic transition was not developed by the same speed at all parts of its territory, which is evident from remaining the two world models of the reproductive behaviour [1], that led to more expressed spatial-demographic and ethno-demographic polarization. As a good introduction to the theme about the strength and diversity of the demographic challenges in Serbia can be the fact that we are witnesses of the historic events when a «demographic factor» (intensive growth of the Albanian population) represented, as stated by B. Kotzamanis [2], a strong argument for realization of the political aims and weakness of Serbia to find adequate solutions within its internal political plan.

Serbia (without the data for south province of Kosovo and Metohija) has around 7,5 million inhabitants today¹. Since

1981 there has been a slowing pace in population growth and in the north province of Vojvodina the depopulation has been noted even then. In the last inter-census period from 1991-2002 the number of inhabitants was reduced at an average annual rate of -1,0%. The ratio of the depopulation process completely reflects the settlements level: from the total of 4.681 settlements in 3.847 occurred the reduction in number of inhabitants.

The intensive migrations during the second half of the XX century brought great changes in deployment of inhabitants in Serbia, through concentration of inhabitants at a small space and systematic discharge and depopulation of the wide non-developed highland areas, border and rural areas on the other side. Almost one third of the population of the Central Serbia is concentrated at one fifth of its territory, i.e. lives in narrow urban regions of Belgrade and Nis.

The changes in spatial-demographic structure followed the continued declination of the natural growth. Negative natural growth has been noted in Vojvodina since 1989 and in the Central Serbia since 1992. Today, the negative rate of the natural growth of Vojvodina (of -5.7%) is among the highest in Europe and reproduction of population is seriously jeopardized in the great number of municipalities of the Republic. Simultaneously with decrease of the natural growth, the process of demographic ageing has been continuously going on. Serbia today, according to the data for Central Serbia and Vojvodina belongs to the group of states with the oldest population in Europe. During the last decade of the XX century, Serbia was faced with the challenges of the societies in transition, characteristic for

Kosovo and Metohija in 1981 (and justified doubts in the quality of the vital statistical data that have been collected until 1997) and the fact that significant changes happened in the meantime, due to the strained political situation and the permanent instability in the region which strongly influenced the demographic movements, the attitude that it is not scientifically responsible to speculate with any approximation on the number of inhabitants in this province was accepted within the expert circles. In the regular statistical reports of the UN it is estimated that the Republic of Serbia had the population of 9,858 million in 2007 [World Population Prospects, the 2006 Revision]. However as it has already been emphasized, the question of statistical data for Kosovo and Metohija and the other relevant facts necessary for research of the newest demographic appearances and processes is complex and discussible. The further data in this paper relates only to population in Central Serbia and Vojvodina.

¹ In 1999 the Republic of Serbia lost sovereignty over Kosovo and Metohija, and the province was put under the protectorate of UNMIK. Since then, the Republican Statistical Office of Serbia is unable to collect data for this region, but it has to be emphasized that the quality and scope of the statistical information in the previous years was also limited. Considering the great time distance from the last complete census at

other countries of the late socialist block in the surrounding [2] However, contrary to the countries where the process of social and economic transition was realized in “peace” in Serbia (and likewise in other republics of the ex-Yugoslavia) it started under the conditions of the huge changes of geo-political characteristics, unstable social-political circumstances and war psychosis, that produced specific weight of the total situation and emphasized negative tendencies of demographic development, followed by new migration flows and process of socio-economic and socio-demographic transition.

2 CRISIS OF THE 1990ties AND DEMOGRAPHIC MOVEMENTS IN SERBIA

With the political and social crises that started in the last decade of the XX century, the existing long-term unfavourable demographic trends accelerated and more sharpened. Demographic consequences of the socio-political turmoil, dramatic changes and economic crisis can formally be classified into the two categories:

- Immediate effects of these events (dissolution of Yugoslavia and war actions) were an inflow of the great number of refugees and persons endangered by the war from the ex republics of SFRY, while the clashes at Kosovo and Metohija and NATO aggression in 1999 resulted in to the occurrence of internally dispersed persons from this province, with simultaneous desertion of the country.
- Indirect effects manifested into all those facts that negatively respond to the level of birth delivery, marriages, employment, etc and occurred as a result of the country blockage, economic sanctions and hard socio-economic situation in general.

2.1 By the census of refugees and persons endangered by the war in 1996, there were 618 thousand persons in Serbia registered (the real number of refugees was certainly greater). Vojvodina accepted extremely big number of 42% of refugees and intensive movements towards this province were the continuation of the historical migrations of Serbs from the same origins after the Second World War. The massive inflow of refugees directly reflected the number of inhabitants of Serbia, but in the Central Serbia despite the big inflow of refugees, the stronger effects were previous negative movements, and therefore the total number of population in the final score decreased; while in Vojvodina the turnover was noted and the total population increased (for 62 thousand persons). In this way, the former emigration municipalities, mainly in the western part of the Province, by inhabiting the refugees, replaced the negative natural growth. However, the positive effects very quickly disappeared and the estimates predict the new depopulation in Vojvodina. Publicly we encountered in those days the conclusion that the refugees would significantly improve the demographic picture of Serbia, but researches [3, 4] presented that those were too optimistic predictions lacking significant demographic effects. Age-gender structure of

the refugee population was not different in great scope from the population structure in Central Serbia, because the movement of the whole families occurred. The biggest difference was in the increased involvement of women in the age group of 20-45 years as a result of bigger mortality of men in the war or separation of families. Besides, the exiled population in the situation where quick adaptation and coping with the new environment is necessary, very quickly takes over the reproductive behaviour of the surrounding where they exist.

On the other side, departure of the young, reproductive and work-capable population from Serbia (it was determined by the census that increment of emigration aboard is 146 thousands, but it is estimated that significantly higher number of young people left the country) had significantly bigger negative effects to the general demographic movement in Serbia. Considering the fact that the biggest part of the refugee population in Central Serbia is registered in the region of Belgrade (about 171 thousand persons), then it could be seen that the inflow of the refugee contingency even more emphasized the already existing unbalance in territorial deployment of inhabitants. A big challenge for the society of Serbia in the socio-economic sense, appeared to be how to take care of the refugees and create adequate living environment for such big number of people, especially under the conditions of the hard economic situation in the country. The analyses of the professional structure presented that the refugees during the forced migration changed work performances mainly from agricultural services into the non-agricultural, which, with the fact that they inhabited more urban environments than rural centres, represented the sign of their emphasized social transformation that made higher pressure to labour markets. Despite the fact that Serbia adopted the *National Strategy for solving the question of refugees and internally displaced persons*, very modest results have been achieved in this field until now. According to the UNHCR data from 2004 there were 276 thousand refugees in Serbia and about 207 thousand internally displaced persons from Kosovo and Metohija².

2.2 Migrations partially mitigated negative consequences of the unsuitable trend in domain of the natural movement of the population in Serbia, but the general crisis of the society under the conditions of the international economic and political blockage and especially NATO aggression of 1999 contributed to further lowering of the fertility. This most eloquently confirms the lowest ever noted total fertility rate of 1.4 children by woman in 1999. Already in 2001 and during the further few years a slow increment in number of

² It is still impossible to talk about demographic implications at Kosovo and Metohija since there are no statistical and other relevant determinants that can offer insight into the real picture. Kosovo crisis caused a big wave of mass migrations. The UN High Commissioner for Refugees estimated that during 1998 and in the first three months of 1999, 350 thousand persons left this region. During the three months of NATO bombing further 820 thousand people escaped, but during the second half of 1999 almost whole Albanian population returned back.

live births and increase of the total fertility rate up to the level of 1.6 children per woman. That this was a question of a short rehabilitation of fertility, after the years of crisis with decreased fertility, confirmed the data in 2005 and further when the already established trend of decreased fertility rate continued. So the number of live births and the total fertility rate in 2005 and 2006 was less than in the extreme 1999 year. The short “compensational” period coincided with the political and economic changes in Serbia. The year 2000 is the year of “democratic revolution” when the expectations of the Serbian inhabitants went towards the quick recovery of the difficult economic and political situation in the country and the faith in “better tomorrow”. The real changes were realized more slowly than expected by the inhabitants, and in 2005 the previous trends continued. G.Penev states that the general uncertainty and political instability, evident pauperization of the biggest part of population, great increment of unemployment (especially women and young population), deterioration of the general housing circumstances and multiple deduction and irregular payment of wages for the children and parental supplements are only some of the facts that necessarily influenced the couples about their decision on giving birth [5]. Researches done by some authors are interesting, stating the attitude that movements in view to fertility rate, although at first sight unfavourable, have been far more favourable in relation to the ones that should have been expected in such social-economic circumstances. Comparisons with the other European, ex-socialist countries indicate that their fall of fertility was significantly more intensive, which leads to the conclusion that the sluggish transition in Serbia partially mitigated unfavourable trends in the domain of fertility [2, 6].

In relation to the mortality it is hard to state precisely in what measure the social crisis has influenced the trends. However, certain indicators, such as the backwardness of the increment pace of the life expectancy of the Serbian population in relation to the European countries, especially concerning women [7], have a certain weight. Also, the increment in mortality of the younger, middle aged population has been noticed. The unfavourable trends were relatively short and of smaller intensity than in the majority of the transitional countries in East Europe and considering the dimensions of crisis in Serbia, G.Penev thinks that they can be considered as modest [8].

3 DEMOGRAPHIC CHALLENGES AND SERBIA’S “RESPONSE” TO DEMOGRAPHIC LIMITS

3.1 The key challenge of the demographic and social moment of Serbia is the population reproduction below replacement level. At the territory of Central Serbia and Vojvodina the population has not been reproducing itself for more than half a century. The average number of children per woman is 30% less from the level necessary for the replacement of generations [9]. The continuous fall of fertility, deeply rooted low reproductive standards, delay

of giving birth are the result of the expected transitional changes and processes of modernization. Still, the fertility level that is below the European average emphasizes the influence of post-socialist social transition. High psychological and economic price of the parenthood is a big challenge in overcoming the existing demographic crisis. Especially since the unfavourable socio-economic frame of reproduction is joined by the influence of demographic factors such as the lowering and ageing of the fertile contingents and intensive demographic ageing of the whole population.

The state’s strategic response to problems of demographic development was acceptance of several strategic-developmental documents. *Strategy for stimulation of the fertility*, *National strategy on ageing*, *National strategy for employment* directly relate to solution of the crucial demographic challenges. Numerous other planned documents, such as *Strategy of the spatial development*, *Strategy for regional development*, etc., the questions of demographic character underline, as the necessary fact for implementation of the total strategy. The increased awareness on demographic problems and necessity for pro-natality policy is certainly positive fact of the social moment of Serbia. Yet, these documents do not have a priority rank. So, for example, implementation of the *Strategy for stimulation of the fertility* is postponed in expectation that Serbia will face with consequences of the world financial crisis!

3.2 The second kind of challenge relates to solution of problems in unequal regional development and in the extremely differentiated demographic development of Serbia and big disproportions in demographic size of Belgrade (and its negative agglomeration and polarization effects, in all and in demographic view) and the rest of Serbia. The fact that in spatial-functional and spatial-demographic structure of Serbia appear two “vacuum” regions at the eastern and western Serbia with spatially inadequately integrated centres in development that might take the role of macro-regional centres represents a significant limit from the perspective of the spatial-demographic trends. These are depressed regions in population, which represent destimulating fact for differentiation of the settlements network, growth of centres, development of public services, etc., and cause a big problem in preparation of the conception for strategy of the spatial development [10]. They are also the main limits of the poly-centric policy which implementation is imposed as an imperative of the sustainable socio-economic development of Serbia.

3.3 In the cause and effect chain of demographic obstacles and social difficulties, the high rate of unemployment is the next fact that demands great effort from the society. The movements in economy, especially during the 1990ties were unfavourable in engagement of work power which resulted into the great number of unemployed (with big hidden unemployment). Only during the last decade of the

XX century its number was more than doubled, to around 22% [11]. Although the problem with unemployment in economy existed even before the start of the transitional process it was strengthened in this period. Unemployment is more present in female population and is the most expressed in young population. According to the data for 2007 (without data for Kosovo and Metohija) the actual level of employment (51.5%) is significantly below the level of full employment of 70% which has been accepted as one of the aims in the *National strategy for employment for the period 2005-2010*. According to B. Radivojević's researches the employment rate in Serbia is lower than in the surrounding countries (in Croatia was 55.6%, Hungary 57.3%, Bulgaria 58.6% and Romania 58.8% in 2007). The *National strategy for employment* is complementary to the *Strategy for Poverty Reduction* and to the other strategic documents associated to sectoral and regional development. The documents exist, but their implementation and operation is another question. The weak chance for employment was the second fact, besides political crisis, crucial for the great drainage of the highly educated cadre abroad. That situation is still unfavourable showed the conducted surveys where almost 70% of students stated that they plan to leave the country [12].

3.4 The size of the demographic challenges perhaps best reflects the results of probability projection which indicate that the continuation of the fall of total number of population is most certainly demographic future of Serbia. Even according to more optimistic scenario which predicts stabilisation of the political circumstances and improvement of economic situation in relatively short period, that would reflect the positive balance of external migrations, the possibility that in 2020 Serbia has more inhabitants than today is only 15% [12], and even in the most favourable development of events practically there are no chances to stop the process of demographic ageing and all those demographic, social and economic implications that derive from it.

4 CONCLUSION

Deterministic system which channels the trend of fertility might be named by one denominator of unfavourable social circumstances. Still, the situation is double emphasized:

- Drastic deterioration of living standard from the time of so called "surviving strategy" during the extremely difficult circumstances of the country's blockade, and
- Completely new demands set by the society in transition which the inhabitants face: from the need to adapt to processes of re-structuring of economy and trade, privatisation of the social enterprises, changes in all spheres of public and social life (which are sometimes followed by degradation of some institutions for social and health protection or other ways of family and inhabitants' support).

This complex system of cause and effect connections which gradually evolve into a serious obstacle for the total

development of Serbia, demands defining well elaborated policy, including precisely determined instruments for its implementation that would be directed to mitigation (and gradual overcoming) of negative trends for the population development, i.e. creation of pre-conditions for the demographic revitalization of Serbia.

Under the conditions of the reduced and at the great territory seriously quantitatively and qualitatively endangered demographic resources exists the serious treat that demographic component for development and organisation of space outgrows into the basic problem and the limit for the balanced spatial and regional development of Serbia. Relatively low degree of economic and social development might lead to the vicious circle of high unemployment and high level of poverty.

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THE BURDEN OF CANCER IN AUSTRIA: ESTIMATING CANCER PREVALENCE WITH DATA FROM THE AUSTRIAN NATIONAL CANCER REGISTRY

Nadine Zielonke

Statistics Austria

Austrian National Cancer Registry

Guglgasse 13, 1110 Vienna, Austria

Tel: +43 (0)1 711 28 7228; fax: +43 (0)1 711 28 7445

e-mail: Nadine.zielonke@statistik.at

ABSTRACT

Austria – along with other industrialised countries - is facing a major increase in the cancer burden because of the ageing population. Information on cancer prevalence is of primary interest for health care planning and resource allocation because it identifies the burden of a disease or health-related events on the population and health care system. Prevalence represents new and pre-existing cases alive on a certain date or period, in contrast to incidence which reflects new cases of a condition diagnosed during a given period of time. Prevalence is a function of both the incidence of the disease and survival. However, systematic information on cancer prevalence is hitherto unavailable for Austria. The objective of this descriptive paper is to present best national estimates for cancer prevalence in Austria.

1 INTRODUCTION

Around 36 000 people are newly diagnosed with cancer each year in Austria, with men being affected slightly more often than women. After cardiovascular diseases, malignant cancer is the second most common cause of death in both sexes [1]. In view of the fact that these diseases occur primarily in older people, the importance of cancer for describing health status and planning health care will continue to increase in future due to the increasing age of the population. The epidemiology of cancer incidence (newly diagnosed cases per calendar year, data source: Austrian national cancer registry) and cancer mortality (data source: Austrian cause of death statistics) plays a key role in health reporting. Prevalence is a function of both the incidence of the disease and survival. However, systematic information on cancer prevalence is hitherto unavailable for Austria. One main reason was that there are crucial and even philosophical differences in the interpretation of prevalence within the scientific “cancer community”. That is why it was considered most important to reflect on the international differences in terms of definitions and methods. The following paragraphs will shed light on different international approaches, which will help modelling best Austrian estimates and which will be discussed at the end of the paper.

2 INTERNATIONAL EVIDENCE

The decision for an approach to estimate or describe cancer prevalence in a country is based on a wide range of interacting factors regarding data quality, length of follow-up period and completeness of data collection.

The Cancer Registry of *Norway* systematically collects cancer notifications since 1952. Those records are regularly supplemented with information on the patient’s vital status during an automated procedure, facilitating a high level of completeness and validity. They annually publish incident and prevalent data. Here prevalence is defined as the proportion of a population that has a disease at a given point in time [4]. Moreover, they differentiate between lifetime and partial prevalence. Lifetime prevalence can be defined as all persons living and ever diagnosed with cancer. However, they consider partial prevalence more useful for quantifying resource requirements since it describes the number of persons alive as of a given index date, stratified by time since diagnosis (one year, one to four years, five to nine years, and 10 or more years).

Slovenia’s cancer registry uses the same definition as in GLOBOCAN 2002. The GLOBOCAN 2002 database has been built up using the huge amount of data available in the Descriptive Epidemiology Group of IARC, i.e. incidence data as well as statistics on cancer survival are provided by cancer registries from all over the world for the reference year 2002. Since the provided data do not allow for following the vital status of all incidence cases directly to check on their vital status, GLOBOCAN uses a method to estimate the sex and age-specific prevalent cases by cancer-location for a country as described in Pisani et al. [13]. Instead of total prevalence GLOBOCAN as well as *Slovenia* calculated partial prevalence (1-,3- and 5-year prevalent cases) obtained by combining the annual number of new cases and the corresponding probability of survival by time. This approach is also applied by the Robert Koch Institute (Germany) which collects and evaluates all data from regional cancer registries in Germany [11].

EUROPREVAL is the first Europe-wide project to estimate the prevalence of the most important cancers in the 17 participating countries [2, 5]. EUROPREVAL provides the first large-scale comparative overview of cancer prevalence

in Europe. The data was obtained from the EURO CARE-study. EURO CARE published systematic comparisons of survival for most adult and childhood cancers in Europe since 1978 [6, 7, 9, 14]. Most recently EURO CARE-4 included patients diagnosed in 23 countries. EUROPREVAL defines point prevalence as the proportion of individuals who have ever been diagnosed with cancer still present in the population at a given time. Hence it is assumed that cancer is an irreversible disease and diagnosed individuals remain cancer cases until death [5,6]. That implies that prevalence of persons with cancer rather than prevalence of cancers is considered. The difference lies in the decision on how to account for multiple malignant tumours. Thus, person prevalence considers only the first primary malignant cancer diagnosed in each person.

3 PRACTICAL CONSIDERATIONS AND ESTIMATION OF PREVALENCES

The Austrian National Cancer Registry includes data on the incidence of cancer cases and on survival. Data is reported by all hospitals and is based on information provided in the patient's medical record. Currently the Austrian cancer registry contains about 1 071 000 reported tumours, featuring roughly 36 000 new cases per year. Data has been collected since 1969; it has however only been available in a reasonably complete amount and quality for the years following 1983. This was enabled by linking the cancer records with the records of the causes of death statistics. Hence, basis for the following prevalence estimates will be the incidence data of the Austrian National Cancer Registry with years of diagnosis between 1983 and 2004 which includes data from 769 560 cancer cases (i.e. malignant invasive cases, incl. DCO-cases). If a person has had two or more types of cancer in the study period, then each cancer type is represented in the specific cancer site category, yet just once in the "All C00-C97" category. Of those 769 560 cases a total of 642 364 was included in the analysis as first malignant tumours on the "All C00-C97" category (the difference is caused by multiple tumours), which are equivalent to the number of cancer patients. Given the length of the follow-up period of this study (21 years) direct methods to estimate prevalence will be employed and described. We assume that once diagnosed with cancer, an individual represents a prevalent case until death.

3.1 Point Prevalence

	Sex	Cases observed (a)	Cases alive (b)	Completeness Index R (c)	Total prevalent cases (d)	Population (per 100 000)(e)	Total Prevalence (x 100 000) (f)
Malignant Neoplasms C00-C97	Total	642 364	265 593	0.89	298 419	81.74	3.6
	Men	306 984	112 194	0.89	126 061	42.06	2.9
	Women	335 380	153 399	0.89	172 358	39.69	4.3

Table 1: Point prevalence as of 31.12.2004 by sex

Given the length of the follow-up period of this study (21 years) we followed the direct method of estimating the total prevalence as used in the EUROPREVAL study [2, 3, 5, 10]. Point prevalence is defined as the proportion of existing cases at one point in time. In a population covered by cancer registration for L years, the total prevalence (N_{tot}) is given by the sum of the observed prevalence plus the unobserved prevalence. The observed prevalence, N_{obs}, is the proportion of patients diagnosed after the start of registry activity i.e. all cancer cases that have been diagnosed between 1983 and 2004 who can be directly counted from the registry data and who were still alive at the given reference date. The unobserved prevalence, N_{unobs}, is the estimated number of living patients diagnosed before the registry has been in operation [2, 5]. As the Austrian National Cancer Registry operates for a reasonably long period, the unobserved prevalence will not be very relevant. However, to follow the methods used in EUROPREVAL as closely as possible, we estimated its value as described in the following paragraph. The results of all malignant neoplasm combined are displayed in Table 1. It shows the results of the direct approach to estimate the prevalence of all cancers combined long with the main steps of calculation, where (a) is the number of cancer cases collected during the 21-year period and included in the analysis; (b) the number of cases alive at the reference date; (c) the completeness index R; (d) the total prevalent cases [= (b)/(c)]; (e) the population count per 100 000 and (f) the total prevalence per 100,000 [= (d)/(e)].

We applied the appropriate correction factor, the completeness index R, which is an estimate of non-registered cases alive. R takes the value of 1 when all prevalent cases are fully observed, and approaches 0 as the proportion of prevalent cases that are observed decreases [2, 5]. The results show that 3.6 out of 100 Austrians have had a previous cancer diagnosis until the reference date. Contrary to the proportion of new cases (incidence) in men and women, there are more prevalent cases among females compared to males at the end of 2004. Most important reason for that is the dominant role of breast cancer, with relatively good survival perspectives for women. Second most common cancer was prostate cancer, followed by cancer of the bowel.

¹ We fixed 31 December 2004 as reference date for calculation of prevalence estimates because we can assume highest completeness of cancer records until then.

3.2 Partial Prevalence

Partial prevalence in Austria is – contrary to the estimation of total prevalence – directly obtained from the follow-up of registered cancer patient’s vital status. Partial prevalence helps classifying prevalent cases by disease stage at the reference date to distinguish the recently diagnosed patients who are in need of initial treatment, from those who need

clinical follow-up and those who can be considered cured since they have all different demands and health needs. Hence we subdivided the results of the point prevalence according to the number of years spent after being diagnosed with cancer. We consider that an important step towards the development of specific indicators of health care needs for specific sections of the (cancer-) population.

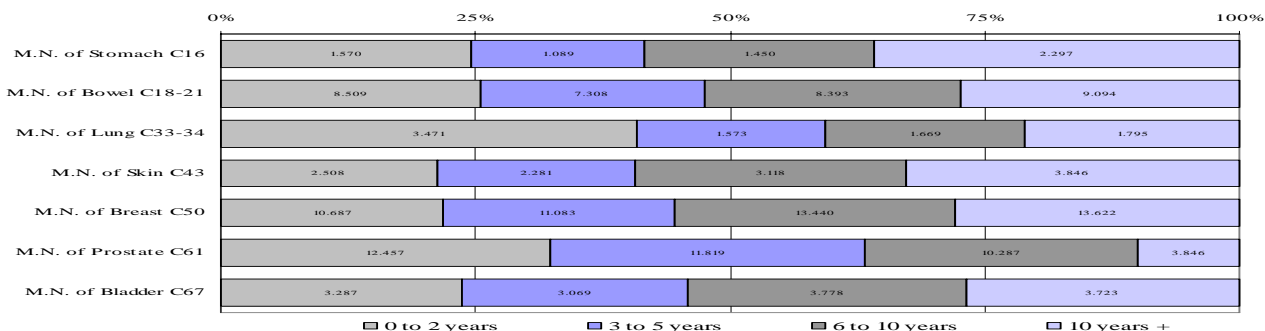


Figure 1: Partial prevalence as of 31.12.2004 by cancer sites and time since diagnosis

At the end of 2004 there were 265 593 living people who have previously been diagnosed with cancer at one point throughout their lives, thereof 112 194 men and 153 399 women. The results shown in *Figure 1* describe those cases that have been diagnosed up to 2, 3-5, 6-10 or more the ten years prior to the reference date by specific cancer sites. The most acute demand on the health care system have patients up to two years after their cancer diagnosis. 64 127 men and women of all living cancer patients belong to that group (24%). Those patients that have been diagnosed 2-5 years ago need less intensive care. 21% belong to that partial group. One fifth of all living cancer patients have a diagnosis 6-10 years old. For one third of all cancer diagnosis is older then ten years. Cancer sites with particularly good or bad survival chances result in an according figure, i.e the comparably high lethality of lung cancer is reflected in the big share of relatively young diagnosis among all living lung cancer patients whereas more than 50% of all living cervix-cancer patients survive the diagnosis already longer than 5 years.

3.3 Period Prevalence

As an estimation of period prevalence for the year 2004 we suggest an approach for the Austrian data where the ratio of

person months spent by cancer patients during one year (1.1.2004 - 1.1.2005) and the person months of the general population in 2004 (=person months of exposed to risk) is calculated. Cases where a person is diagnosed with cancer and dies within the same period would otherwise be lost for the analysis of period prevalence. We, however, consider these cases equally important to describe the burden of cancer throughout the period of interest. The result could be interpreted as the proportion of the Austrian population affected by cancer at any time in 2004 by age-group and cancer site [8]. Of the 642 364 primary cases diagnosed between 1983 and 2003 287 167 were still alive at the beginning of the observation period (1 January 2004). 38 034 new incidence cases occurred in 2004. All of these cases contribute a different amount of time to our calculation according to the number of months they were alive throughout the year under consideration. This method was applied to all age-groups, cancer sites and sex. In 2004 3.2 out of 100 Austrians had cancer (all ages combined), whereas the proportion was increasing with age. *Table 2* shows the period prevalence by age-group and sex. In the age-group 55-64 already a share of 5.1% had cancer and of those 85 and older even 18.9% had cancer.

			Absolute numbers per 100 000									
			Age-groups									
	Sex	Total	0 - 4	5 - 14	15 - 24	25 - 34	35 - 44	45 - 54	55 - 64	65 - 74	75 - 84	85 +
Malignant Neoplasms C00-C97	Total	3 174	46	126	239	654	1 437	2 714	5 145	9 302	12 827	18 847
	Men	2 754	52	138	230	393	765	1 619	4 489	10 430	17 282	27 823
	Women	3 571	40	113	248	915	2 128	3 800	5 764	8 364	10 472	15 842

Table 2: Period prevalence in 2004 by age-groups and sex

4 DISCUSSION

As shown in the last chapter of the report, different approaches to estimate prevalence and thus describe the burden of cancer have specific interpretational implications. The authors consider the partial prevalence the most applicable measure in the context of health care planning compared to period and point prevalence.

Given the length of the follow-up period of the Austrian National Cancer Registry we can assume that the number of cases that have been diagnosed with cancer before 1983 and who are still alive 21 years later should be accounted as only marginal and negligible.

5 CONCLUSION

The variation of national best practices is based on very different data conditions. With regard to the data situation in Austria we consider partial prevalence the best measure in context of health care planning and resource allocation.

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