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BOOK REVIEW

Herbert G. Grubel and Anthony Scott, eds., The Brain Drain: Determinants, Measurement and Welfare Effects (Wilfrid Laurier University Press, Ontario, 1977) pp. xiii + 165.

The brain drain has recently returned to the arena of academic analysis and policy discussions: with one important change of emphasis. Whereas the earlier academic focus, in the 1960s, was on essentially neoclassical, competitive modeling, the many recent contributions have provided a far richer complex of theoretical analyses that build in more realistic features such as imperfections in labor markets. In turn, this shift reflects the demise of interest in the subject by policymakers in the developed countries (DCs) that earlier worried about the outflow to the U.S., but its enhanced attraction to the policymakers in the less developed countries (LDCs): for, few professional economists are willing to treat LDCs as realistically portrayed by models that assume away market imperfections or the role of externalities and distortions.

The Grubel–Scott volume belongs essentially to the earlier genre of professional writings on the subject. It reprints these economists' major and minor contributions, published mostly between 1966 and 1969, but then also reorganizes these while adding much new material that has evidently been drafted in 1976.

This complicates the reviewer's task enormously since, given the state of the debate in the 1960s, the authors clearly made some pioneering contributions, which, if reprinted 'as is,' could only have been judged to be distinguished. However, given the extensive rewriting – unfortunately done in a way which makes it impossible to detect what precise material came from which published paper – and new materials, the volume can legitimately be judged also in light of the know-how as in 1976: and, by that criterion, serious questions can be raised about its overall analytical soundness as also about its occasional policy prescriptions (or, more precisely, policy rejections).

Grubel and Scott's important contribution (reproduced with substantial rewriting in Chapters 3 and 4) amounted to two propositions: first, that the welfare effect of the brain drain must be judged, not by changes in GNP or GNP per capita in the country of emigration, but rather by its effect on 'those left behind' (TLB); and, second, that this means that, for 'small' migrations, there will be no effect on TLB because the migrants will have been contributing to GNP what they earned as wages.

While these propositions were, quite appropriately, influential in shifting the brain drain debate on to an analytical plane of discourse, it is unfortunate that Chapters 3 and 4, written at the present date, are still heavily focused on them, without an updated analysis of their limitations. Thus, consider the proposition that the welfare effect on TLB is the proper focus of analysis if one is concerned with the effect on the less developed countries (LDCs). Now, this would seem to be perfectly appropriate if the effect of the brain drain is being considered on the basis of the 19th century pattern of emigration, which was predominantly of the once-and-for-all variety. However, the important aspect of modern professional migration is that it is of (what this reviewer has termed elsewhere) a 'to-and-fro' variety, given the low transportation costs, frequent opportunity to return to one's country of birth and the growing tolerance of lack of assimilation in the countries of immigration (including the United States where the melting pot has surely melted). Thus, the proper set of persons over whom the LDC welfare function is to be defined should *include* the migrants themselves. Now, the Grubel–Scott procedure of leaving out the migrants and focusing on TLB may be defended on the ground that the migrants are, ipso facto, better off or they would not emigrate, and therefore exclusive attention on the effect on TLB should be enough to decide also whether LDC welfare (defined over the augmented set which includes the migrants) has also improved. But surely this defense will not work in general. Thus, it is easy to construct cases where, for example, the brain drain would be considered beneficial if the Bergson–Samuelson social welfare function is defined over the augmented set of individuals but harmful if it is defined only over TLB. Again, for example, the theoretical analysis of the welfare effects of professional emigration – when the LDC is pursuing an optimal income tax policy in the Atkinson–Mirrlees type of framework, where the tax is a second-best instrument to pursue egalitarian objectives – can be significantly different, depending on whether the emigrants are or are not included in the welfare analysis and whether the tax can or cannot be extended to the emigrants' incomes while abroad.

But, even if one designs the theoretical analysis in terms of TLB, the Grubel–Scott volume is surely somewhat dated in sticking to models that are of the perfectly competitive variety and, to boot, assume one product! The one-product assumption means that they miss the point (favorable to their prescriptions) that, as long as the migration leaves the LDC in the McKenzie–Chipman diversification and the Rybczynski cones, there will be no effect on TLB even for 'large' migrations. Moreover, it is rather unfortunate that the authors do not turn their theoretical talents to assimilating, if not incorporating, the many recent theoretical contributions by Koichi Hamada and others that model with illumination the effects of numerous labor market imperfections and realistic governmental-policy 'distortions.' Instead, Chapter 4 (newly written) is an elementary exercise in cumbersome geometry which utilizes unnecessarily restrictive assumptions mainly to prove the obvious: that the total loss in output from the emigration of skilled labor would be less if capital were malleable and reallocable to train more skilled people!

The rest of the volume contains the authors' work on the decision to migrate and their measurement of the human capital in the flow of skilled manpower internationally. The latter is of high quality and extremely carefully done. But, at this date, one would have again expected some further rethinking on the whole question in light of the new theories of education as also the recent discussions in international organizations on measuring the imputed capital flows in the brain drain from LDCs.

Thus, is it really altogether obvious that investment in education is investment in 'human capital'? Modern theories of education have produced at least two alternatives: the Arrow–Spence screening theory and the Bhagwati–Fields–Srinivasan theory of 'fairness-in-hiring' and job competition. These theories are quite relevant to international migration as well. Thus, for example, the education acquired by students from LDCs in countries such as the United States is not always a matter of going to places such as Chicago and MIT. Often, students with perfectly good domestic degrees will study at inferior institutions in the United States, either because the U.S. degree provides a screening process for U.S. employers or because, quite simply, the U.S. degree is an instrument of job competition in the U.S. labor market. Therefore, the Grubel–Scott discussion and calculations based on the 'human capital' notions would be quite beside the point in these cases. The present reviewer therefore would reject the implicit assumption in the Grubel–Scott procedures that the valuation of the human capital is the only method of looking at the brain drain. Then, again, one can and should generalize the notion of capitalising the flow of professional manpower in yet another direction: i.e. one could take the present-discounted-value of the migrants' incomes in the country of immigration or emigration and consider this as the imputed capital flow implicit in the brain drain as at one point of time. This measure, of course, need not have the slightest relationship to any 'human capital' doctrine, while providing one with a perfectly appropriate measure which can be put into an overall balance sheet of 'capital' flows between LDCs and the developed countries, as is recently being considered at international organizations such as the UNCTAD.

The policy judgments and conclusions (mainly presented in Chapters 1, 4 and especially Chapter 12) also left the reviewer uneasy. While there is much here that is valuable, there are two main problems with the analysis: (i) a tendency to be complacent about the effects of the brain drain and (ii) a failure to distinguish conceptually among alternative tax proposals and their rationales, which does not deter the authors from rejecting them anyway. The complacency is to be traced partly to the tendency to attach low weight to disexternalities or to stress the positive externalities to the exclusion of negative effects (e.g. on pages 40–41, the notion that 'knowledge is a free good' is used to argue that an Indian scientist at Berkeley, who discovers a cure for cancer, is benefitting India equally: but the fact that knowledge may be restricted by patents or by CIA contracts or that the Indian scientist may wind up working on problems that have little relevance to India is not discussed at all); this, in turn, reflecting the fact that these disexternalities are more likely to occur in LDC-to-DC migration than in the DC-to-DC migration with which these DC-origin authors have immediate first-hand experience. On the other hand, the failure to discuss systematically the distinctions between an emigration tax, an income tax on immigrants' incomes in DCs, transfer of resources from general DC revenues etc., and to discuss their many alternative rationales and corresponding political and administrative implications renders their somewhat summary rejections of one or more of these proposals (on pages 152–55) less than compelling.

It would have been perhaps unnecessary to dwell on such limitations, were it not for the fact that the authors evidently feel, and are clearly unjustified in so asserting, that their analysis is definitive and superior to the confusions in the present policy and research discussions. They are best quoted on this from their own Preface:

> A study of the literature on the brain drain which has appeared since the publication of our own writings has convinced us that the present book should continue to be of use to scholars and policy makers. The economic analysis and methodology of measurement employed in our studies remain valid and applicable to future studies. The empirical findings represent an important historic record which may serve as a benchmark for future empirical studies. Our policy conclusions embody the economists' internationalist welfare approach which all other policy discussions can disregard only at the risk of losing credibility.

There is little doubt that, had they put enough energy into it, these distinguished authors should have been equal to the task required to sustain their claim. Unfortunately, they have not done so.

In fact, there is every indication of haste. There are rather obvious non-sequiturs, as when concern with GNP is rejected, on page 27, as 'nationalistic' pursuit of military and economic power, to be contrasted with their enlightened criterion of the effects on TLB: an argument that would be dismissed by those who may legitimately see military and economic power as influencing in obvious ways the external environment and *hence* the flow of goods and services to TLB. There are occasional, inadvertent misrepresentations as when (in material that is ascribed explicitly to Grubel alone), the Bellagio Conference on the brain drain and taxation is described (on pages xiii and 10–11) as dealing mostly with the so-called emulation effect of emigration on domestic salary levels when, in fact, a very large number of other labor market imperfections, etc., were modeled at this Conference; and, as when argumentation is conducted on the premise that the proposal to tax the brain drain in the form of taxation of immigrants' incomes in countries of immigration is necessarily based on alleged loss of welfare in LDCs whereas this link has been explicitly pointed out by its proponent as not necessary for recommending the tax. Moreover, there is an unusually large number of lapses in referencing: for example, the *International Migration Quarterly Review* (pages v and xi) does not exist and should instead be *International Migration*; the Preface includes the phrase 'to be published in the Proceedings of the 1968 Cornell Conference'; there are references to footnotes which make no sense (as in footnotes 13 on page 6 and 16 on page 9) because they evidently belonged to an earlier publication of the material; the journal reference to the Berry–Soligo paper is missing on page 36. There is no index either.

Was it really useful to publish this hastily-assembled and sketchily-argued volume? The ill-argued formulations and prescriptions of policymakers indeed need to be exposed; and there is indeed evidence of nonsequiturs and other logical fallacies in the recent arguments on the brain drain by *some* LDC (and, for that matter, developed-country) spokesmen at the UN and otherwise. However, nothing constructive can be done towards a scientific resolution of the issues in the debate if the professional economist does not bring to the task a careful, balanced and analytically strong approach that would distinguish his work markedly from that of the often-untutored policymakers whom he seeks to straighten out.

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