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Portability of Social Benefits and International Trade in Services: Some Reflections

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Abstract

In this fascinating new field, this paper offers some reflections on portability of social benefits, and tries to identify promising research topics. These reflections are organized in three sections. The first analyzes the channels that underpin the positive value of portability of social benefits in models of international trade, and with regards to fairness, analyzes different welfare criteria for assessing migration, with special attention to the human rights of migrants. The second section focuses on migration by active workers. The final section focuses on retiree migration, which is inherently simpler because it does not have a direct impact on the labour market.

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1. Introduction

The gradual development of an integrated world economy over the last two centuries is likely to continue in this century. Economic integration has taken the shape of larger volumes of international trade, initially in goods and subsequently in services. The flow of migrants at different ages in the lifecycle, and with different time-patterns of reversibility, has also exploded.

Still, being a migrant for more than a year is a minority experience, because the global emigrant stock was about 3% of the human population in the year 2000.[3] Within large federal countries, mobility over time is also a minority experience. For example, in the U.S.A. only 3.1% of the working-age population moved to a different state over the years 2000-2005.[4] There is no information on how many of those aged 65 or more are emigrants, but the global average is likely to be small.

The impact on the labour market of medium-term changes in residency is larger than what is suggested by that 3% figure. The equilibrium wage is influenced by the *potential* for mobility (the relevant wage elasticities), as well as by actual mobility (the share of migrants in labour supply). [5] For example, only a few immigrants may be needed to trigger a chain of reallocations in many more matches between workers and jobs, raising overall productivity by more than the direct impact of the migrants.

In those few (subnational) regions where changes in residency are chosen by large groups of people, they also have a macroeconomic impact and affect social institutions. These impacts may trigger responses from the political systems in the regions involved. On the other hand, the rules chosen by these institutions, specifically those that provide social benefits and set taxation, may have some influence on those migration decisions. Therefore, two-way causation may help explain observed levels of migration and the amount and type of social benefits extended to migrants.

In this fascinating new field, this brief paper offers some reflections on portability of social benefits, and tries to identify promising research topics. The paper is organized in three sections. The first analyzes the channels that underpin the positive value of portability of social benefits, and with regards to fairness, analyzes different welfare criteria for assessing migration, with special attention to the human rights of migrants. The second section focuses on migration by active workers. The final section focuses on retiree migration, which is inherently simpler because it does not have a direct impact on the labour market.[6]

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[3] Holzmann and Koettl (2011, Table 2) estimate the migrant stock at 186.5 million people for year 2000. The UN estimates global population at 6,122.7 million for that year (http://esa.un.org/unpd/wpp/Excel-Data/population.htm). The ratio is 3.04%.

[4] According to Holzmann and Koettl (2011). They also note that Eastern Europe and Central Asia have currently the highest share of migrants, possibly as a consequence of the breakup of the Soviet Union.

[5] This point has been emphasized by Fourage and Ester (2007) and by D'Addio and Cavalleri (2012).

[6] Medium-term changes in residency can also improve welfare directly, by providing access to better weather. This channel may be important for some, but actual mobility is required here.

2. Portability for efficiency and for fairness

The value of rules that increase portability of social benefits is logically dependent on the value of migration. The intuition is straightforward. Consider a world where jobs differ by location, say across cities, regions and countries. Therefore, migration improves matches and raises incomes for all, including the original residents (non-migrants). If portability rules for social benefits affect migration, they also affect incomes for non-migrants. [7]

Inadequate portability rules for social benefits are those that force the loss of some of the potential income attainable with better rules. Conversely, if there are no efficiency gains from migration, then less portability of social benefits does not create a cost in terms of lost incomes for non-migrants. In this situation, portability of social benefits would be irrelevant for non-migrant incomes. This is the topic of the first subsection.

Of course, market income is not the only income to consider. Disposable incomes also depend on taxes paid and transfers received. Therefore, when immigration affects the balance of tax revenues minus transfers, there must be a separate round of effects going through the fiscal budget. Tax rates and benefit rates must be adjusted, sooner or later. These changes have efficiency effects in production and consumption. They also have redistributive impacts across different socioeconomic groups, and possibly across generations. The rules on portability of social benefits may have an important role to play here, because for each given level of migration, they affect distribution (equity or fairness) and efficiency. The second subsection analyzes the joint income and fairness effects of rules on portability of social benefits.

2.1 The ability of immigration to increase market income

A prevalent view is that since immigration increases supply in the labour market, and this in turn reduces wages for all, migrants and non-migrants. In that view migration is negative for non-migrants' earnings, and an increase in the portability of social benefits would be equally negative.

That picture is very incomplete. Borjas (2005) restated forcefully that despite the fall in wages, other gains in income create a positive "immigration surplus" in net terms for the residents in the receiving country. There are two other income gains to consider, ignored in the previous paragraph. The first simply cancels the earnings lost by mobile resident workers, and are the corresponding gains by the owners of the fixed factors of production different from mobile labor, such as capital (whose ownership is shared by all savers), the industry-specific portion of the human capital of skilled workers, and union rents. The second gain comes from the fact that the immigrant workers produces output that is worth more than their wages. This surplus is an overall gain for the receiving country, or "immigration surplus". So an analysis of incomes rather than

[7] If labour migration is affected, the other side of the market is also affected: firms' location choices for offices and factories depend in part on the availability of adequate labour, so portability of social benefits would also affect the location of fixed investment.

earnings alone finds that immigration is beneficial for non-migrants in the receiving country as a group, because they increase their aggregate incomes. There is enough extra income to compensate losers, such as non-migrants that do not participate in union rents, do not have skills that are industry-specific and own limited savings. Therefore an increase in the portability of social benefits that raises immigration would be beneficial too.

The presence of non-traded goods does not make a difference for this result. For example, in the specific-factors Australian model, the market for non-traded goods in the host country is buffeted both by higher output (produced by the new labor supplied by immigrants), and by higher demand, since some of the immigrants' spending goes to non-traded goods. The impact on the relative price of non-traded goods is ambiguous. Still, the earnings of non-migrant labor fall and the rents of the fixed factors of production (capital, the industry-specific portion human capital, and union rents) rise in both sectors, just as in the previous paragraph.

However, the picture is not complete yet, because over time investors optimize when deploying new investments across sectors, and because new investment competes with old established fixed factors accumulation. These forces push the economy towards a different equilibrium, called "long run", in which fixed factors of production earn returns which barely compensate savers for postponing consumption, and where these (risk-adjusted) returns are equalized across sectors (Trefler, 1997).

In such a long-run situation, consider worlds with two factors of production (mobile labour and capital plus skilled labour), where both move across sectors within the same country but do not move across countries, and N internationally tradeable goods (Heckscher-Ohlin). Now consider the case where both the originating and destination countries involved in migration are *small*, within a larger world.[8] Because of smallness, each of the N production sectors must take international output prices as given. If production exhibits constant returns to scale, supernormal profits are zero, which implies that unit costs must be equal across countries (except for allowances for transport costs). Therefore, on a productivity–adjusted basis, wages are equalized across countries. In this case migration affects the amount of production located in each country, but does not affect factor rewards, as long as both goods are produced in both countries. This is one of Mundell's (1957) famous results.[9]

Because in these long-run situations migration does not affect the incomes of non-migrants, changes in portability of social benefits are equally irrelevant for the incomes of non-migrants. Reducing or increasing portability does not matter to them in the long-run. Of course, portability rules do matter for immigrants.

[8] The same results obtain in a world with two large countries where productivity depends *only* on each worker's characteristics, as long as both goods are produced in both countries and there is no factor-intensity reversal.

[9] At the same time, the incentive to immigrate can be large; indeed it is proportional to the size of the worker's productivity increase that is created by the receiving country's institutions, over and above the productivity created by the sending country's institutions. The same result obtains in Ricardian (one factor) models of international trade (Trefler, 1997).

The situation is slightly different if the receiving country is not so small relative to the world economy, and the amount of immigration is large enough.[10] In this important case, immigration worsens the terms of trade of the receiving country, because it increases production of the goods in which the receiving country specializes and exports, and reduces production of the goods in which the receiving country does not specialize and imports. For world consumers to accept these changes in the world composition of production, some change in the terms of trade is required. D Due to the different factor intensities of exported and imported goods, the worsened terms of trade raise the real wages of mobile workers and reduce the rents of the other factor of production (capital, skilled labour, unions). The impact of immigration on non-migrants' incomes is negative, but only in proportion to the amount of migration, so the impact can be modest. An increase in the portability of social benefits would also be slightly negative for incomes.

Thus, a review of international trade models finds that portability's efficiency value (for the market incomes of non-migrants) is *derivative* from the gains from migration. If the gains from migration fall for some reason, then the efficiency value of portability must fall, and viceversa.

Immigration has more effects than those merely economic. If the jobs' attributes are not fully perceived or fully internalized by the individual that chooses among the jobs, then individual job choice can be inefficient from a social point of view. For example, the productivity of inherited social capital may depend positively on the degree of cultural homogeneity (Schiff 1999), so excessive immigration could reduce productivity and incomes. In the opposite direction, if cultural diversity raises creativity, and if this raises productivity and incomes, freely determined immigration might be insufficient. However, the presence of such non-market effects *does not* imply that portability rules should be adjusted to manage them. In most cases it is more efficient to rely on policy instruments that specialize in each of the non-market effects, such as taxes on activities that destroy inherited social capital and subsidies for creativity-enhancing activities. Only when some important limit on expanding the menu of policy tools is reached, falling back on other instruments should be considered, and possible portability is not the best instrument.

This principle does not apply to economic equity and fairness.

2.2 Welfare criteria and fair portability of social benefits

Disposable incomes also depend on taxes and transfers, in addition to market incomes. When immigration affects the balance of tax revenue minus transfers, tax rates and benefit rates must be adjusted. This unbalance also has redistributive impacts across socioeconomic groups and across generations. Therefore, the income and fairness effects must be analyzed together.

Rules for portability of social benefits should take into account fairness together with efficiency. Welfare functions allow merging efficiency with fairness criteria in a coherent manner. This is why this subsection discusses how to define this welfare function. Each approach implies a different way of assessing the fairness of the rules for portability of social benefits.

[10] The maintained assumption is that productivity depends at least in part on the country's characteristics.

A major issue is whether migration policies and portability rules for social benefits should be assessed from the point of view of the migrant alone, from the point of view of all residents, or by using balanced criteria.

The point of view of the migrant alone has proven amenable to a human-rights approach to public policy[11]. In this view, human beings are endowed with a right to leave their current residency, i.e. with a right to emigrate.[12] This point of view allows public policy on migration and on portability of social benefits to be developed independently from other social or economic policies. Specifically, it implies that fairness requires that social benefits should be extended fully to all immigrants.

That approach ignores the impacts of migration on non-migrants, who are also members of the polity and participate in the economy. For example, if the emigrant has a human right to demand equal coverage in her new residency (at the receiving country), then there is no regard for the cost of doing so for the health insurance fund, or more precisely, without regard for the cost of doing so for others such as non-migrants in the receiving country who must lose some benefits from it, or are forced to cover deficits in that fund by paying further taxes.

Of course, this conflict is attenuated if the immigrant pays enough local taxes (say VAT and fuel taxes), and also if the health insurance fund (from her sending country) pays for her expenses in the new residency. But in many cases these attenuations will not exist for decades.

Inclusion in the welfare criterion of the point of view of the non-migrants that reside in the receiving country leads to a different type of optimal policies regarding migration and portability rules for social benefits. Since migration is a minority experience, this second approach gives a large weight in social welfare to non-migrants' interests. In a majoritarian democracy, this may imply that the point of view of migrants is effectively ignored.

It is well-known that in rule-of-law social environments, the defense of minorities can be recovered by a charter of basic rights that takes precedence over majoritarian decisions. The basic rights of migrants need to be explicitly included in the welfare criterion, at least at the same level as the basic rights of non-migrants.

To incorporate this critical adjustment, benevolent policies should be redefined as those that maximize the combined welfare of migrants and non-migrants, subject to the *constraint* of

[11] According to the ILO (2008, p. vii) social security was declared a *human right* in the major United Nations human rights instruments. The 1944 Declaration of Philadelphia, incorporated in the ILO Constitution, requires the ILO to further among the nations of the world programmes which will achieve "the extension of social security measures to provide a basic income to *all* in need of such protection and comprehensive medical care" (Article III(f)), as well as "provision for child welfare and maternity protection" (Article III(h)).
[12] Note that the symmetric right to immigrate is not protected. In extreme cases, this omission can negate the right to emigrate.

respecting the basic rights of each migrant and non-migrant[13]. Immigrants should be granted the same *basic* rights as the weakest or poorest non-migrants.

This second best approach allows for mild forms of discrimination against non-poor immigrants. An example is the sale of residency visas in exchange for a large fee (or tax), that only rich immigrants can afford. Another is to condition income-tax benefits for second and third pillar old-age pensions on the length of residency. A third example is to make the withdrawal of benefits in response to larger earnings, or to larger income or wealth, contingent on the length of residency. The resulting lower benefits net of contributions for immigrants, as compared to the net rates faced by similar non-migrants may be seen as discriminatory. They may be beneficial for non-migrants including the poor among them, if they raise net taxation on higher-earning immigrants.

In these examples, fairness is taken into account when maximizing the welfare criterion. If the resulting rules for portability of social benefits includes some mild discrimination to high-earning migrants, these limits would be second-best optimal.

This overview suggest the following research program: use theoretical models calibrated with empirically-based parameters, to identify second-best portability rules, for each specific social benefit. It is likely that the results will differ significantly across specific social benefits. The results of such a program would be a guide to “optimal portability”, most valuable for policymakers.

A related research program is one where the welfare criterion includes the interests of the non-migrants who reside in the full set of countries involved in a migration. In this case, benevolent rules for portability of social benefits would be those that maximize the combined welfare of migrants and non-migrants who reside in the sending *and* receiving countries. This research program would produce an appropriate guide to policy for supranational units such as the European Union (EU).[14]

3. Migration of active workers

The first part of this section seeks some lessons from the literature on the portability of employee benefits, between employers within a given country, for the international portability of social benefits. The second part reviews the case of old-age pension benefits, and how different types of pension plans can deal with migration in an equitable way, while sustaining their own solvency.

3.1 Employee benefits have limited portability

The extensive literature on employee benefits shows that despite the large gains from reallocating workers towards jobs with higher productivity in other employers in the same country, this *does*

[13] This constraint may imply, for example, that immigrants escaping political persecution in the originating country must be given access to social benefits in the destination country.
[14] The even more encompassing criterion would be maximization of world welfare, but it does not seem practical for the remainder of this century.

not imply that employee benefits should be fully portable across employers. A major reason is that separation destroys employer-specific sunk investments, such as training, selection costs, and performance evaluation costs, combined with the fact that a large share of these investments is financed by the current employer. Thus, for separations decided by the worker (quits), she does not take into account the loss imposed on her employer.[15]

Investments that are not specific to the employer are valuable elsewhere to the quitting worker, so the employer would refuse to finance those investments, effectively forcing the worker to do so. However, if the employer did finance them anyway, it would face the same (private) loss as in employer-specific investments.

The inefficiency cannot be solved by having the worker finance these investments, first because of the higher discount rate faced by most workers (as registered by the consumer credit interest rate). Next, if the worker financed those investments and these were employer-specific, in those separations decided by the employer (firings), *he* would not take into account the loss imposed on the worker.[16]

Standard responses by employers to the losses created by quits involve changes in the form of compensation, which may take the appearance of offering employee benefits conditional on meeting a pre-set vesting period. These strategies are to some extent equivalent to adding a "permanence bonus" to the compensation package. Alternatively, the employer might reduce compensation contingent on quitting, say by cutting severance payments. For these responses to be successful from the point of view of the employer, portability must actually fall.

However, the motivation of employers is more complex, as they also use employee benefits to attract better workers and select certain types of them. For example, in the case of defined-benefit pensions, leaving the employer (or the pension plan) after meeting the vesting period but still in mid-career imposes large reductions on the actuarial value of those benefits, to the benefit of the employer. In part, this is due to purposeful back-loading of benefits, but it is also in part due to technical difficulties to set objectively the value of accrued benefits at the time of leaving. These technical difficulties are the counterpart of the implicit guarantees for rates of return and for the longevity risk premium that are embedded in defined-benefit plans. To some extent, the employer's gain from early leavers covers the employer's loss from these implicit guarantees.

In contrast, if pension benefits are of the defined-contribution type, they are much more portable. There is no back-loading, the implicit employer guarantees are absent and with it the valuation problems, so the pre-set vesting period is the only incentive for permanence that remains.

Employee health benefits are similar to defined benefit pensions due to implicit guarantees by the employer, which cover risks in the rate of growth of medical prices and the risk that future technical progress in medical treatments may raise rather than reduce lifetime medical costs.

[15] The separations decided by the employer (firings, non-renewal of temporary contracts) would take this into account, aiming for some optimal turnover rate.

[16] Unless an appropriate severance payment was agreed upon to cover this loss.

The next question is whether these employer responses reduce portability excessively, as compared to some socially optimal level of portability. The answer is yes, because the employer does not take into account the gains afforded by portability to other agents. Specifically, the employer does not take into account the loss for the next employer brought by delaying the filling of a high-productivity vacancy, nor the loss for the worker of missing a better job. In addition, the worker is in a weak bargaining position with regard to the vesting period, because the vesting period is usually set as a uniform rule that applies equally to all workers, and because requesting a lower vesting period signals a lack of commitment to the job that may induce the employer to reject the worker.

In part for this reason, a number of countries have introduced statutory restrictions on the ability of employers to impose excessive vesting periods on employee benefits, such as ERISA in the U.S.A. since 1976. These restrictions increase portability above the level which employers would naturally agree with workers, but do not attempt to attain full portability because an excessive quit rate prevents recovery of employer-specific sunk investments, such as training, selection costs, and performance evaluation costs.

This policy is in contrast to the full portability across employers that most governments seek for their social benefits, such as mandatory old-age pensions and health insurance. Full portability requires unification of the contribution and benefit regimes across employers and sectors of the economy. This result that can be attained both by state-managed and privately-managed schemes, with appropriate rules.

A justification for the full portability policy is that the social objectives that justify mandating social benefits (individuals' behavioral biases, redistribution, etc.) are not related to a specific employer. Thus, a restriction or a subsidy that tied social benefits to specific employers or to specific sectors would be both inefficient and against the non-discrimination principles.

The standard arrangement that reconciles these two policies (full portability of social benefits, limited portability of employee benefits) is a two-layer regime. Each individual's benefits have two layers: the social layer, fully portable, and the employee benefit, which is less portable.

Lessons for international portability of social benefits

One way to establish an analogy is to ask whether significant investments financed by the national state, or the local government, would be lost to the country in the event of voluntary migration (the equivalent of quits).

Few public investments are country-specific, i.e. are productive only if the beneficiary remains in the country or locality. One case seems to be language education in the locally spoken language or dialect, provided it is not an internationally spoken language, if financed by the national state. Other nationally-oriented educational items such as local history, local geography and local civics, seem to have less significant costs.

General education financed by the state is valuable elsewhere to the emigrant, so it is not country-specific. Health services financed by the national state also create a type of human capital (a healthy worker) that is not country-specific. However, the polity also loses if investments not specific to the country are financed by the national state and taken away by the emigrant (Scalera, 2009).

An efficient recovery of the investment would be contingent on emigration. A number of countries have established an "expatriation tax". For example, the Netherlands is said to have tax treaties with some countries where Dutch pensioners move to with the aim of taking advantage of a favorable tax treatment of their pensions.[17] This is very close to a benefit formula contingent on residency. In the case of the U.S.A., the expatriation tax established in 1966 is on those who abandon citizenship, because the U.S.A. taxes nationals on a worldwide income basis.

Obviously, an expatriation tax may put in jeopardy the human right to emigrate. For example, Nazi Germany is said to have redirected a pre-existing tax aimed at capital flight, to confiscate assets from persecuted people who sought to exit the country. In 1972 the Soviet government imposed a head tax on all emigrants with higher education, which in some cases may have amounted to several years of salary (Goldman, 1995). Apparently South Africa and Canada avoid this outcome by granting a generous exemption, so the expatriate tax is levied only on high-wealth emigrants.[18]

The equivalent of adding a "permanence bonus" to the compensation package is to establish more favorable benefit or contribution rules in proportion to length of residency. An alternative is to establish tax credits o tax exemptions in proportion to length of residency.

A wider perspective on residency changes should take into account the level of skill of migrants. This point of view was taken by Bhagwati in 1972 when he proposed a tax on the "brain-drain", an idea he pursued over the years (as in Bhagwati and Wilson, 1989). One method to levy this tax would be to establish taxation and on a nationality basis and worldwide income. The presence of remittances, the facilitation of technology transfer back home, and other benefits that arise from return migration in some cases, are positive externalities that need be taken into account.

Another effect of taxing high-skill emigrants would be to allow more redistribution within the sending country, because high earners would be less able to escape taxation by emigrating (Mirrlees, 1982).

The research agenda in this area is wide open. In the theoretical side, a priority would be to create models that identify how to protect the human right to emigrate, while at the same time allowing the national state to recover most of the investments that are taken away by emigrants, in a second-best setting. In the empirical side, there is a growing literature assessing the importance of the mechanisms outlined here may be assessed (see review by Scalera, 2009).

3.2 Old-age pensions and migration of active contributors

[17] http://en.wikipedia.org/wiki/Expatriation_tax#Netherlands

[18] Canada taxes the capital gains which would have arisen if the emigrant had sold his assets when he left.

Consider migration by an active worker in mid career. The impact on his accumulation of pension rights depends on the design of the pension scheme or plan. The three main dimensions of design are the degree of funding, the degree of use of actuarial benefit formulae rather than years-of-service formulae, and the rule sharing aggregate risks (Valdes-Prieto, 2000).

In a scheme where the old-age pension scheme has an actuarial benefit formula, there is no question about the value of pension rights at the time of migration, and these rights can be allowed to accumulate in the original plan until the member reaches pension age and claims the benefits, without detriment or subsidy for the migrant. It is notable that this result obtains regardless of whether the risk-sharing rule is "defined contribution" (as in mutual funds) or "defined benefit" (as in deferred annuities, where the sponsoring life insurance company bears investment and mortality risks), provided the scheme is fully funded in the financial sense (pre funded). This fact has allowed Latin American countries with such pension schemes to agree easily on portability rules for migrants, where the main option has been that the migrant's rights continue accumulating in the scheme of the sending country, until the member reaches pension age and claims the accumulated value, which is sent to the destination country.

However, if the benefit formula is not actuarial but based on years of service, then an exit from the plan at mid career, as experienced by a migrant, may trigger substantial losses or gains, depending of the deviation of the benefit formula form actuarial fairness at the date of exit. A non actuarial benefit formula redistributes wealth between leavers at different stages in the life cycle, including those that leave the plan at pension age.

Are these results correct for pay as you go (PAYG) finance? Certainly the actuarial character of the benefit formula continues to be critical. The remaining issue is whether an actuarial benefit formula in a mature PAYG context, such as in notional defined contribution (NDC) schemes, would allow full portability. The answer is no.

"Sustained solvency" is defined as solvency that continues to hold in every period and state of nature, despite shocks, in the absence of outside subsidies in present value (Valdes-Prieto, 2002). To sustain solvency, contributions and benefits must adjust to absorb aggregate shocks.

Consider the most flexible NDC plan, which is the one whose notional interest rate (NIT) is set every period to equal to the growth rate of the covered wage bill. If a block of active members emigrate at the beginning of a period, it is clear that the growth rate of the covered wage bill falls immediately, but only for one period (transitorily). This lowers the NIT for one period alone. The drop in the NIT reduces the growth rate of pension rights for all current members of the scheme. But since this happens for only one period, the overall value of pension rights does not fall as much as the present discounted value of contributions fall in response to the emigration. This is the finding in Valdes-Prieto (2004), who simulates precisely this experiment in detail. The result is that the NDC scheme experiences a cash-flow deficit that lasts for an entire working cycle (40 years in the simulation), before recovering cash flow equilibrium. The cumulative size of this cash deficit is large. Therefore, even the most flexible NDC plan does not have sustained solvency in the face of emigration.

Of course, if a block of active members join an NDC plan in the receiving country, there will be a cash-flow gain at the receiving NDC plan, despite the fact that a part of it will benefit existing members with a transitory increase in the NIT credited to their account.

In a fully symmetric case, the cash flow deficit in the sending NDC plan is equal to the cash flow surplus in the receiving fund. However, if the NDC plans differ in parameters such as the growth rate of the wage bill or the pension age, or if the migrants increase their earnings thanks to migration (the normal case), that financial equality is lost. Therefore, it is not possible to set up an exchange system where deficit plans can be exactly compensated by surplus plans in response to migration. Still, because the residual differences in cash flows are likely to be small, an exchange scheme may be quite effective in practice.

4. Retiree migration

Retiree migration does not have a direct impact on the labour market.[19] The foremost barriers that working-age people perceive to migration are language and family, according to the Eurobarometer survey analyzed by D'Addio and Cavalleri (2012), and also likely to be the main obstacles for retirees considering migration are. The next two most prevalent concerns of potential migrants in the EU, not linked to the labour market, are the "bureaucracy involved" and the social security standards for pensions and health care in the receiving country.

A retiree's decision to migrate is influenced by the presence of financial services that allow access to money pensions, and possibly as significantly, by the availability of quality health services and coverage of her home country health insurance plan to providers in the host country. In both cases, the actual degree of international expansion of provider networks is critical for actual export of social benefits. International expansion of health provider networks is the process renders social benefits "exportable".

In turn, the expansion of international provider networks is influenced by factors such as the set of local regulations and others explained below, and also by multilateral trade agreements on trade in services, such as GATS and analogues at the regional level. Economic policy has a major role to play in both. These are the issues explored in the first subsection here.

In ageing areas of the world, retiree migration has the potential to become large in some regions. If large volumes of money pensions come in to be spent locally, some macroeconomic impacts are predictable. The sectoral imbalances can be even more important: the presence of large numbers of immigrating retirees affect the receiving region's health system's ability to provide services efficiency and equitably to both the local and immigrating retiree populations. These impacts are receiving increasing attention in the public health literature, and should receive more in the economics literature. These macroeconomic issues are explored in the second subsection.

[19] Medium-term changes in residency can improve welfare directly, by providing access to better weather.

4.1 Retiree migration and exportability of social benefits

A prerequisite for mobility of retirees is ready access to money pensions for old-age or for invalidity (disability). This aspect of so-called pension "exportability" applies regardless of whether the pension is "contributory", i.e. self-financed by previous contributions made by the beneficiary or her employer, or is financed out of taxes, as in demogrants and social pensions.

Since current technology allows money to be transferred at low cost, it is safe to assume that if a retiree moves abroad and demands her money pension for old-age or for invalidity to be transferred where she resides, her wish will be met, especially if the retiree remains a voter in the home country. However, exportability of pensions may be hindered by technical and by regulatory constraints. One is the extension of bank branch networks in the receiving region, or of substitutes[20], specifically whether they reach or not the location where the migrating retiree intends to reside. In the Caribbean and in the Northern shore of the Mediterranean this precondition is likely to be met for most residences. This is not necessarily the case in North Africa, South Asia, Central Asia and China, but it could certainly be under concerted international action.

On the regulatory side, the pension-paying institution needs to set up protocols for sending pension money to pensioners residing abroad. This may be hindered by regulations or laws in the sending country that fail to contemplate this service. This is an area where policy needs to play a role in the sending country. In the receiving country, policy needs to open up foreign exchange regulations and banking regulations such as know-your-client rules. These improvements to regulations may be taken up by the local regulators of financial services, and their harmonization may be supported by supranational entities.

A retiree's decision to migrate is also influenced by access to social benefits whose indemnities are made in services, such as health services and long-term care, rather than money or goods. The case of housing benefits may be in the camp of goods or services, depending on its design.

Exportability of health benefits

The degree of international expansion of health provider networks is critical for rendering health benefits "exportable", together with the coverage of her health insurance plan. In turn, this expansion is influenced by factors such as technology and regulations. Thanks to the new information and telecommunications technologies, a growing number of health-related services are becoming tradable or partially tradeable in new ways.

A useful attempt at classification was achieved during the Uruguay Round of the General Agreement on Trade and Tariffs (GATT), now called World Trade Organization (WTO), which took place over 1986-94, and led to the *General Agreement on Trade in Services* (GATS).

The GATS defines four "modes" of international trade in services. Each mode is defined below, and examples for health services and health insurance social benefits are provided:

[20] Specifically, networks of automated teller machines (ATM).

1. *Cross-border delivery*: E-health, telemedicine and medical diagnosis are services that can be traded internationally because exact coincidence in time and place are not required for delivery. The same happens for components of health insurance, such as health-claims administration and cost-containment management. Cross-border delivery of physical goods such as drugs (medicines), prosthesis and medical equipment is also important for completing access to health-service social benefits.

2. *Consumption abroad*: The patient travels (Ex. for surgery) to a delivering country, which may be different from the country that pays the service and from the country of residence. This is also called “Health tourism”. Of course, the cost and time required by travel implies that this mode can be interesting only for services rendered occasionally and which have a high value.

3. *Foreign Direct Investment*: Examples are hospital operators, health-claims administrators and cost-containment managers.[21] In this mode, owners of these firms deploy their intangible assets internationally. Although the actual suppliers of services can be local branches or local licensees, the transfer of intangible assets requires the country that receives those assets to protect the property rights that support those assets.

4. *Temporary migration of workers* (“production abroad”): The provider travels (Ex. physicians and nurses travel to where the patients reside) to the patients’ residence country, which may be different from the country that pays the service and from the country where the worker resides. Again, the cost and time required by travel implies that this mode is interesting only for services that can be rendered jointly to a sufficient number of patients or in a sufficient number of occasions.

It must be emphasized that several of these modes operate jointly in practice. For example, evaluation of clinical appropriateness of health insurance claims, which is in modes 1 and 3, is enhanced by trade in mode 4. The general concept of “international expansion of provider networks” applies to the combination of modes that allows provision of good quality at least cost.

Another important point is that in the presence of insurance, three countries may be involved: the country where the fund that pays the service resides, the country where the patient resides, and the country where the provider resides. The service may be delivered in a fourth country.

The role of economic policy

The regulatory obstacles to these types of international trade in services can be prohibitive, because health provision and health insurance are among the most regulated sectors in any modern economy. The following cursory review of regulations that affect exportability of these social benefits, organized by mode, is only illustrative:

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[21] Health insurance services are quite different from health provision. For example, Olympus Managed Health Care “controls costs by vetting claims for financial and clinical appropriateness”.

- Mode 1 (cross-border delivery): legal and tax status of cross-border telehealth in the countries involved; licensing and qualification requirements for medical consultation and diagnosis; technical standards in the countries involved; privacy protocols in favor of patients; consumer protection rules; availability of professional indemnity insurance for doctors and other health workers that engage in cross-jurisdictional practice; limits to benefits payable by insurance funds for telemedicine and telediagnosis.
- Mode 2 (patients travelling): The country of service delivery may have policies to promote health tourism; Immigration restrictions in that country may originate in public health risks, for some diseases. Portability of health insurance in the country where the paying fund resides.
- Mode 3 (foreign direct investment): in the country where service is delivered, limits on creation of for-profit hospitals or clinics; tax or statutory limits on FDI in general; protection for intellectual property rights and copyright (over brand names).
- Mode 4 (temporary migration of health workers): Registration and licensing in the country where services are to be delivered; limits on employment of foreign workers (labour law); labour protection and income tax law for short-period foreign workers.

This review suggests that achieving exportability of health benefits, an important goal as a matter of rights, cannot be assured if policy work is limited to exportability of health insurance. Other regulatory barriers on the exportability of health benefits must be lifted as well.

In periods of slow growth and fiscal retrenchment, economic policy should be especially interested in international trade in health services, which may increase the pace of growth and may create large rents in some areas, as these industries are only beginning to develop. Active efforts to streamline regulations may yield increases in fiscal revenue from both VAT and income tax.

The role of economic policy in this area appears to be the following: first, a unilateral effort from each country, to adjust local regulations that impinge on the different modes of international trade in services that underpin exportability of social benefits. This effort should consider both the case of retirees moving abroad but who still receive health insurance and tradeable health services from home country providers, and the case of incoming foreign retirees arriving to reside permanently, or arriving as health tourists to have health services delivered.

Second, surmounting the regulatory obstacles placed by numerous foreign countries may become increasingly costly through bilateral negotiations, and also less effective. In that setting, the local effort could be targeted to a few major potential trading partners, and significant attention could be reoriented to multilateral efforts to harmonize the regulations that hinder exportability of social benefits. For example, ASEAN adopted a treaty called “Mutual Recognition Arrangement on Nursing Services”.

Research topics

The range of issues mentioned here will be confronted by policymakers with some prioritization. Quantification of the relative size and importance of different obstacles can provide valuable inputs for setting those priorities. Econometric work can provide the required quantification, where the following issues appear attractive:

- Measure the actual impact of expansion of health provider networks on international trade in health services in general, under past regulatory regimes.

- Measure the actual impact of expansion of health provider networks on the volume of retiree migration, under past regulatory regimes.

- Measure the impact on retiree migration and on international trade, of specific variations in regulations that have occurred in the past, in different countries, to identify those with the largest impacts. For example, Mattoo and Rathindran (2005) find that the U.S.A. engages in limited international trade in health services despite big differences in the price of health care across countries. They also identify a simple modification of existing insurance products that would create sufficient incentives for consumers to travel. For 15 highly tradable, low-risk treatments, they find that the savings to the U.S.A. would be $1.4 billion per year even if only 10% of the patients who need these treatments went abroad. Half of these annual savings would accrue to the *Medicare* program.

- Instruct public social insurance institutions to prepare development plans to facilitate international trade in health services. Encourage those institutions to share in the rents that may be available (as suggested by Werding and McLellan 2011). For example, if some services are cheaper in foreign countries where some retirees reside, the health insurance fund in the sending country might consider sharing in the savings, but to expand the market, it should also pass some of them along to retirees and to other participants in the chain of provision, such as receiving-country public health providers. Empirical research in this area of health management might identify priorities for regulatory policy.

- Health provision is a sector where state-owned production is significant. This may led some countries to create "national champions" to compete in the international health provision networks. For example, the government of Cuba has established joint ventures with Canadian, German, and Spanish companies to attract patients from these countries for specialized treatments. The government's aim is to help establish Cuba as a hub for teleconsultation and telediagnostic services to the Central American and Caribbean market (Smith et al, 2009).[22] Research could ask whether state-owned enterprises in this sector make sense, and identify new organizational approaches to avoid the major pitfalls.

[22] Cuba has also established clinics in Central and South America, where Cuban physicians and nurses are employed. The issue of paying them take-home wages below local minimum salaries may be important.

4.2 Macro impact of large-scale retiree migration (LSRM)

In the European Union, permanent migration by retirees has not been large in the recent past, despite having installed an advanced framework for social protection of mobile workers 40 years ago (since 1972), which includes a "totalization" scheme for pension rights. It appears that only 1% of German pensioners live outside Germany (Knell, in comments to Meier, in this seminar).[23] In the Eurobarometer survey analyzed by D'Addio and Cavalleri (2012), social security abroad is mentioned among the first two concerns when considering migration by less than 5% of the sample in most countries, the exceptions being Germany and the Nordic countries[24]. Moreover learning seem slow, since in the working-age population, an experience of easy social benefit portability in the past raises willingness to consider working abroad (within the EU) in the future by only four percentage points (D'Addio and Cavalleri 2012, Table 9).

Although migration is a minority experience for retirees, a number of regions within countries receive large-scale retiree migration. Therefore, the macroeconomic impacts discussed in this subsection are more likely to be important for the subnational governments those few receiving regions. Of course, some sending regions may also experience macroeconomic effects. Helping manage these impacts may be an important role for supranational entities such as the EU.

Money pensions

The accounting is straightforward: after migration by a large segment of retirees, consumption falls at the sending region, but production does not. In the Balance of Payments of the sending region, this shows up as an improvement in the current account and an equal worsening in the financial account; the opposite happens at the receiving region.

The macroeconomic impact of this change depends on the structure of the macroeconomy. If this structure is well represented by the specific-factors Australian model at the regional (subnational) level, demand for non-tradeable goods and services falls in the receiving region, depreciating its real exchange rate[25]. This raises the competitiveness of interregionally traded goods produced there, which attract labour reallocations that increase local output of those goods (net exports from the region rise). The opposite happens in the receiving region, where the real exchange rate appreciates, competitiveness of interregionally traded goods falls and net exports fall.

Other macroeconomic impacts of macro of large-scale retiree migration are redistributional. In the *sending* region, the capital owners in the sector that produces tradeable goods and services obtain a permanent gain, because of lower unit labour costs relative to product prices. The capital owners in the sector that produces interregionally non-tradeable goods and services suffer a

[23] This evidence contrasts with the frequent vacations abroad taken by retirees in the EU, and underlines the importance of distinguishing between temporary and permanent movements.
[24] In these countries, this percentage rises to 12-20%, maybe because the welfare state is believed to be particularly attentive and efficient there.
[25] The "real exchange rate" is defined as the ratio of a price index of tradeable final goods and services, to a price index of non-tradeable final goods and services. In this context, trade is interregional.

permanent loss, for the opposite reason, and chose to reduce the rate of increase in their good's prices. Active workers also suffer a loss, given standard weights in the consumer price index of non-traded and traded goods, because nominal wage rises and non-traded good inflation lag the increase in the CPI during an adjustment phase and then remain permanently lower.

In the *receiving* region, rents move in the opposite direction: rents to capital owner fall in the tradeable good sectors, and rents to capital owners rise in the non-tradeable goods sectors; real wages rise for active workers, because nominal wage increases and non-traded good inflation are higher than the increase in the CPI during an adjustment phase and then remain higher.

Public-health and large-scale retiree migration

The spending pattern of retirees is quite different from average, being much more intensive in health services. This implies that the macroeconomic impacts discussed above have different sectoral impacts than if the migration were done by others, for example by children. This difference combines with the fact that the health sector exhibits inelastic supply for long periods.

One way of thinking about this is to redefine the two goods in the Australian model: non-traded goods and services would be health services alone[26], and traded goods would represent all other goods combined. Because the relative price of health services should be much more affected than the standard real exchange rate, where all non-traded goods are combined into a composite good, this approach makes unique the macroeconomic impact of retiree migration.

The public-health literature recognized these issues from the microeconomic perspective long ago. Do immigrant retirees crowd-out domestic patients in the receiving-region health facilities? Do facilities and skilled health professionals become underutilized in the sending region?

If immigrant retirees induce international hospital networks to invest in new hospitals to serve them, do two-tier or dual health systems emerge, in which local patients receive lower-quality services? Are regional inequalities in access to health care in the receiving country, exacerbated by such investments?

Research proposals follow immediately: in the empirical front, is there evidence for these macro-health impacts in the (subnational) regions most affected by retiree migration?

Consider links to growth. The entry of international supplier networks in health would offer local health professionals more opportunities to train for higher skills, both domestically and abroad, increasing the supply of qualified health professionals for the benefit of local patients and speeding up technology transfer. [27] After some years, these activities may also spawn local entrepreneurship in health services for retirees, becoming an autonomous engine of economic growth. Is there evidence for these effects?

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[26] Or more generally, goods and services such with a large share of retiree demand within all demand.
[27] In such a setting, a "brain drain" would coexist with "brain circulation" (XXX quote).

Research questions in the political economy of large-scale retiree migration include:

(1) Effects on the franchise (the right to vote). Since active workers in the sending region lose rents on a permanent basis, together with health-sector workers located there, they might try to limit pension exportability. In response, immigrant retirees may organize and canvass to keep their franchise in the sending region, to protect the exportability of their pensions. What is the evidence? L ocal retirees (who worked and now reside in the receiving region) lose from the inflow of new foreign retirees, because non-traded good inflation, or health-services inflation is higher during an adjustment phase and then the CPI remains permanently higher[28]. Therefore, local retirees may organize to create regulatory barriers to the immigrating retirees, possibly blocking access to local health services. In response, immigrant retirees may also want to become enfranchised in the receiving region, helping them oppose those actions by local retirees. Is there evidence of such conflicts among retirees?

(3) Adaptations of the political-economy models for the Dutch disease. In a large-scale retiree migration model, the natural resource sector's role would be played by the sending country's institutions that fund the health (and other) benefits for emigrating retirees. The political economy effects ensue in countries where the natural resource sector is also *concentrated* in a few firms, since this facilitates behaviors such as bribing of local politicians and union leaders, to limit taxation and set up barriers to entry of new firms that process the natural resource.

In a large-scale retiree migration model, analogues might occur for concentrated links in the supply chain for health services, such as the health insurance institution of the sending country and international hospital chains and other providers. For example, the health insurance institutions of the sending country may bargain with the regional authorities and the regional unions of health professionals to share in the rents. International hospital chains may attempt to set up barriers to entry by asking the regional authorities to raise licensing standards, and may ask to delay investments in locally owned new hospital capacity and other facilities. Both actors may combine pressure with offers to unionized local health professionals, of new opportunities to train for higher skills abroad.

5. Final words

Portability of social benefits and international trade in services is a fascinating topic: new concepts such as optimal discriminatory portability rules, retiree wars and health tourism, are waiting for specific models and quantitative estimation. More generally, there are large opportunity for cross-fertilization with other branches of Economics such as public finance and international trade.

Santiago, July 2012

[28] Money pensions indexed to the sending-region CPI are not enough, because what matters for migrant retirees is the CPI at the receiving region with weights based on the pattern of retiree spending.

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