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***A DEVELOPMENT AND CRITIQUE OF THE  
CONCEPT OF REPLACEMENT MIGRATION***

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Migration and Environment



Institute of Geography and Spatial Organisation,  
Polish Academy of Sciences

## **A DEVELOPMENT AND CRITIQUE OF THE CONCEPT OF REPLACEMENT MIGRATION**

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**Abstract:** For the last few decades decline in fertility and mortality resulting in population ageing raised many concerns among the demographers. Their uncertainty about the performance of certain public institutions (e.g. pension systems and labour markets) gave way to various solutions that might reverse current trends in the development of the size and structure of populations. One of them is the concept of replacement migration – the idea implying that international migration might be a tool to offset population ageing and its negative effects. This article outlines the concept and its development, and evaluates its usefulness from the point of view of different scientific disciplines, other than demographic. The evaluation leads to the conclusion that for the time being the concept is a purely scientific exercise that may help realize the scale and potential threats of the ongoing population changes. Before it can offer feasible solutions to population decline and ageing as well as their consequences, it needs to be expanded. In such case, the so far ignored economic, social and political aspects of population development would have to be given proper attention.

**Keywords:** replacement migration, ageing, population decline

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# 1 Introduction

For the last few decades demographers in the developed countries have been observing progressing changes in objectives and patterns of life of individuals, resulting in decline in fertility (D. J. van de Kaa 1987, 1993 and R. Lesthaeghe 1991 labelled these changes as the “second demographic transition”). The latter, for many countries already at sub-replacement level, together with improved mortality (decline in mortality in all age groups and constantly growing life expectancies at birth) faced the countries with new challenges not met in the history beforehand. Rapid slow down, or decline, of natural growth and common ageing (transformation of the age structure to relatively greater proportions in the older age groups) jeopardised many institutions shaping social life. Most evident areas are labour markets and pension systems, for which the effect of declining labour force, and cohorts in productive age, both in absolute numbers and in relation to the rest of population (especially to the old) is not known.

Worrying tendencies made demographers look for the means to counterbalance them. For mortality is obviously untreatable, and any measures to recover fertility are usually expensive and of postponed results, they suggested that international migration might be such a tool. And this is how the concept of replacement migration emerged. My objective is to draw an outline of the debate on replacement migration, with a word of comment.

## 2 Replacement migration concept

To be precise, replacement migration is referred to as “the international migration that would be needed to offset possible population shortages, i.e. declines in the size of population, the declines in the population of working age, as well as to offset the overall ageing of a population” (United Nations 2000b: 5).

The idea manifested itself mainly in research on scale of migration needed to offset demographic trends and re-examination of government policies concerning migration. The comprehensive studies on various aspects and evaluation of this solution in reference to Europe are presented by Coleman (1992) and Feld (2000).

In 2000 the United Nations took up the issue again. Although it was not new, the direct addressing the matter by the Population Division in the United Nations Report from March 2000 (*Replacement Migration: Is it A Solution to Declining and Ageing Populations?*, further also referred to as Report, United Nations Report or United Nations 2000b) gave birth to broad debate about its potential feasibility, but also about the rationale of such simulations.

### 2.1 Critique

According to Coleman (1992) the need for immigration in some developed countries in the context of the aforementioned demographic trends is motivated by three main factors: need for care of ageing population (directly by services and indirectly by income tax revenues to provide appropriate pensions), mismatch between demand and supply of labour on the domestic labour markets and need to rejuvenate population of working (which is beneficial for productivity). From detailed analysis of both demographic and economic features of the population he concludes the EC countries have significant reserves of the labour force among unemployed and inactive, and that specifics of the labour demand make large scale legal movements by migrants from less developed countries into the European labour market unlikely. There exist labour shortages in Europe, but they concern professional workers who comprise only a small part of the potential flow.

As far as population size and structure are concerned migration proved to have little effect on them, considering realistic levels of net inflow to the countries with sub-replacement fertility. In Coleman’s opinion, the EC shouldn’t need increased immigration to satisfy quantitative work force deficiencies at least for the next ten or twenty years (which is ten years from now); social security problems caused by ageing shouldn’t necessitate it either. In

the long run they can only be rectified by appropriate fertility. Nevertheless, changes in pension systems and in assumptions about retirement age and work force participation in later life can be more applicable than additional migration streams. As for ageing alone, in face of current developments (nothing has changed here) it cannot be avoided no matter fertility.

Feld's (2000) conclusions are generally consistent with Coleman's. He analyses closer various aspects of immigrant's performance on the labour market due to its ongoing changes, emphasizing also potential mistake of those fearing labour shortages due to trends in labour force development and possible/likely productivity gains that can more than compensate for the contraction in the working population. Also the structural changes on the markets (concerning both labour and technology) make it possible, that the developed countries may not suffer labour shortages, even in their work force was to diminish. He puts more stress on the need for structural changes in social security system.

Neither Coleman (1992) nor Feld (2000) consider the reluctance of citizens of the EC to take up certain jobs, also temporary, for example in agriculture, construction, industry, tourism, elderly care, cleaning etc.

A critique of some aspects of the concept from technical/practical point of view can be found in Blanchet (1992). He shows that any attempts of regulating the age structure of a population through migration motivated only by short term considerations can postpone the experienced problems which will come back, aggravated, anyway.

## **2.2 United Nations' perspective**

The United Nations in its Report take up the issue, already present in the demographic literature, of the below replacement fertility rates, lengthening life expectancy and their implications in populations of the selected developed countries, and migrations as a tool to prevent the negative (?) demographic trends. It is surprising, however, that the study doesn't refer to earlier development of the concept and related critical remarks.

In short it discusses the process of population ageing, which appears to be a continuous and universal process in developed countries - a straightforward result of both fertility and mortality declines (resulting in increased longevity of the ever smaller populations). In recent years, this issue together with population decline has received renewed attention in developed countries, because of the continued below replacement fertility and on-going decrease in mortality. Their effects are going to be deepened by baby boom generation approaching retirement age. Both population decline and ageing are perceived to be negative.

And although the “[United Nations] Report is careful not to characterize them as problems, it strongly suggests that they are. (...) While the authors never say so exactly, the reader is invited to conclude that (their) consequences are decidedly negative” (Espenshade 2001: 385), and so are the phenomena dealt with in the Report.

Population size and age–sex structure of any country depends on three demographic components: fertility, mortality and international migration. Because any attempts to increase the mortality, are out of the question, in theory there can only be two ways remaining of retarding changes: reversal of declines of fertility, and positive net migration. As far as the fertility is concerned, the recent experience of its low levels makes “few believe that fertility in the most developed countries will recover sufficiently to reach replacement level in the foreseeable future” (United Nations 2000b). According to the Report even most optimistic scenarios for fertility course wouldn’t change too much the rapid decline of the potential support ratio (PSR, the ratio of the working-age population [15 to 64 years] to the old-age population [65 years or older]) by the year 2005. Therefore only the second option – international migration might at least partly offset population decline and population ageing, according to the authors. And the most likely it is this line of reasoning to be blamed for a great deal of misunderstanding around the Report. The main body of the Report is built from theoretical some sort of what-if-consideration. These hypotheses were understood, however, as an recommendation to survive in the future, and the misunderstanding raised loads of questions, doubts and confusion concerning possible future directions of the world’s development.

Building upon the medium variant of the 1998 Revision of the United Nations World Population Prospects (United Nations 1999 a, b, c), and setting different migration goals Report makes an effort to evaluate future migration scenarios and population levels up to the year 2050 in eight countries and two regions (namely France, Germany, Italy, Japan, Republic of Korea, Russian Federation, United Kingdom, United States, Europe and the European Union). Medium variant of the United Nations’ population projection (United Nations 1999 a, b, c) constitute scenario I; scenario II is formed by the same projection but amended by assuming zero migration after 1995. Scenarios III – V compute the number of migrants required to maintain the size of a total population, the size of the working-age population (15 to 64 years), and the potential support ratio (PSR) respectively, on the highest level they would reach in the absence of migration after 1995.

During the first half of the 21st century, the populations of most developed countries are projected to become smaller and older as a result of below-replacement fertility and increased



longevity; in the absence of migration, the declines in population size will be even greater than those projected and population ageing will be more rapid (see results of scenarios I and II).

Results presented as scenario III show that “for France, UK, US and the European Union, the numbers of migrants needed to offset population decline are less than or comparable to recent past experience. While this is also the case for Germany and the Russian Federation, the migration flows in the 1990s were relatively large due to reunification and dissolution, respectively. For Italy, Japan, the Republic of Korea and Europe, a level of immigration much higher than experience in the recent past would be needed to offset population decline.” (United Nations 2000b: 93) Additionally “the numbers of migrants needed to offset declines in the working-age population are significantly larger than those needed to offset total population decline” (United Nations 2000b: 94).

“The levels of migration needed to offset population ageing (i.e. maintain potential support ratios) are extremely large, and in all cases entail vastly more immigration than occurred in the past. Therefore, maintaining potential support ratios at current levels through replacement migration alone seems out of reach” (United Nations 2000b: 94). And it is these extraordinarily large numbers of migrants required that may be a signal that the results presented in the Report are not any policy advice but a demographic exercise. Even though there are many statements<sup>1</sup> implying that the scenarios might be a realistic solution to demographic problems, the lack of any analysis of how to implement them seems to be sufficient to conclude that they are not any recommended solution.

Report strongly suggests that decreasing potential support ratio is a great danger. It says that fertility shouldn't have significant impact on the PSR in the discussed countries and theorizes that the potential support ratios could be maintained at current levels, without any migration after 1995, by increasing upper limit of the working-age population to roughly 75 years. (Maintaining potential support ratios at current levels is discussed only for scenario II; the idea is not developed further.)

The Report concludes with the statement that “the new challenges being brought about by declining and ageing populations will require objective, thorough and comprehensive reassessments of many established economic, social and political policies and programs. Such reassessments will need to incorporate a long-term perspective. Critical issues to be addressed in those reassessments would include: (a) the appropriate ages for retirement, (b) the levels,

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<sup>1</sup> Like „whether those larger numbers of migrants are within the realm of options open to Governments depends to a great extent on the social, economic and political circumstances to the particular country or region”.

types and nature of retirement and health-care benefits for the elderly, (c) the labour-force participation, (d) the assessed amounts of contributions from workers and employers to support retirement and health-care benefits for the increasing elderly population and (e) policies and programmes relating to international migration, in particular replacement migration, and the integration of large numbers of recent migrants and their descendants” (United Nations 2000b: 95).

### **2.3 Critical assessment of the United Nations Report**

Most of the literature thriving on a base of the United Nations Report, like the Report itself, doesn't refer to the arguments of Coleman (1992) and Feld (2000) (see section 2.1) either. The articles, to which I also include these that appeared before the Report but seems to be in line with the debate in the successive literature or the Report itself, can be arranged within a few classes.

One of these classes could be made of both synopsis of the United Nations study possibly with stress put on a particular country or a group of countries or/and extensions concerning migration policy/attitude (for example Bermingham 2001; Orzechowska 2002). Some of them also refer to theoretical situation on the labour market from today's perspective, assuming the population forecast came true. The papers of this kind (just like the United Nations Report) happen to be misunderstood, as they are interpreted as policy suggestions, or expected future prospects rather than numeric and purely academic extensions, based on certain conditions, of the observed demographic trends. To this group I would also include the researches that analyze data for other countries, often using tools more sophisticated than United Nations (see for example Habcicsek, Tóth 2002; McDonald, Kippen, 2000; McDonald, Kippen, 1999).

Another class can be easily constituted from the readers who, for some reason, took the United Nations' simulations seriously, and tried to imagine what could happen if they were to be put into practice. Concerns about the carrying capacity of the planet in these articles look much like Malthusian predictions (see Abernethy 2001; Meyerson 2001). No matter what one thinks about such an attitude there are a few important questions arising from this group. One of them is: why is population decline so dangerous? The other could be: why is it considered as a problem? The questions touch fundamentals of the analysis, but they are not answered in the Report.

The last class gather both supporters and opponents of the Report, but what allows to put them in one group is their reserve to the matter. They seem to understand better than others the character of the United Nations' document. While defending it they show awareness of its hypothetical nature and while criticizing the document they focus on methodological or/and technical shortcomings rather than on absurdity of assumptions or conclusions (see Bouvier 2001; Espenshade 2001; Coleman 2000).

The lecture of the articles from the last group is an educational experience and perhaps it's worth getting into the discussion from this point. It helps to gain an objective, wide scientific perspective that is missing in the United Nations Report and many successive documents.

In his comment Bouvier (2001) explains of what character are the United Nations' documents (even if it is not expressed directly) and how they should be read. He also sheds light on the nature of the phenomena addressed in the Report and makes an attempt to evaluate the on-going changes.

Espenshade (2001) criticises the Report for its arbitrariness and too narrow perspective. According to him there should be no surprise concerning the results of the United Nations Report (regarding the outcome population structure) if one bears in mind assumptions made. It is obvious that the author of any study is free to choose postulates for its work but they are obliged to discuss the rationale of the choice preferably referring to the existing literature. It doesn't apply, however, to the authors of the Report. The other major shortcoming of the document is purely demographic perception of the considered solutions. The phenomena addressed in the United Nations document (called problems, with no justification though) are demographic in origin, but their discussion there "fails to recognize the enormous scholarly literature in economics and the other social sciences" (Espenshade 2001: 387).

Comprehensive critique of the Report's conclusions in relation to the UK can be found in Coleman (2000). Author criticises both the concept and the way the projection was performed. He points out that the style of the document can lead to unqualified statements concerning demographic state of affairs and migration, and the way of release that resulted in loads of misunderstanding around the subject. In his opinion the quality of data (not the latest – in relation both to migration streams and demographic indicators) and methodology changed the projected numbers of migrants required to achieve certain demographic goals. Finally, he argues that narrow demographic perspective can undermine the rationale of the simulations like the Report especially when data are read as numbers without any inquiry what is behind (as an example he uses theoretic retirement ages and real estimated from

available data which turns to be nearly 10 years lower for the UK). In conclusion Coleman suggests diversifying the (United Nations') approach to the problems addressed in the report (in particular ageing) and "moving away from concentration on what was already known to be an unsuitable demographic and social expedient in the form of mass migration, and address a broader repertoire of more realistic responses" (Coleman 2000: 33).

The questions resulting from the second class are crucial in understanding the problem addressed in the United Nations Report, or more precisely the phenomena that were called problems there. Is population decline a problem indeed? If so, the document should include a clear explanation of why this is the case. There are some premises like organization of certain economic institutions built upon the assumption of pyramid-shape population age structure, but voices revealing positive sides of population decline (especially in the developed countries "suffering" from the decline) can also be heard (for example Burke 1997, 1999; Bouvier 2001). It's not the point to decide on which is correct but when suggesting it's positive or negative the main arguments of both sides should be considered. The same applies to population ageing and other aspects of the current demographic change. Although the questions are serious, the answers are often not, or at least not complete both in the Report and in the literature.

Studies in the first group often extend issues addressed in the Report into the real-life conditions the concept would have to face while implementing. It enforces verifying economic, political and social policies that might play a crucial role in such operation. Good example of the article of this kind is Orzechowska's thesis (2001). She considers both possible consequences of demographic trends, and current population and migration policies in EU countries. She draws attention to the worrying tendencies on the labour market concerning primarily rapid decline in the labour force in a few countries (namely Italy, Spain, Germany) within the time covered in the United Nations Report. Similar tendencies, though of diverse timing and intensity, can be expected for other countries discussed in the document.

In her study, Orzechowska, basing on economic theory, refers to potential macroeconomic consequences of the demographic trends. The idea is interesting especially that appears very seldom in demographic studies. She also considers some qualitative aspects of the labour force (I am going to refer to in the next part of this text) and potential political feasibility of the replacement migration. Lecture of the latter policies makes her think that due to necessary numbers of migrants (according to United Nations Report), the migration does not seem to be realistic solution to ageing and declining of labour population and some other solutions should/will have to be found. She anticipates that some of them might be reserves in

high unemployment and relatively low activity levels in Europe (reserves especially among women and the old) and regional differences (more on mobility and its increasing see Orzechowska 2001).

McDonald and Kippen (1999) present an interesting study of population ageing in relation to Australia. They explain “the suddenness of the emergence of ageing as an issue by the lack of concern expressed about it in the 1975 Report of the National Population Inquiry (the Borrie Report)”, caused by too high levels of birth rates and death rates assumed, short term of the projection and important social or/and economic changes occurring since mid-1970s that made ageing an issue (McDonald, Kippen 1999: 47). Authors interpret some economical means (mainly concerning pension systems and their rules) as important changes that exacerbated the demographic trends, and clarify that “the definition of ageing as a problem is not simply driven by the fact that the population is getting older but also by the ways in which we have organized institutions in the society that relate to ageing” (McDonald, Kippen 1999: 48). Their study seems to be more complete and coherent. One of the interesting conclusions is that the impact of immigration on ageing in the first 25 years of projection is larger than the impacts of fertility and mortality (and opposite afterwards), and that it is subject to diminishing returns (in another words each additional 50 000 immigrants has roughly half the impact on ageing of the previous 50 000). Thus, “levels of immigration above a particular number per year (specific for countries) add large numbers of people to the population with little impact on the age structure” (*idem*: 50). They also discuss weak grounds of using PSR as a tool describing dependency in a society and opt for more sophisticated measures. Interesting are also proposed ways, alternative to demographic (i.e. migration), of addressing the problem. New methods of training workers also from the older age groups, increasing labour force participation rates and change in the incentives created by pension systems are interesting options in the discussion. The analysis of such ways is evidently missing in the United Nations Report.

### **3 Replacement migration – a critical approach**

Current demographic trends in the developed countries are an issue of growing importance. Below replacement fertility rates and increasing life expectancies resulting in the structure of population never faced before endangered the performance of the institutions (mostly economic) based on old population parameters. Increased ratio of the older to the younger (working) population changes the settings for pension system, and possibility of population, and also labour force, decline raises questions about the future of the labour market and economic growth. Both phenomena are going to be even strengthened by the baby boom generation approaching retirement ages together with declining cohorts of the young entering the labour force. Therefore the Report takes up a burning issue, although its strongly suggestive, but not direct style turned out to be misleading. A clearly formulated purpose of the study and justification of the suggestions included in the study (for example why should the processes in question be counteracted) might help to better focus on the problem rather than on plenty of possible interpretations and the study itself. Reference to and consideration of preceding analyses (e.g. Coleman 1992; Feld 2000) might suggest more sensible assumptions and methods, and, therefore, make conclusions more practical.

United Nations Report, like many papers referring to population change related situation on the labour market, sketch black, gloomy and generally depressing vision of the later, surprisingly not even mentioning what the danger consists in. The often quoted ‘slogans’ concerning decreasing of the labour force don’t settle the matter, as the decrease in the labour force hasn’t been proven to be obviously unequivocal with the disaster in the economy. Even if it lays beyond the scope of a text a reasonable explanation of the suggestion should be included in such discussion. It is also surprising that in the United Nations Report, the authors trying to deal with ‘unavoidable’ economic problems in the future don’t take into consideration any solutions other than demographic. A trace of the others could be simulations of the change in retirement age necessary to maintain current PSRs, assuming zero migration after 1995; but the idea wasn’t given too much attention, and wasn’t further developed. Again, it might have not been their objective but at least a word of explanation should have been said about this. In various aspects the Report seems to be incomplete.

Many of the papers exploring the concept of replacement migration, although add something to the discussion, repeat the United Nations’ mistakes. The phenomena that can be observed are undoubtedly demographic in nature but their consequences are not; they are

rather social, economic and political. In this sense the phenomena are interdisciplinary and should be dealt with so. Only few authors show awareness of it, and only few points at solutions other than demographic.

### **3.1 Economic perspective**

Some attempts to analyse economic aspects of population ageing and decline can be found in Orzechowska's thesis (2001). She tries to evaluate the consequences of demographic trends from the perspective of macroeconomic theories (neoclassical growth theory, aggregate demand, and Modigliani's and Brumberg's life-cycle analysis). Referring to neoclassical theory she says, that according to the "theory of optimal growth, a reduced population growth, associated with capital deepening<sup>2</sup>, should lead to higher per capita incomes" (Orzechowska 2001: 22). However, it seems that this neoclassical theory provides an explanation and measures of per capita income only by assumption that everyone in the model is working. Put differently, it means that income is divided by the number of the working persons, which is not the case in described developed countries. Hence, there is no direct equivalence between the cited model and the demographic problems, so the model shouldn't be used in this case without additional assumptions. To evaluate the influence the decreasing labour force should have on per capita output it would be necessary to measure the relative strength of decrease in labour force and increase in the number of people that don't work but gain from the national product, and then evaluate the net result of those two. Unless the decrease in labour force means also population decline, the cited model (with no change in technology) will predict decline in per capita output. The other two theories give some intuition but further research would be necessary to get something more than just intuition from them.

Apart from macroeconomic perspective the field that should be examined in detail is pension system. The viability of the system itself is of major concern, but what also shouldn't be neglected are its inevitable connections with and influence on labour market, mainly through incentives, savings/investment and capital market. Extensive analysis of them, for selected countries, can be found in Gray and Weig (1999), with no reference to migration however. In the existing literature on pension systems there is a tendency to look for a solution of the problem of viability of the systems in institutional changes which adjust the systems to the current, and possibly future, demographic conditions, rather than in alteration of conditions (no matter costs), so that the system could operate in the setting it was designed

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<sup>2</sup> Capital deepening is an investment, which results in an increase in the capital-labour ratio.

for. As the demographic trends don't seem to reverse in the foreseeable future, it seems to be more reasonable direction. It is worth noting that the appropriately designed pension systems, already implemented in a few countries, may not only provide themselves solvency, but also, through incentives, improve the situation on the labour market.

The other noteworthy economic field that should be thoroughly studied is labour market. Most of (if not all) impact of population decline, ageing, change in structure or its other development on economy goes through this channel, so it is surprising that there is so little about this market in the literature exploring replacement migration, or more specifically its rationale. Some aspects of population ageing and decline, especially in working age, and their impact on the labour market are presented in the paper by Kotowska (2003). Had it been connected with the idea of replacement migration one could easily see that the latter is not an obvious solution to the expected problems. From her study one can conclude that there are reserves of the labour force, mainly in the unemployed and in persons in working age but beyond the labour force, especially from the older age groups, in the investigated countries, but labour markets in the countries may/do need adjustments to encourage them to the market. Such a consideration raises doubt about motivation of enforcing immigration – if markets cannot absorb all its domestic labour force (the unemployed) or use it without adjusting, can they absorb/use any additional from abroad? As long as we look at the quantitative results we can freely add numbers of migrants to the numbers of domestic people (workers) and say they can substitute for those who are missing for the preferable performance of the economy, or for certain levels of the indicators we look at. However, there is still flaw on this line of reasoning. If we look at the demographic indicators we should ask ourselves a question why certain levels of them are so important to maintain. Considering for example PSR (or old age dependency ratio – i.e. the ratio of the number of old to the number of persons in working age) one must think what the rationale of this action is. Does it mean anything? Why is growing number of the old so worrying? Isn't it rather the problem of economic dependency (on the labour force)? (Endangered viability of the pension system is a frequently mentioned problem, but it seems to have more to do with the old to the working ratio than with the ratio of the old to a certain age group.) And if so, and we know why certain indicators are desired not to change, we should refer back to the issue whether the migrants can indeed substitute for the labour force. Isn't it necessary to include also the educational profile of the migration stream? Why shall migrants be better than domestic workers, who fruitlessly look for a job? It would be difficult to model but it requires some explanation, at least touching the issue what the point is in considering that migrants might change anything. The other question might



concern the domestic unemployed. Even if migrants could substitute for them in qualitative terms mentioned above, can they be simply substituted for? Are we, trying to solve a relatively short term problem, not raising a long term collapse?

It appears that for the time being replacement migration has been some solution only in purely quantitative considerations.

The questions, however, led us back from quantitative to qualitative aspects of the matter, and made us consider the quality of the labour force rather than the size of it. A trace of such approach can be found in Orzechowska's thesis (2001). She considers possible change in productivity of the labour force with its potential economic consequences. From the cited papers she concludes that as far as influence of population ageing on productivity is concerned there is no consensus. Referring to the neoclassical growth theory, reduced numbers of workers should result in higher capital investment per worker and, hence, increase their productivity. This is, however, a purely quantitative approach. According to the theory, the productivity of the worker depends only on the number of workers in total, and the amount of capital. It is entirely independent of the workers skills or the type of job (responsibility), which should be taken into account when using the theory in the real life situations. In jobs requiring physical strength and speed productivity can be expected to decrease, which is not necessarily the case in jobs where experience and related abilities are important, even though the old may be less capable of adapting to new production techniques and procedures ("many studies show that physical ageing makes a positive contribution to worker's productivity in earlier work years, then levels off and eventually becomes a negative factor, while increased job experience and maturity generally continue to exert a positive influence throughout one's employed lifetime" Orzechowska 2001: 30). Therefore the net effect of population ageing on productivity cannot be easily evaluated, although undoubtedly older workers may find it more difficult to adapt to increasing dynamics of the labour market and its growing requirements (more see in Kotowska 2003).

The other attempt of quantitative approach might be for example differentiating between older and younger or skilled and unskilled workers, which leads to interesting conclusions concerning quality of the labour force. One negative aspect of the, already observed, labour force ageing is that "limited renewal of the population of working age and its ageing may lead to the decline in skill level of the labour force, since young people served usually as source of new skills. The ageing populations may also experience slower technological change, because their creativity that promotes breakthroughs is more characteristic for younger cohorts – entrants to the market" (Palmer, Gould 1986; after Orzechowska 2000: 31). For the

same reason labour force should be less mobile, flexible and adaptive. Other associated aspects can be dual market theory and statistical discrimination<sup>3</sup> – older people are perceived as the labour force of “worse quality” and, supposing they are not highly qualified or specialised (valuable in the sense of human capital accumulation<sup>4</sup>), they are likely to be hired only for the low paid jobs, and vulnerable to dismissals connected to the business cycle (so called second sector of the labour market). Employers are reluctant to bear costs of selection and education of the workers who are more vulnerable to health problems and more likely to leave the job earlier than average. From this point of view, labour force ageing is a negative process and it would be good to counteract it somehow. However, by the same argument inviting migrants is a poor solution. Unless they can prove their good qualifications (which is relatively rare) as minority group they are thought to be unskilled and, if at all, they are employed, like the older, only/mainly for low paid jobs and easily dismissed (more see in Ehrenberg, Smith 1999). Therefore, efforts to change employers’ attitude towards the old and improving performance of the institutions that might raise mobility (but also skills) of the old seem to be more reasonable to counteract negative effects of labour force ageing. Evaluation of such efforts and desired direction of the latter, with reference to potential labour force shortages in the future, can be found in the paper by Kotowska (2003).

Talking about the lower end of the labour market (second segment) one should constantly have in mind the distinction between legal and illegal immigration. In the discussion of pro and cons of liberalisation of migration policies the claim of shortages of labour in the second segment of the labour market, due to “dirty” jobs, that the native population wouldn’t accept, is often key argument of the supporters. They seem to forget, however, that most of this phenomenon refers to shadow economy, as in many European countries policies/procedures concerning employment of the foreign workers are strict and complicated, and often make the employment of the immigrant more costly than employment of the native. Therefore the employment of immigrants concerns first of all specialists (whose work is worth more than the costs), and the employers of the cheap labour will often hire natives instead or immigrants illegally (which doesn’t solve the problem of the shortages in question) and employment of the immigrants will perform on much smaller scale that is often perceived/believed. Only assessment of adequate data for specific countries would allow to evaluate the real importance of this argument, in discussion, however, it seems overvalued.

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<sup>3</sup> Evaluating characteristics of the person basing on average characteristics of the group, the person belongs to; more on this see Ehrenberg, Smith 2000.

<sup>4</sup> Simplifying, it means that it would be very costly to train a new worker to perform their job.

It's worth noting here, that the above reasoning doesn't allow for capital endowment and technological progress. Their improvement, even if difficult to be kept up with for older groups of the labour force, may more than offset potential negative effects of ageing and population (and labour force) decline.

### **3.2 Political and sociological perspective**

The issues that also shouldn't be neglected are of both political and sociological nature. Discussing the matter of possible migration one cannot forget about possible assimilation problems and sociological tensions. No matter how beneficial the inflow of migrants might be, in practice the migrants themselves turn out to be both politically and socially unpopular group, which makes them more vulnerable to discrimination on both official and unofficial level (seen for example in eligibility restrictions and unemployment rates respectively; for more on this see Coomans 2002). Therefore both these aspects should be subject to thorough examination.

As far as political aspects are concerned, careful insight in recent population and migration policies might be not only helpful but also justifying grounds of such discussion. Zoubanov's article (2000) implies that the governments (even in the countries with serious "negative" demographic changes) don't show too much consideration to the matter, and many of them don't find the changes the problems, and even if they do, they often take no action against them. If so, having in mind that they are responsible for the policies, all discussion can be only an academic debate. I am not saying a useless debate, but it should be stated clearly that the documents like the United Nations Report are supposed to be a warning rather than a tool to solve anything.

No matter of governments' attitudes towards population change, in practice there exist national programs to attract immigrants. They are targeted to specialists and people with higher education who might be a valuable in the sense of human capital (examples of such programs can be found in Apap 2003). The practice shows, however, that they are so selective, that little changes in certain states' migration status quo, featured by rather restrictive immigration policies (more on migration policies and trends see for example Salt 2001; wide theoretical perspective of political settings of immigration (including economic aspects) can be found in the study of Gaston and Nelson (2000), theory of migration politics is presented in Freeman 2002).

## 4 Conclusions

Recent population trends in most of the developed countries are a source of new questions, worries and challenges for people who deal with population related issues – demographers, sociologists, economics, officials in the governments, and many others. For the time being, the issue seems to be a major concern only for demographers, and perhaps this is the answer to the question: why most of prescriptions to preserve population from negative results of the trends are demographic?

Looking from the perspective of most of fields, other than demography, one can conclude that the concept of replacement migration needs to be expanded. Whether labour market will need additional inflow of labour force, or not can only be subject to speculations. Since we cannot predict future course of productivity, we also cannot say if the future labour force, which we can predict to some extent, will be sufficient or not. For the last years/decades productivity proved to grow faster than the labour force decreased. So, maybe an attempt to substitute the missing labour force in the future is trying to solve the problem that will never appear. If it was to appear, the potential of the labour force (in the unemployed and inactive) in Europe can be a possible source to meet shortages on the labour market for the next few decades, and even if it didn't suffice the far going institutional changes on this market would be needed to absorb the foreign labour.

As for the pension systems, due to already mentioned labour market conditions immigrants make little contribution to receiving countries' pension funds. Institutional changes of these systems seem to be both more realistic and more effective.

Apart from all arguments above, political and sociological issues may alone make the replacement migration concept purely academic. From today's perspective the political approach to migration inflow in Europe doesn't herald any radical shift to welcome immigrants. Few countries have undertaken policies to attract potential workers with higher education, but the enforced selection schemes are too strict/selective for most of the potential immigrants. Little indicates it is going to change soon. Sociological issues are not so evident yet, but the increasing social tensions and official or/and unofficial negative phenomena concerning migrants may suggest that they may become more serious problems if the migration were to grow to bigger scale.

It is obvious that the professionals look at any matter from the perspective of their own discipline, however, we have to remember that demographic modelling cannot be the art for

art's sake. Hypothesizing can help to imagine the scale/strength of a phenomenon but we shouldn't confuse our hypothetical scenarios with reality and forget that the isolated effects of the examined phenomena in the model ceased to be isolated when we want to get back to real life situation, and we want to draw constructive conclusions from our model. To do it in this case one would have to take to consideration all mentioned aspects (i.e. economic, political and sociological), and possibly also other, that are influenced by the population changes. Only having them examined one by one, in terms of what effects on them certain actions may have, some solutions/suggestions could be inferred.

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