

pronouncements on the correct definition of 'equilibrium' and of economists' misunderstanding of the concept. Whatever our other faults, economists are extremely careful to define what is meant by equilibrium for a given environment under study; it is obviously of no importance if the term's meaning differs from that used in physics.

McCaughey is not alone in his strange views of economics. Much of this book conflates classical general equilibrium theory with the entire corpus of economics. In doing so, it is easy for the various authors to argue that the theory is empirically unsatisfactory, fails to address issues of learning, etc. One would never know from this book that evolutionary game theory, behavioural economics, and so on are active areas of research. Similarly, one would never know that scholarly research on economics has a primary empirical component.

Indeed, the major attacks on economics found in this book rely largely on a misconception of the role of high theory in the discipline. General equilibrium theory was never taken as an empirical description, but rather as a logical organizing structure. In their preface to *General Competitive Analysis* (San Francisco, 1971), Kenneth Arrow and Frank Hahn write:

It is not sufficient to assert that, while it is possible to invent a world in which the claims made on behalf of the 'invisible hand' are true, these claims fail in the actual world. It must be shown how the features of the world regarded as essential in any description of it also make it impossible to substantiate the claims. In attempting to answer the question 'Could it be true?' we learn a great deal about why it might not be true. (p. vi)

This nuanced view of the interactions of theory and empirics seems lost on most of the authors in the volume under review.

Undoubtedly, adherents of computable economics will dismiss my reactions as the product of typical neoclassical narrow mindedness. But frankly, I see little difference between the mode of argumentation in this book and that taken by intelligent design advocates when attempting to debunk Darwinism. In both cases, a broad corpus of theory is attacked on the basis of misleading and de-contextualized arguments. The proposed alternative, while often dressed up in mathematical formalism, has nothing to commend it in terms of demonstrated explanatory power. And, like intelligent design advocates, I see little prospect of computable economics devotees taking the defects of their claims seriously.

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*Public Pensions and Immigration: A Public Policy Approach.* By TIM KRIEGER. Edward Elgar, Cheltenham. 2005. ix + 212 pp. £55.

For ageing economies like those of Western Europe, inflows of young workers from third countries can play an important role in improving the sustainability of social security systems that rely on intergenerational transfers. In this interesting volume Krieger provides a thorough analysis of the problem, both by looking at normative issues and by considering the political feasibility of active migration policies as tools to tackle the recent demographic developments.

The main message delivered by this book is that migration can help during the transition from pay-as-you-go social security systems to fully funded ones. Migration can hardly be seen though as a panacea for the problems faced by existing welfare states, because of both demand and supply-side considerations. On the one hand, the number of migrants needed to stabilize existing unfunded systems would be well above the politically acceptable figures. On the other hand, were the political constraint not to bind, international competition for similarly (highly) skilled migrants would be likely to induce shortages in the international market for talents. As a result, while migration can help in keeping the parameters of a social security system in check, it can represent only one of the many instruments to be used by a government to deal with ageing societies.

After a brief introduction, Chapter 2 provides an overview of the main demographic developments in western Europe and other advanced economies. As the author highlights, low fertility rates, accompanied by higher life expectancy, have led to rapidly deteriorating dependency ratios in most of the countries considered. As a result, the funding of many public pay-as-you-go social security systems has come under threat. An immigration policy that allows predominantly

young workers to settle in the host country can be seen as a simple solution to the problem. As the author points out, though, the sheer size of the inflows needed to maintain a constant dependency ratio are predicted to be so high as to render politically very difficult the use of migration as the only policy tool with which to face the demographic transition.

Chapter 3 sets up the basic framework—a two-period overlapping generations model—used to introduce a classification of the most common types of pension system. In particular, the author distinguishes between fully funded and pay-as-you-go structures, and in the realm of pay-as-you-go systems between systems that pay an essentially flat old age benefit (Beveridgian) and systems in which individual retirement income is related to an individual's working-age earnings (Bismarckian systems). In the context of the pay-as-you-go systems, it is shown that the budget equation depends on both the dependency ratio and the wage paid to the average worker. While an inflow of migrants has an unambiguously positive effect on the current dependency ratio, increasing the size of the working population, the effect of immigration on average wages depends instead on the relative skill composition of the native and migrant populations.

If the average wage is not impacted by migration, if arriving migrants are young and if, once settled in the host country, they follow the same demographic patterns as the domestic population, unskilled immigration is a boon for the receiving country. On the one hand, it improves the wellbeing of the older generation, alive when immigration occurs, while all future generations will be unaffected. As is shown in Chapter 4, though, this clear-cut result no longer holds if wage effects and/or an imperfect assimilation process are explicitly modelled. In this case there will be groups in the population that will favour a more open immigration policy, and other groups that will oppose an increase in the inflow of foreign workers.

The determination of migration policy in a democratic society populated by heterogeneous agents is explicitly considered in Chapter 5. In a fixed-replacement-rate regime, where the benefits paid to retirees are a constant fraction of the current average wage, it is shown that the negative effect of migration on the average wage implies that the median voter will belong to the unskilled young generation. Under plausible conditions, it is then shown that, while the politically chosen level of immigration is positive, it is generally lower than the welfare-maximizing one.

Chapter 6 extends the analysis by considering the effects of voting on the determination of migration policy when pension systems differ. Two scenarios are studied: a fixed contribution rate regime and a fixed replacement rate regime. Under a fixed contribution regime, in both a Beveridgian and a Bismarckian system the current retired generation benefits from migration, while the effects on the working generation depend on the skill composition of the migrants; if migrants are unskilled, the (skilled) median voter will be in favour of immigration. Under a fixed replacement regime, given the total pension benefits, migration will lead to falling contribution rates. In a Beveridgian system, because pension benefits are a function of the average wage, the current retirees will be against immigration; under a Bismarckian system they will be indifferent. Skilled workers will unambiguously favour unskilled immigration, as their wages will rise and their contribution rates will decline. The median voter in this situation will once again be the unskilled native, who will gain from migration through a reduction in the contribution rates, but will lose from it as a result of increased labour market competition. As the author shows, whenever migration is small the gains from falling contribution rates dominate; whenever migration is very large the opposite effect holds. Moreover, the unskilled native is more likely to oppose an increase in immigration in a Bismarckian system than in a Beveridgian system, as a lower wage today will also translate in lower pension benefits in the future.

So far the analysis has focused on the point of view of the host country. That is, Krieger has studied how immigration flows affect the pension system of the receiving country. The next question he asks (in Chapter 7) is whether a different pension system *per se* might represent an indirect incentive to relocate across borders. While in the presence of substantial cross-country income inequalities this is unlikely to be an important issue, if countries don't differ too much in their level of development the existence of different pension systems might be the source of an efficiency loss. Several of the solutions put forward in the literature are then discussed, but most of them appear to be politically difficult to implement.

Chapter 8 presents an attempt to evaluate the extent to which the existing pension systems in the 15 EU member countries do in fact represent an important factor in inducing the relocation of workers across EU countries. Interestingly, Krieger shows that, even though the differences across countries in the net public pension wealth are very large, there is little evidence that migration flows observed among EU countries are related to differences in pension systems.

A similar question is asked in Chapter 9, where the author analyses the likely impact of migration from new eastern European countries on Germany. The main message is that, while the pension system of the destination country is very likely to benefit from an inflow of young eastern European workers, for those very same young eastern European workers the German pension system might very well turn out to be a bad deal. Of course, as long as income differentials between eastern European countries and Germany continue to be very large, the effects of the retirement system on the migration decisions are likely to remain only a second-order question.

The book is clearly written and tackles a very important question. It should be an essential read for any social scientist working on immigration policy and its long-run implications. The only important shortcoming in the discussion, in my view, is the exclusive focus on voting models to explain migration policy. While the median voter framework is a very useful tool to aggregate individual preferences, it might in this case be an oversimplification of the actual political process. In particular, there is growing evidence that lobbying plays an important role in shaping policies towards international factor mobility, and I would have liked to see the relevant recent literature discussed in this otherwise excellent book.

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