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ABSTRACT

Labour Mobility, Redistribution And Pensions Reform In Europe*

In this Paper, we discuss the main characteristics of European mandatory pension systems and the implications for these systems of increasing factor mobility. In particular, we expect the extent of redistribution (both intra- and intergenerational) in national pension systems to decrease. The latter result should hold true even in the presence of mobility limited to some particular subgroups in the working population. The present Paper explores this issue by considering three types of mobility: not only mobility at the beginning of the working life, but also mobility during the working career and mobility at retirement.

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NON-TECHNICAL SUMMARY

The future of the public pension systems in the European Union (EU) is nowadays a widely discussed topic. Unfortunately, the debate can be qualified as a rather shallow one, because it only addresses a limited number of questions. In the United States, on the other hand, much writing – some of it quite influential – is devoted to the old age crisis even though the crisis there is slightly less severe than in most of the member states of the EU. On the issue of the viability of the public systems, European economists and politicians can be classified into two broad categories. Those who think that the present systems are more or less fit for the future, and those who think that we are heading for serious financial trouble – if not in the short, then at least in the medium run. On the face of this opposition, there seems to be little common ground between the two groups. At least on one issue, however, most of the analysts seem to agree, namely in their neglect of individuals' mobility on the future of the pension systems. Usually, critics tend to consider the future of an isolated pension system, or at best of a given country's multiple systems while ignoring or underestimating the potential for increased inter-country and inter-system mobility.

We discuss the main characteristics of European mandatory pension systems and the implications for these systems of increasing factor mobility, with a particular emphasis on labour mobility. While it is undoubtedly true that labour mobility between countries is rather limited at the moment, it is more than likely that it will increase. In the past, individuals' mobility was inhibited by cultural and language differences, but also to a non-negligible extent by regulatory and legal limitations. Nowadays, these limitations on job mobility are being dismantled in the wave of a reduction of public intervention and the creation of a true single market. Obvious exceptions are some government jobs that we could call 'strategic', as well as occupations in the legal profession. Cultural and language barriers are also starting to become less relevant as people are more frequently exposed to foreign languages and cultures from a very young age, notably through student and apprentice exchange programmes. The results of these changes can already be felt today, particularly in those segments of the workforce that either necessitate very high skill levels, or relatively low ones. Hence, we not only have to study the question of whether labour mobility will increase and therefore have an impact on the viability of the pension systems, we also have to consider the question of whether this mobility will continue to evolve differently for different population segments, and what the consequences of such an evolution will be.

In the present Paper, we focus on the issue of mobility at the beginning of the working life, where an individual has to make a once and for all locational choice when they enter the labour force. The question we are mainly

interested in is whether there is room for strategic relocations of individuals at the beginning of working life. We can also put the question somewhat differently by equivalently asking whether there are sufficiently strong financial incentives built into the various retirement income systems that could induce people to move from one country to another. Such incentives for mobility can arise as soon as some segments of the labour force are treated differently in different countries. Our interest does not stop at this pure microanalysis. We also explore the impact of such strategic relocations on the redistributive patterns of the various national pension systems. By redistributive patterns we understand both inter- and intragenerational redistribution of all kinds, i.e. not only as a function of income but also of other family characteristics.

Moving at the start of working life is not the only kind of mobility with implications for social security. Workers can move in the middle of their working life; the portability of social security and other pension schemes can foster or more probably restrict this type of mobility. Then, there is the mobility at the end of one's working life. Retirees can be attracted by warmer weather or a cheaper lifestyle and accordingly move to another country. This type of mobility may have some consequence on public revenue depending on the tax structure. Finally, there is cross-border mobility, which occurs when individuals work and live in two different adjacent countries. We will also deal with these alternative types of mobility.

1. Introduction

The future of the public pension systems in the European Union (EU) is nowadays a widely discussed topic. Unfortunately, the debate can be qualified as a rather shallow one, because it only addresses a limited number of questions. In the United States on the other side, much writing — some of it quite influential — is devoted to the old age crisis even though the crisis there is quite less severe than in most of the member states of the EU. To explain this statement, one should keep in mind that compared to the majority of European countries, the US devotes considerably less resources to unfunded public pension systems. Also, Social Security — the main public retirement program — can rely on a non-negligible trust fund. Furthermore, private funded pension schemes are widespread, and people generally retire at a much higher effective retirement age. Even the most pessimistic forecast of the finances of the US Social Security program seem rosy relative to what can be reasonably expected in a number of European countries. In that respect Aaron [4] notes that "even if no legislative changes were made, 70 to 75 percent of benefits provided under current law could be paid indefinitely" and adds: "To suggest that social security is in crisis is to engage in Orwellian doublespeak". One could not surely write that about most EU countries.

On the issue of the viability of the public systems, European economists and politicians can be classified into two broad categories. Those who think that the present systems are more or less fit for the future, and those who think that we are heading for serious financial trouble, if not in the short, at least in the medium-run. On the face of this opposition, there seems to be little common ground between the two groups. However, at least on one issue, most of the analysts seem to agree, namely in their neglect of individuals' mobility on the future of the pension systems. Usually, critics tend to consider the future of an isolated pension system, or at best of a given country's multiple systems while ignoring or underestimating the potential for increased inter-country and inter-system mobility. Doing so, the authors neglect an entire spectrum of issues that have the potential to induce large changes in the returns individuals can expect to get from their pension contributions. Furthermore, the consequences for the public systems themselves are also far from negligible.

In this paper, we discuss the main characteristics of European mandatory pension systems and the implications for these systems of increasing factor mobility. While it is undoubtedly true that labor mobility between countries is rather limited, it is more than likely that it will increase. In the past, individuals' mobility was inhibited by cultural and language differences, but also to a non-negligible extent by regulatory and legal limitations. Nowadays, these limitations on job mobility are being dismantled in the wave of a reduction of public intervention and the creation of a true single market. Obvious exceptions are some government jobs that we could call "strategic", as well as occupations in the legal profession. Cultural and language barriers are also starting to become less relevant as people get more frequently exposed to foreign languages and cultures starting at a very young age.

[4] Aaron and Shoven (1999).

The results of these changes can already be felt today, particularly in some segments of the workforce. For example, young college and university graduates are more mobile than their less-educated counterparts. The reasons are multiple. First, they generally have a better language training and a more frequent exposure to other cultures (e.g., through the Erasmus and Socrates student exchange programs of the EU). Second, they generally work on jobs that are easier to relocate. The localization can be made easier either by the characteristics of the job itself (e.g., a computer programmer telecommuting to work), or alternatively by an international working environment (e.g., the customer support machine-tool specialist with a European or even worldwide customer base). [5]

Hence, we do not only have to study the question of whether labor mobility will increase and therefore have an impact on the viability of the pension systems. We also have to consider the question of whether this mobility will continue to evolve differently for different population segments, and what the consequences of such an evolution will be.

In the present paper, we focus on the issue of mobility at the beginning of the working life. The questions we are mainly interested in are whether there is room for strategic relocations of individuals at the beginning of the working life, and whether such mobility has the potential for changing the redistributive patterns of the various national pension systems. By redistributive patterns we understand both inter- and intragenerational redistribution.

Moving at the start of the working life is not the only kind of mobility with implications for social security. Workers can move in the middle of their working life; the portability of social security and other pensions schemes can foster or more probably restrict this type of mobility. Then, there is the mobility at the end of one's working life. Retirees can be attracted by warmer weather or cheaper life and accordlingly move to another country. This type of mobility may have some consequence on public revenue depending on the tax structure. Finally, there is the cross-border mobility which occurs when individuals work and live in two different adjacent countries. We will also deal with these alternative types of mobility.

The structure of the paper is as follows. In section 2 we illustrate some of the core features of European pension systems and compare them to the US when useful. We also discuss some issues relating to mobility in the middle and at the end of the working life. In section 3, we present some insights into which paths towards reform European governments can take. Section 4 represents the main thrust of the paper and deals with the direct implications of mobility on various provisions of pension systems. We use findings from the literature on fiscal federalism to illustrate some of the potential effects of mobility. Section 5 addresses the other types of mobility within the lifecycle as opposed to that at the beginning of the working life. Finally we conclude the paper with some comments.

[5] On the contrary, immigration from outside EU tends to cater to unskilled workers. But this is not the concern of this paper.

2. Characteristics of the European pension systems

Before proceeding further, four points are worth emphasizing. They pertain to the differences regarding pension systems between the Federal US and the Confederal EU. First, compared to the US federal social security structure, pensions in the EU are the responsibility of national governments. Second, within the EU, there are important differences across countries in the size and the organization of pension schemes. Third, in the whole debate over the future of social security in the US the scope is that of the national borders. In the EU, there is a well-founded concern that economic and political integration affects the survival prospect of each national pension system. Finally, labor mobility is known to be negligible within the EU; even within each national entity, interregional mobility is lower than across states in the US.

The first and fundamental pillar of European pension systems is mandatory and unfunded. The systems are organized under the form of a pay-as-you-go (PAYG) "defined benefit" scheme. Individuals contribute to the scheme today and in return they receive benefits when retired that are financed by future generation's contributions and based on some pension computation formula, that is not necessarily a function of past contributions. What makes the systems different across EU countries is their size and their redistributiveness. For example, the French and German systems are more than twice as important as the British system in terms of their share of GDP — close to 13 percent as opposed to 5.5. [6] Furthermore, while in some countries these systems account for a large fraction of the total income of the elderly, this is not so in other countries. [7]

Not surprisingly the second pillar (occupational pensions) is quasi inexistent in the countries that have a very strong first pillar. The same statement also holds true for arrangements belonging to the third pillar (individual retirement savings). More generally, it is fair to say that the presence of private pension arrangements is an inverse function of the generosity of the public systems. In the absence of public provision, individuals have to try to get their old-age income secured through private market arrangements, be they compulsory or discretionary.

As opposed to the public PAYG systems, occupational pensions are generally organized on a fully-funded (FF) basis. A notable exception are the French unfunded second tier pensions that are both defined benefit and entirely based on a PAYG principle, and hence rather belong to the first than to the second pillar. Another characteristic of occupational pension plans is that they can be either defined benefit, or defined contribution, i.e., the pension being a direct function of past contributions. Third pillar schemes in turn are generally fully funded and entirely based on a defined contribution basis.

From a point of view of redistribution, public pension systems are markedly different in the various EU countries. Two main levels of redistribution have to be distinguished. The PAYG nature of European public pension system has lead to what is known as the *free lunch* given away to the past and current generations of retirees. This free lunch

[6] The corresponding figure for the public Social Security retirement program in the US is 4.6 percent.
[7] See Johnson (1998).

implies an implicit government debt, the so-called social security wealth, which is particularly high in countries with generous pension schemes. In Germany and in France, this implicit debt is much higher than the explicit government debt. The French debt GDP ratio is just below the Maastricht ceiling of 60 %. If the implicit government debt is added in, the overall ratio amounts to about 160 % [8]. This redistribution from younger to older generations clearly varies across European countries. This is not without consequences as factor mobility increases.

Another source of variation across European countries is the extent of intragenerational redistribution. In some countries, there is a tight link between contributions and pension benefits according to the insurance principle of getting an actuarially fair return. In some other countries, this link is loose. Indeed, in countries such as France and Germany with contributions-related benefits, social security does not effect any redistribution; one sometimes speaks of Bismarckian regime. On the contrary, countries with redistributive benefit rules are such that the replacement ratio declines as income increases. In these countries such as the Netherlands or the UK, workers truly consider that their contributions are like taxes, namely that they don't give a right to an equiproportionate benefit.

But intragenerational redistribution can also take on different forms. For example, early retirement provisions can also cause major redistribution of income. Indeed, in countries such as Belgium where implicit taxes on continuing work beyond the time of first eligibility for early retirement benefits is close to 80 percent, the system operates a clear redistribution towards individuals retiring early.[9]

The effective retirement age also varies across European countries. It is indeed striking to observe that in Europe, the current and expected demographic parameters are not terribly divergent. The statutory retirement ages are also quite similar. What varies a lot is effective retirement. To capture this notion Gruber and Wise (1999) have introduced the concept of unused labor capacity between 55 and 65. It ranges from 67 % for Belgium to 35 % for Sweden (it is 37 % in the US and 22 % in Japan). This is mainly due to a number of both implicit and explicit incentives to early retirement (so-called “actuarial” adjustments,...), which vary wildly between European countries. These incentives are pervasive in the social security programs of countries such as Belgium, France, Italy and the Netherlands where the effective retirement age is quite low.

Furthermore, some European countries have essentially opted for a universal national pension system, while others have preferred to set up multiple ones. As a consequence, the study of the question of inter- and intra-generational redistribution finds itself complicated by the sometimes quite opposing degrees of redistribution of the various national systems.

All together these features have the consequence that in most EU countries elderly households experience an unprecendented level of welfare relative to the other age groups and relative to the past. Poverty rates are also extremly low among today retirees.

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[8] Roseveare *et al.* (1996).

[9] Pestieau and Stijns (1999).

3. Reforming the pension systems.

We have just described the main characteristics of the European pension systems that appear rather heterogeneous in four respects: size, burden on future generations, redistribution across households and retirement age. These characteristics combined with population aging and declining productivity growth explain the old age crisis that is clearly more acute in countries with generous schemes. Up to now each national government has more or less successfully addressed this crisis. In Cremer and Pestieau (1999), it is argued that the old-age crisis does not solely come from the combination of demographic aging and pay-as-you-go schemes. By appropriately adjusting the key parameters of social security systems, namely the replacement rates, the payroll taxes and the retirement age, while fostering individual or collective saving for retirement, the old-age crisis can be averted. The real issue is also and mainly political. Reforms have to go through the political process: majority voting and vested interests too often make impossible the implementation of reforms otherwise optimal from the standpoint of both intra- and intergenerational equity.

In that respect, two remarks are in order. In countries that have undertaken reforms, the approach has been to rely on the grandfathering formula, precisely to circumvent paralyzing interest groups. This can have an unbearable cost. Further, it is well admitted that a total shift from PAYG to FF system is not feasible. If the transition generation is to be compensated for abandoning PAYG by issuing an appropriate public debt, and if the benefit rule is unchanged so as to keep the extent of intragenerational redistribution constant, then such a shift would be "neutral". The government who would undertake such a reform would run an increased deficit, but this would be exactly offset by the increase in private savings from the surplus of the new pension plans. The national saving rate would not increase. In effect, the reform would simply convert an implicit government obligation to future retirees into explicit debt. This being said, most reforms, implemented or contemplated, include the development of some fully funded schemes acting as supplement and not substitute for the existing PAYG first pillars.

Discussion over the viability of existing pension systems and alternative ways of reforming them is most often conducted in the setting of national borders with no or low labor mobility. The implicit assumption is that while physical capital has proven to be quite mobile, labor may not be so mobile. Language is often the most often cited barrier to migration, but differing customs, traditions and preferences matter as well. Governments themselves may implement policies that inhibit labor mobility: regulation of house prices and rents, subsidies of declining industries, residency linked social benefits. Inefficient property markets make moving an expensive proposition. One expects that these various barriers to mobility will progressively fall under the pressure of European integration and more generally of economic globalization. It is therefore relevant to investigate the implication of labor mobility on the old age crisis.

We thus have an interesting question, namely whether a shift from PAYG to FF systems has any effect in the face of increasing labor mobility. As already noted before, a "neutral" shift from PAYG to FF does not have any effect in the absence of mobility. The same proposition implies that if before the reform there is what we call a migration

equilibrium, after a neutral reform, this equilibrium is unchanged. Any individual will face the same lifetime utility before and after the reform; there are thus no reasons for moving.

Clearly if the reform is not perfectly neutral from the viewpoint of inter- or intra-generational redistribution, then a migration equilibrium will result according to the argument developed in the next section. If the reform does not fully compensate the transition generation of retirees, the young generation of workers will face a lighter liability in the reform country (through lower implicit or explicit government debt). Retirees cannot move out but workers from other countries can be attracted by the reform country and move in. Hence the changing intergenerational redistribution patterns induce mobility. Further, recall that before the reform any individual worker was indifferent between staying in his home country and moving to the reform country. If the reform does not restitute the same redistributive pattern as that prevailing before, i.e. reduce the amount of intragenerational redistribution, high wage workers can be attracted to move to the reform country and low wage workers to move out of it.

4. The implications of labor mobility in the EU.

As announced, we now turn to the expected effects of labor mobility on the way countries organize their social security systems. As already mentioned, we realize that we are far from smooth mobility across EU countries. We believe that this will eventually occur. In any case, in a competitive market economy, capital mobility implies equalized rates of return and hence equality of wages for a given skill level. Yet and this is important for the problem at hand, there is a difference between equal wage rates and equal lifetime utilities. That difference may arise from different factors, notably national endebtment and unfunded pensions system which may benefit households when introduced and burden them thereafter.

We consider autarkic countries having each their specific pension policy and see what happens when factor mobility is allowed for. Two settings can be envisioned. In the first, countries are passive; they don't want to change their approach regarding financing (PAYG or FF), the role of supplementary pension and the type of benefit rule (Bismarckian or Beveridgean). As shown by Cremer and Pestieau (2000) in a two-country model, such a passive behavior can result in pathological outcome with all high income individuals or all low income individuals conglomerating in one country, depending on which group is mobile. In the second setting, countries react to migration and reform their pension system according to their planners' social welfare function or through the political process.

We will adopt the latter setting and assume that within each country there is a social planner with a utilitarian objective. This seems to be the prevailing assumption in the literature. First we look at the effect of mobility on the intragenerationally redistributive dimension of pension provisions and then at the effect of mobility on the intergenerationally redistributive dimension, namely the size of the social security wealth.

4.1. Intragenerational redistribution

The prevailing view is that redistribution policy is best administered by the central government, in our case the EU. Accordingly, decentralized redistribution policy causes some kind of adverse selection. In a world of perfect mobility, we would expect individual countries with redistributive programs to attract poor households from less redistributive neighboring countries and to repel rich households who have to pay for the programs. These reactions eventually make it impossible to pursue any redistribution at the national level except through some kind of cooperation among the member states. We expect these general predictions to hold even in the presence of a limited mobility of individuals belonging to some income and social groups.

The canonical model used is naturaly simple. It involves two countries producing an output using two types of workers, skilled and unskilled. Skilled workers are assumed to be mobile and unskilled workers are immobile (The opposite assumption does not change the resulting conclusion). There is a social security scheme that effect some redistribution between the two thpes of individuals. In the absence of mobilityn each country implements the redistribution that fits its welfare criterion. When there is mobility, such a policy is constrained by the constraint that the lifetime utility of mobile workers be identical. In other words, any move towards a non generous system in a country attracts migration from the other countries.

In the literature [10], one usually contrasts redistributive social security conducted without and with coordination. The former case reflects the current step of the EU and the latter a still far fetched possibility. Three findings are standard. First, uncoordinated national redistributive policies result in migration distortions when countries are different. In other words, the efficiency required that the marginal productivity of mobile workers be equated is violated: a correlary to this finding is that if one country value redistributive more than the other, it will end up with relatively less skilled workers and less redistribution than in autarky. The second finding is that if both countries are identical in all respects, the equilibrium is symmetric and the allocation of mobile workers efficient; yet, the suboptimaly too low degree of redistribution remains. The third finding is that a coordinated increase in the redistributive payroll tax rate in the two region increase social welfare. Note that the same conclusion holds if mobility is only partial. The only case where mobility is neutral is that of an actuarially fair pension system.

4.2. Intergenerational redistribution

Let us now look at differences in social security wealth, or expressed differently in intergenerational redistribution. The issue is the same as that of different levels of public debt. The Maastricht treaty introduced a ceiling of 60 % on the ratio debt to GDP. It adopted a narrow definition of public debt. It is however clear that the reasons that lead to adopting that ceiling apply as well to the implicit debt generated by generous PAYG pension systems. The major reason for imposing such a ceiling was the European Monetary System (EMS); it is independent of whether or not there is labor mobility. The rationale is simple. When a country deeply endebted through standard debt or

[10] See Cremer *et al.* (1996) and Wellisch (2000).

through PAYG social security joins a fully integrated economic union, it makes its partners partially pay for it.

If there is labor mobility, differentials in the net benefits that individuals can expect from public pensions along with other policies alter the payoff to migration and can influence the international allocation of labor. Wildasin (1999) estimates the change in the present value of lifetime wealth for representative workers in 7 EU countries that results from switching from one public pension program to another. He shows that moving between certain countries can result in an increase of 15 % or even more in lifetime wealth. As he points out, differentials in net benefits create fiscal incentives for inefficient labor allocation. We expect increased mobility to lead to a reduction in differences in intergenerational redistribution over time.

Consider two countries identical in all respect that contemplate adopting a PAYG system for, say, compensating the current generation of retirees for hardship that prevented them from saving for retirement. It is clear that with mobility of the young generation, there will be a "race to the bottom", namely towards a lower amount of such pension provision than decided in autarky. Naturally, we assume that the young generation anticipates that a PAYG system relatively to a FF system implies a cost that depends on the gap between the rate of return on capital and the rate of growth of the economy.

Consider an as realistic setting in which two countries are identical in all respects but towards intergenerational redistribution. One relies more than the other on PAYG to finance its pension system. What happens when their borders are open to possible migration of the young ? One can expect an outflow from the "more indebted" country to the "less indebted" one. [11] The only way this outflow can be stopped is by decreasing the burden of such a debt and this implies taxing the currently retired and immobile generation. Note that if on top of this, the population is aging and hence the dependency ratio is going up, there is an additional incentive for the young generation to move out from PAYG countries to FF ones.

As a consequence, countries whith a population dedicated to the PAYG principle and would resist any even partial shift towards FF schemes can be forced to reform system because of mobility-induced tax competition.

Lastly, let us analyze the implication of differences in retirement ages in European countries once we allow for increased labor mobility. Exactly as for the degrees of intra- and intergenerational redistribution, we would expect increased mobility to render social security systems less redistributive with respect to retirement age. By this, we do not understand that retirement ages will necessarily tend towards one identical age of retirement all across the European Union. Rather, we would expect there to be a schedule of retirement ages and benefit packages that people of different survival

[11] This issue has lately received much attention. See Bräuminger (1999), Pemberton (1999), Meier (2000), Crettez *et al.* (1996). If national governments are passive and the only factors of production are mobile labor and mobile capital, then the more endebted country disappears. To avoid such an extreme solution, one has to introduce fixed factors such as land or real estate. Alternatively, one has to allow for actions by national government towards a rapid reduction in the national debt or the PAYG pensions at the expense of the immobile retirees.

probabilities could choose from. For example, early retirement would go together with reduced benefits, late retirement with increased monthly benefits. People will then select the best package for them depending on their own estimate of the survival process they face.

4.3. Is there a race to the bottom ?

In the two previous subsections, we have argued that with some factors mobility there would be convergence towards less spending on PAYG provisions and less redistribution in retirement benefits. This expected evolution often labeled "race to the bottom" thus concerns PAYG and flat rate benefit systems. Do we witness such a race to the bottom ?

When looking at the evolution of old age benefits (aggregate or per beneficiary) over the last decades, it is surprising to see that they have not decreased in most EU countries. During the period 1990-1996, the ratio of old age benefits to GDP has increased everywhere but in the Netherlands. Does that mean that the danger of social dumping is the area of social security is not to be taken seriously ? Not really. This question calls for a number of qualifications. First, it is possible that there are some lags in the reaction of mobile agents to increased mobility. Second, the cost of mobility might be higher than often thought and is not restricted to the language issue or the financial cost of moving. The job market is still relatively closed. More importantly, the same reasons which explain why each country adopted a given type of social security (PAYG or FF, Bismarckian or Beveridgean) can explain why people don't move. It is possible that they are attached to particular type of social protection and in that respect they are not as opportunist as assumed in models of fiscal competition. This point only holds for the mobility of net contributors and not for that of those benefitting from redistribution. Also, it noteworthy to consider recent work that identifies beneficial effects of competition among governments that seem not to have been previously recognized. It can be shown that with imperfect competition [12] or with majority voting [13] public spending and redistributions can very well not decrease as a result of factor mobility. Finally, it is interesting to note that countries that redistribute intragenerationally quite often do not rely exclusively on PAYG systems. The converse holds true for countries who do not redistribute intragenerationally. Hence, the two redistributive effects would offset each other.

These different arguments may explain why the effects of mobility on redistribution have been so far limited. It is however important to realize that in the future they can loose their strength. For example, the impediments to mobility induced by fiscal or social policies are likely to disappear in the future with the integration not only of European economies but also of national mentalities and cultures.

5. Mobility within the lifecycle

In the previous sections, we implicitly assume that individuals contemplate migration at the beginning of their lifecycle. At that early stage, they were supposed to be able to

[12] Wilson (1999).

[13] Cremer and Pestieau (1998).

weight the pluses and then minuses of alternative locations. In the real world, there are other types of mobility; workers can move within their working period or at the beginning of their retirement period. Exactly as for mobility at the beginning of the working life, such relocations can be triggered by factors pertaining to job offers on hand, family matters, health conditions and health coverage — which are factors exogenous to the social security system — or alternatively by strategic considerations created by the social security system itself.

5.1. Mobility at retirement

First we consider mobility at the beginning of the retirement period. Both public and private retirement schemes all across the EU allow individuals to receive their social security benefits independently of their place of residence in the EU, and sometimes even far beyond the reaches of the Union. In this respect, it is indeed not uncommon to observe retirees relocating from Germany or Sweden to Spain or Italy after retirement, be it for health reasons or simply because they want to see the sun... This is not uncommon but surely not a widespread as in the US. In this respect we only have to think about the situation currently observed in both Florida and Arizona. If a large number of retirees from Nordic countries would settle in Southern countries, there would be a loss in the tax base for the former and a gain for the latter. This is so because taxation of the elderly is essentially done through indirect taxes rather than through direct ones. It is indeed well known that social security income is not as heavily taxed as labor income. Further, interest income is hardly taxed in the EU. VAT is thus frequently the only major source of tax income from the elderly. This effect on the tax base would only be reinforced by the presence of differential mobility according to income. It is more than likely that the people moving South would have a higher average income than those staying behind in the North. Hence, this reduction of the tax base in Northern countries would also be accompanied by a shift in the overall tax burden from the old to the young and from the rich to the poor, with all its consequences on the mobility of the young.

This finding is even underpinned when introducing the welfare component of public pensions benefits into the picture, namely means-tested old-age benefits. Recipiency for this type of income is strictly based on a residency criterion. Therefore, assuming a more generous system of means-tested benefits in the North of Europe, we would expect poor people to move North as a reaction to the more generous social security system. Again, this condition assume that national government do not react. Expectedly, they will not remain passive and will adjust their welfare system and their tax structure to counter unpleasant effects of retirees' mobility.

5.2. Mobility during the working period

Now looking at mobility within the working period, we have to introduce several distinctions. First of all, we have to distinguish the first from the second and third pillars. Second, we also have to distinguish mobility concerning the workplace and mobility concerning the place of residence. We just consider the later. Shortly after the Treaty of Rome, Member States began to develop a system of multilateral coordination

of social insurance legislation [14]. The coordination so achieved was aimed at establishing equality of treatment between nationals and non-nationals (but belonging to the EU) in social insurance. It has proved successful as it allows individuals to take up residence or employment in any country of the EU without undue loss of social insurance rights, that is without being at significant disadvantage, compared with persons who remained in their own country throughout their entire working life. This system of multilateral coordination applies to pension provisions, but only to the first pillar. When this system was developed, it was believed that, at a later stage, a parallel multilateral scheme of coordination would eventually be put in place for supplementary pensions whether based on legislation or on contractual arrangements. However, it quickly turned out that it was not easy to overcome the obstacles to freedom of movement posed by the pattern of existing supplementary pensions in the EU, which are both complex and diversified. Patterns are complex in the sense that even within a given country, there is a large diversity of pension schemes that are often interwoven with particular rules of the tax code. Furthermore, tax treatment of pensions is not necessarily very stable, hence introducing a high level of segmentation. The system is also diversified in the sense that in some countries private supplementary pensions represent the bulk of the pension rights of individuals while in other countries they are just a trickle. The distinction between defined benefit schemes and defined contribution schemes is also not without importance here, as it is much easier to transfer balances of defined contribution plans rather than accumulated pension rights in a defined benefit plan.

Over the last three decades, the Commission but also the private sector, the insurance and the pensions funds industry, have searched for some solutions. It remains that today obstacles live on and hence freedom of movement of workers covered by supplementary pensions is restricted. For our purpose, the implication is clear: there is more freedom between countries with a dominant mandatory social security than between countries with mixed arrangements. Let us add that in the latter the first pillar is sometimes means-tested which implies residency restrictions even after retirement that we already mentioned.

It is clear that to adopt a pension system (both first and second pillars) that does not slowdown mobility it is tempting to generalize defined benefits approaches. In the first pillar, this would be made possible by adopting the so-called national accounts pension system that are now used in Italy and in Sweden. Such a policy would clearly facilitate labor mobility in particular within an enlarged EU. Indeed with a more and more heterogenous economic union, the current arrangements concerning the mandatory systems could become increasingly difficult to implement. At the same time, it is clear that a generalized move towards defined contributions systems make them less redistributive and this is a serious problem which assistance programs (means tested minimal pensions) can only solve partially.

5.3. Cross-border mobility

We now turn to a frequently neglected issue related to mobility during the working life. Indeed, we have to distinguish mobility of the workers with respect to their workplace

[14] This is enacted through Regulation 1408/71 and 574/72. See EC (1994).

from that with respect to the place of residence.[15] In Belgium, e.g., the rules of the public social security program (the non-means-tested benefits) are not neutral with respect to the place of residence. Indeed, for workers changing both their residence and their place of work, the standard EU rules on cross-border mobility apply: people accumulate fractions of pension rights in different countries according to the proportion of their professional career they spend contributing to a given system. Now consider the case of a worker who instead of moving his place of residence to the other countries only commutes to work abroad. In this case, he still generates pension rights abroad in proportion to the time spent in every foreign system. However, in parallel, he accumulates fictive or imputed pension rights in the Belgian social security system: fictive wages - which are close to national average wages - are imputed into his Belgian earnings record, and this independently of the real observed earnings of the individual. If at the time of retirement, the foreign pension is smaller than the fictive Belgian pension corresponding to the same period of time, the Belgian social security system then pays the difference to the individual. Hence, the Belgian system illustrates that it is possible to introduce an additional margin of maneuver, namely a separation of the choice of the residence and the workplace. This distinction is especially important for small countries such as the Benelux countries, where it is almost within the reach of anybody to work in a different country than the one the person resides in. The same is obviously true for border regions of bigger countries.

But this particularity of the Belgian system also reemphasizes one weakness of the entire current regulatory framework on mobility, namely its focus on first-pillar pensions. To illustrate this point to the extreme, consider the case of a Belgian resident working in the Netherlands. At retirement, the worker will have significant Dutch pension entitlements, some large fraction of them under the form of occupational private pensions. However, in its computation of the potential pension complement, the Belgian social security administration does not take the Dutch occupational pension into account and hence pays out a much larger supplement than what would have been the case if all kinds of pension income were taken into account.

6. Conclusions

We started this paper by showing that members of the EU have quite contrasting pensions systems particularly with respect to redistribution. Such a setting is likely not to be sustainable with factor mobility. Capital mobility that is high and labor mobility that is still negligible but for highly qualified workers imply that eventually there will be some convergence towards less redistribution both between generations and across households. Pension systems seem to face a tough dilemma particularly where they are generous: they have to adjustt or to perish.

Having some governments forced to reduce their debt, both explicit and implicit, is not a bad thing particularly in view of implications of aging for public finances. However, pressure to reduce the redistributiveness of social security particularly towards low

[15] The first type of mobility is qualified as “travail frontalier” in French, i.e., people crossing the border to get to work.

income retirees is by no means desirable. Even if the overall level of poverty among elderly people is quite low in the EU, there is quite some variability between member countries.One can therefore fear that a race to the bottom on social security benefits will lead all EU countries to experience poverty rates of the elderly that we nowadays only know from countries such as the UK or Portugal.

In that respect, there is the idea of developping a European safety for the elderly could be envisioned seriously. Indeed, there is little doubt that the elderly are the most vulnerable group of the populaiton. This again raise a crucial question of whether European governements take the social dimension of the EU seriously. As Atkinson (1995) points out, the main problems limiting individual national governments to provide effective social protection are "those arising from political pressure — a political economy, rather than a migratory, constraint on national policy". One can easily speculate that such political pressure is much stronger at the level of the EU. To put it another way, one has the feeling that a number of national governments uses the excuse of fiscal competition for not pushing for effective social protection both at the national and at the Union level.

The Maastricht Treaty implied a mandatory reduction of the public debt in countries such as Belgium or Italy. Another interpretation of this reduction is to consider it as a reaction to increasing mobility in Europe. Even if those countries are may be not willing to abolish their PAYG systems alltogether, they still have to lower the burden on the young mobile workers in their countries in the face of increasing tax competition.

Two final remarks to conclude. This paper has focused on labor mobility within the EU. There is an even more challengering mobility, that resulting from immigration flows from outside EU and particularly Eastern Europe. The reality or even more so, the potentiality of these flows is likely to induce individual national government to reform their social security system towards the insurance principe and entitlements based on past work and past contribution [16]. Finally, even for those concerned by the threat of economic integration on effective social protection, it is crucial to improve the portability of supplementary pension schemes within and across EU countries.

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[16] See Michel *et al.* (1998).

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