

## Commentary: Demographic Changes and International Factor Mobility

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John Helliwell's paper examines future demographic shocks and international factor markets and asks whether the latter will help us with adjustment to the former. The answer is a qualified "no."

I am in broad agreement with this conclusion, and it is certainly consistent with Ralph Bryant's excellent paper presented earlier. However, it is the discussant's task to bring some pressure to bear on the argument. So I think it would be interesting to explore the evidence a little further and ask why it is a no and why it is so qualified.

I will focus mainly on issues relating to the global capital market. I think that has been a major focus for discussion, especially as it relates to private and public sector financing of old age in the rapidly aging countries. However, I also want to bring in some important and, I think, overlooked complementarities between labor market and capital markets that could significantly affect our calculations of demographic impacts on both the public and private sectors. Given the caution attached to forecasts, as John Helliwell, Ralph Bryant, and others have emphasized, the sensitivity to assumptions and the exploration of other counterfactuals remain important areas for research.

In the limited time available, I will touch on three main issues. First, what is the extent of globalization today? Has globalization gone too far or not far enough? Second, how does that globalization interact with institutions and policy choices? And how does that affect our forecasting? Finally, although much analysis proceeds under the assumption that labor and capital mobility are two different issues, are there potentially important interactions between the two that we should examine more carefully?

### **Has globalization gone too far or not far enough?**

First, what is the extent of globalization today? Has globalization gone too far or not far enough? Implicit in the ideal of integrated factor markets is the idea that factors are arbitrated across borders—that capital and labor are earning their marginal products in all locations. I share Helliwell's overall impression that although mobility is not negligible, it is not perfectly fluid either.

The border effect is big and pervades all markets; the tyranny of distance remains; frictions and trade costs, whether due to technology or policies, are still substantial. This needs to be kept in mind. However, for counterfactual analysis, we are in slightly better shape since, abstracting from these frictions, marginal changes in the incentives for factors to move should still have some presumably predictable impact. And I think we can usefully draw on that idea.

Perfect integration is therefore a less than useful yardstick. A better yardstick might be provided by past experience. In a recent book, titled *Global Capital Markets* (2004), Maurice Obstfeld and I attempted to provide a unified and quantitative account of the evolution of global capital markets since the late 19th century. That earlier epoch is now celebrated as the first age of globalization and provides one benchmark for our evaluation of international market integration. What important lessons did our study provide?

Measured by quantities and prices, the integration of world capital markets was impressive 100 years ago. It is by some measures just as impressive today. For example, the ratio of global foreign assets to global GDP has probably surpassed its previous peak in 1913. One could present similar results for global labor-market integration, for which I refer you to recent work by Tim Hatton and Jeff Williamson (2004)—though in the labor market the recent upturn has been modest, for obvious reasons relating to persistent policy obstacles to free migration.

Why does history matter? I would argue that we need to understand what caused these wide swings in international factor mobility in the last century before we start to make forecasts into the future, as these fluctuations are first-order phenomena.

However, there is another challenge posed by historical data. We also know that participation in the global capital market is very uneven today. Very few poor countries attract any foreign capital, which remains a puzzle for economists, as noted by Robert Lucas (1990), among many others. Conversely, 100 years ago, the global capital market sent a much larger share of capital to very poor countries, as Obstfeld and Taylor (2004) show.

What has changed? Many of today's developing countries have weak property rights, poor rule of law, political instability, and other attributes that lower their productivity. It's almost a consensus now that this low productivity is a result of their institutional environment. In this view, capital is freely able to flow in but has no incentive to do so, as Alan Greenspan pointed out when referring to the efficient use of savings in recipient countries.

Why the change? It is fair to say there is no agreement here. Some (for example, Niall Ferguson 2003) believe these institutional gaps were smaller a century ago because the presence of colonial rulers in the poorer countries guaranteed good institutions or at least protection of capital (their own capital). Some argue exactly the opposite,

claiming that extractive imperialism of the colonial era explains weak institutions today (for example, Daron Acemoglu, Simon Johnson, and James Robinson 2001).

However, let me express a little doubt here. This cannot be the entire story. Even if we take the best available measures of the marginal product of capital, such as the commonly used Penn Tables, *and we correct for productivity*, there is still a large gap between the presumptive returns to capital in a poor country and in a rich country. This gap is partly caused by explicit barriers to capital mobility as well as a variety of distorting policies and institutions that especially affect cross-border investment. I could delve into the details of the history of these policy outcomes, but that would be digressing.

However, I also think it is fair to say that the scope for manipulating the policies does exist for most countries. As noted in a recent paper by Glaeser and others (2004), the actual rules and policies adopted in countries can vary a great deal, even holding initial institutions fixed. And these policies are changing rapidly in some countries. Thus, our focus might turn from the “elusive quest for institutions” and go back to the more pragmatic level of policy design, something closer to what we as economists and policymakers might actually influence.

### **Policies, institutions, and global factor markets in the future**

“Why is any of this important?” you may ask. As we assess the likely path of capital flows under future demographic change, *ceteris*, as the saying goes, are unlikely to be *paribus*.

At the outset, here, let me strongly endorse one point that Helliwell made very clear in his paper and that relates to the approach taken by Ralph Bryant. The predicted demographic shocks are so closely synchronized across rich and poor countries that we cannot expect very significant differences in demographic structure to open up and induce large and persistent capital movements. The peak in active

share is quoted as 2010 in Europe, North America, and Oceania; 2015 in Asia; and 2020 in South America. Only in Africa is it significantly later (much later), but Africa is, sadly, likely to continue to have such a trivial GDP weight in the world economy that it cannot possibly sustain large capital outflows to finance everybody else's retirements.

In the long run, the world as a whole will age and the pressures will have to be met through domestic adjustments. But even in the short run we face a paradox.

If rich countries are to adjust to the demographic shock through reversed capital flows from poor countries, then some poorer "demographic surplus" countries had better grow rapidly and attain significant macro weight in the world economy.

Large and rich countries can only obtain a fairly elastic supply of foreign capital if some parts of the rest of the world grow substantially. Now, under optimistic assumptions, such growth can happen if institutions and/or policies change in a growth-favoring way in at least some developing countries. Recent research by Michael Klein (2003) indicates that for some emerging market countries with sufficient institutional quality, opening capital markets can generate substantial and significant growth.

But here's the rub: These very same changes in poor countries' economic environments, while they can bring about the rapid growth that will enable them to contribute to a greater share of world savings supply, also, at the same time, rapidly raise these countries' own domestic marginal product of capital and, hence, investment demand. The demographic forces pushing capital out are, in this scenario, met by neoclassical convergence forces pushing capital back in.

To provide an example, in a couple of papers about a decade ago (Taylor 1995, 1998), I tried to compute what would happen when two kinds of shocks hit Latin America: the predicted demographic

transition and a possible shift toward more investment-friendly economic policies. The latter I took to mean efforts, through trade reform and other policies, to lower (but not fully erase) the high relative price of tradable capital goods—thus encouraging accumulation and growth through the mechanism stressed by Brad DeLong and Larry Summers (1991) and many others.

The results were startling: While demographic change alone would turn the region into a net capital exporter, the assumed shift in economic policy would, on its own, generate large net capital inflows of similar magnitude. Put the two in the mix together, and the effects could easily cancel. And the same forces are at work in the world as a whole.

On net, it is not at all clear that such developments will free up any capital for outflow to the rich countries. It could even go the other way, implying simply a global increase in the excess demand for capital and, inevitably, higher real interest rates in the world.

This observation prompts two qualifications. First, these kinds of current account reversals might still have enormous consequences for *some* developing nations. For example, a plus 3 percent demographic swing on current account in Argentina would be a very welcome relaxation of their wealth and external capital constraints. How such a surplus would be dissipated is another question, and emerging markets in this position already face other serious problems on their fiscal side, especially in the pension systems, as Anne Krueger noted in her luncheon address yesterday.

Second, and I think this is a very important point, all of this is *partial equilibrium*, treating demographic paths as given and working life as given. But they might not be. David Bloom, David Canning, Adair Turner, and others drew attention to possible endogenous behavioral changes or exogenous policy changes that could make a very big difference to these projections.

I would add another factor: The capital flow situation will dramatically change if the labor market situation changes so as to permit more migration into the developed countries. Because, to go back to the marginal conditions mentioned earlier, even if frictions exist, on the margin every extra migrant worker admitted attracts an inflow (or deters an outflow) of some quantity of capital. Factors, in other words, chase each other. And we can't do meaningful counterfactual policy analysis without allowing for this. This underscores the importance of considering *both* factor markets together in general equilibrium, even in forecasts already as heroic as these. As Ralph Bryant noted yesterday, however, this is very tricky.

Before concluding on the topic of institutions, I want to say something about debt limits, both in North and South. Several participants have expressed doubt about the ability of the South to absorb big capital outflows from the North, which might putatively fund later retirement income in the North. International net foreign asset positions are always likely to be subject to some limits. These limits are almost always going to be tighter in the riskier developing countries, what Carmen Reinhart, Ken Rogoff, and Miguel Savastano term “debt intolerance”—another manifestation of country risk. But this is still consistent with the scenario I outlined. The very countries that are engaging in policy and institutional change, as we have just said, are the ones capable of financing rich countries in demographic shock. But they also will be moving toward greater “debt tolerance”—another reason why net flows might move toward them and not away.

Furthermore, one can't mention the concept of debt intolerance without adding another worrisome note. We shouldn't necessarily think that some kind of debt limit would not also apply, albeit at a high level, if a rich country attempted to crank its net debt position up to several hundred percent of GDP or higher to try to finance its retirees through endless borrowing.

Some rich countries, in line with certain life-cycle models, have at least accumulated some net foreign assets as “middle-aged” societies

from which they can draw interest or principal to finance themselves as they transition to being “old-aged” societies. These countries include Japan and, to varying degrees, the European countries (but not the United States).

But even with the usual theory in mind, it seems that the demographic shock could still be so large as to force even countries like these, with high net wealth, to confront some kind of policy adjustment to keep the public side of their accounts sustainable. The public-sector debit side looks especially weak due to medical and pay-as-you-go social security liabilities. As we have seen in this conference, it is these deficits that pose the biggest demographic challenge.

The United States enters this process in a peculiar and hard-to-judge position. Its net foreign assets are strongly negative, though it is hard to say exactly how sustainable this position is. Changes in real exchange rates, as we are experiencing at present, could in principle help adjust the private side of the current account. It is harder to see what might adjust the public side of the saving-investment balance, namely the government deficit and especially the pay-as-you-go component. We do enjoy our “exorbitant privilege” of low returns on our foreign liabilities and high returns on our foreign assets. But how long will it last? If deficits do matter, a view not popular on the banks of the Snake River, then we might have to worry about debt intolerance too.

### **Complementarities**

Let me finally turn to the question of capital-labor complementarities and whether they change the picture. For illustration I will focus on a typical developed country, and especially the fiscal position (again reflecting the emphasis in the conference).

Immigration is one supposed safety valve. John Helliwell gives a great survey of this area and, rightly, stresses the limits to this dimension of factor mobility. It appears to be too politically sensitive for



rich countries to open the door to mass migration. And, joining Ralph Bryant, Helliwell also points out the limited potential for this policy to improve the fiscal side, given the public goods burden that offsets the boost to tax collection.

But I have some doubts here. If each extra imported worker (the marginal worker) represents a negligible fiscal gain, how can the mass of domestic-resident workers (the mass of average workers) be such a fiscal plus? And a plus they must be if having them around keeps the pay-as-you-go system afloat.

There are two answers, I suppose: The average immigrant costs more in public spending, or generates less in taxes, than the average native person. Perhaps both of these claims are open to question and, even if true, they could be amenable to policy change.

As Michael Mussa pointed out yesterday, these migrants bring with them enormous human capital. Migrants also see a huge increase in their productivity just from landing on these shores. History confirms the same point, and as Gregory Clark has noted in his study of 1910 cotton mills, U.S. immigrants from low-productivity countries become highly productive once in the United States. Aggregate productivity thus appears to be a location- or nation-specific attribute—a mysterious amalgam of social, cultural, and institutional factors (Clark 1987; Clark and Feenstra 2002).

A comparative advantage for the United States and other developed countries is education, including adult education and training on the job in world-class industries using world-class technologies. Migrants know this, so initial human capital can be leveraged into even greater skills after arrival. As David Canning noted, return migrants come back to developing countries having picked up a lot of human capital.

So enabling assimilation is crucial, and since education is involved, this is an important public policy question. The status quo is not

terrible, notwithstanding occasional propositions passed in the state of California; but it might not be optimal either. One might hope that through this human capital acquisition and access to all tiers of the very open education system, especially at the adult level, migrants, despite whatever “low quality” they arrive with, could see their earnings (and hence their taxes) rise, and their burden on the public purse shrink.

So much for thinking about labor migrating to the United States or any other rich country. If that doesn't happen, then our standard neoclassical model suggests that factor-market pressures will be resolved another way: by outflow of capital.

Suppose the choice is more home capital going abroad or more foreign labor coming here. I think there is another fiscal issue here. *It is a great deal easier to tax residents' labor income than offshore capital income.* The efficiency effects are nearly equivalent: GNP goes up in both cases. But offshore capital income is unlikely to yield tax at the same rate as domestic labor. (Indeed, such conditions could encourage even more of it to migrate.)

To take an example, consider U.S. foreign direct investment (FDI), in a low-tax country, say, Ireland. Evidence suggests that profits are overbooked in low-tax FDI host countries, perhaps in part by underinvoicing intrafirm exports from the United States or overinvoicing intrafirm exports to the United States. This generates some accounting illusions: a U.S. investment account credit and a trade account debit. The trade deficit worsens but the current account does not change. Another illusion is that U.S. foreign investment appears to be very profitable (Lane 2003).

In this case, our GNP gain from factor movement generates little tax for the United States, since labor income falls and the taxes on offshore capital are lower than at home. (It does generate plenty of tax revenue for the host country: Wage income goes up and there is a possibly modest tax from capital). One option is to harmonize tax

treatments to take away this loophole, and that is certainly a live political issue in 2004.

I do not know if these differential tax treatments and loopholes are fully captured in the simulation exercises by Ralph Bryant and others. But one thing is clear: If U.S. gross foreign investment positions expand due to capital being pulled on net into other countries, then the revenue effects of transfer pricing and other tax-shifting strategies could turn out to be significant. No doubt, this would be a very tricky microeconomic tax problem to analyze.

But a general equilibrium view suggests that the other option for resolving the factor-market disequilibrium has quite different tax effects: If more offshore workers came to the United States, they could employ also more capital within the border, and this would generate more U.S. labor *and* capital income, with associated U.S. taxes on both. If, as suggested earlier, those foreign workers also get a “magical” productivity boost from migrating or can enhance their human capital quickly on arrival, then the gain is even bigger.

These effects may depend on initial migrant quality, but they may be available to all workers—after all, the late 19th century data show that the productivity gains were there for migrants arriving from very low productivity source countries (Clark 1987).

I think this example illustrates how issues affecting the two factor markets are linked to each other and to the fiscal accounts. Given that the developed countries already have liberalized their capital markets, the question about complementarity forces us to direct our gaze back at the labor market. Never mind the economics, you might say: Is more migration even politically feasible?

Migration could be maintained at present levels by rich countries, but they probably would not expand their labor inflows, as Helliwell notes. Still, calls for more migration can be heard. Philip Martin (2004), writing for the Copenhagen Consensus, has emphasized the

global gains from free migration, and these are indisputable. Dani Rodrik (2002) forcefully argues that this is the biggest factor-market failure out there. But, as has been noted, translating a global gain into national Pareto gains is elusive: The problem comes from distribution impacts.

An aside here is that the biggest gains from more open labor markets will most likely emerge from the integration of markets for unskilled labor—not skilled labor, as these and other authors have argued. It is in unskilled labor markets that the international wage gaps are largest. And if one takes a Heckscher-Ohlin view, this change might have the benefit of diminishing inequality in the developing world, albeit worsening inequality in the rich world (Wood 1994). Thus, I do worry about Helliwell's optimistic assessment of the outsourcing of IT jobs to India and the happiness, communitarian benefits, and enhanced social capital that might ensue. This outsourcing of skilled jobs is a substitute for *skilled* migration from India (not unskilled). And it does not enrich the abundant poor in India, but rather the scarce, well-off, skilled workers. Granted, these outsourcings are currently small in number. But if they grow we might fear that not only will income inequality suffer in India, but, if social capital is mediated by a social gradient wherein status matters, we might expect all kinds of human development indicators to worsen in India (Marmot 2004).

But will migration ever be allowed to reach levels where its macro-economic impacts are significant? Again, history suggest skepticism. Perhaps the last migration backlash in the early 20th century is easy to understand—demand curves usually slope down and workers know it; externalities would have to be demonstrably big to convince economists otherwise; if economists are not yet convinced, vulnerable workers who vote are probably even more skeptical, even if steady growth might mask some of the effects of inflows (see Hatton and Williamson 2004).

On the other hand, the general equilibrium issues are perhaps more transparently understood today (that is, we know capital chases labor). Building a coalition in favor of migration is possible if all of the tradeoffs are fully understood and the whole is sold as a package of costs and benefits (as with trade reform). If so, there may be potential for factor markets to play some role in the adjustment process in the short run. We should then be cautious in inferring big effects from a literature that has been so partial equilibrium in its focus and from extrapolating into a future where policies and institutions at home and abroad might change dramatically.

However, in the long run, I would agree that the path is clearer. The whole world will age. I would envisage the adjustment outlined by Peter Lindert in his recent book, *Growing Public* (2004). As social security burdens grow and tax bases shrink, the adjustment will be primarily domestic, a combination of reduced benefits (including later retirement ages) and higher taxes. In the end, the rest of the world's labor and capital can change this mix on the margin, postpone adjustment a little, but factor markets are not so well integrated, nor the shocks so asymmetric, that the global shock can be avoided for long.

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