Gundlach, Erich

Book Review

[Book Review of] Population, food, and rural development, Lee, Ronald D. ... (eds.), Oxford, Clarendon, 1988

Weltwirtschaftliches Archiv

full foreign exchange cover for the central bank money and retain "a little bit of latitude to accommodate shocks such as an increased currency demand at Christmas" (pp. 41–42). With quasi-currency boards, the republics would however sacrifice the major advantage of genuine currency boards: the outstanding monetary credibility which stems from a full cover for central bank money. Their arguments against a full-blown currency board as advocated i.a. by Hanke and Schuler [1991] and Schmieding [1991] remain unconvincing. A currency board need not be expensive, or at least not more expensive than a standard stabilization fund, as the needed initial endowment with reserves could be created and donated by Western central banks almost costlessly and without incurring noticeable inflationary risks [Schmieding, 1992, Ch. C.II]. And in order to be able to accommodate seasonal fluctuations in money demand, the monetary authorities would simply have to follow the example of Hong Kong and keep a small amount of extra reserves as a cushion. Unfortunately, the authors also dismiss the alternative of flexible exchange rates without offering a sufficient explanation.

As a means to ease the settlement of transactions between ex-Soviet republics with separate currencies and to economize on scarce foreign exchange, the authors advocate a payments union which should encompass the successor states of the Soviet Union and – preferably – also the countries of Central and Eastern Europe. They admit that huge and oil-exporting Russia has little incentive to join such an arrangement. Nonetheless, they urge Russia to act as a large country, i.e. to shoulder systemic responsibilities beyond its own narrow national interests. Regardless of the economic logic of a payments union as a halfway house on the way to eventual current account convertibility, the political rationale is shaky. An arrangement which the dominant country, Russia, may join only very reluctantly, perhaps in exchange for an extra amount of Western aid, could be very unstable. It may require a degree of reliable inter-republican political co-operation which cannot be taken for granted (by mid-1992, some republics have been engaged in armed conflicts against each other). As in the case of price liberalization, the best strategy may thus be to encourage Russia to go ahead with current account convertibility for its own currency – and let the smaller republics suffer the adverse effects if they dare not to follow the good example.

References

Hanke, Steve, Kurt Schuler, *Currency Boards for Eastern Europe*. Heritage Foundation, Heritage Lecture No. 355. Washington, D.C., 1991.

Schmieding, Holger, *Lending Stability to Europe's Emerging Market Economies*. Kiel Working Paper No. 481. Kiel 1991.

–, *Lending Stability to Europe's Emerging Market Economies. On the Potential Importance of the EC and the ECU for Central and Eastern Europe*. Kieler Studien, 251. Tübingen 1992, forthcoming.

Holger Schmieding

Lee, Ronald D., Brian Arthur, Allen C. Kelley, Gerry Rodgers, T. N. Srinivasan (Eds.), Population, Food, and Rural Development. International Studies in Demography. Oxford 1988. Clarendon Press, VII, 215 pp.

This volume addresses an issue which was raised by Robert Malthus more than 150 years ago, which is still unsettled and which is highly relevant for most of the developing countries of today: Will population growth lead to declining per capita output and consumption of food as is postulated by Malthusian pessimists, or, as postulated by Boserupian optimists, will population growth induce responses which may more than offset the negative effects resulting from the decrease in land per head? To put it differently, the book tries to find an answer to the question whether population growth should be seen as a vice or a virtue.

The book contains 10 papers by leading experts. At least some of the papers were prepared for the International Union for the Scientific Study of Population for presentation at the Seminar on Population and Rural Development held in 1984 in New Delhi. The carefully written introduction by *Ronald D. Lee* provides a comprehensive summary of the main topics and allows the reader to understand the connections between the various parts and the basic theme of the book. Part I includes two papers on projections of food output in relation to population. Setting out the general theoretical background, Part II (four papers) deals with the rural response to increasing population density. Part III consists of three country studies for India, Malawi, and Asia in general which analyze the effects of population growth on the rural labor force. The last paper (Part IV) tries to assess the role of frontier expansion as a safety-valve for population growth. The classification of the papers into Parts II, III, and IV appears to be somewhat artificial. The last five papers of the book all focus on specific empirical evidence and could have been easily assembled under an alternative common heading, as is made clear by the introductory text.

In the first paper, *T. N. Srinivasan* assesses various recent projections of the impact of population size on the demand for and supply of food. The models reviewed vary in their approach to modelling production and supply: whether they distinguish countries and regions as well as different socio-economic groups within countries in deriving demand, whether they are partial or general in modelling market equilibrium, and whether they are static or dynamic. He notes that almost all forecasts agree that food output per head on a global level should be more than adequate through the end of the twentieth century. Of course, this is not to say that everyone will have sufficient food. Srinivasan argues that the model projections should be interpreted very carefully. For instance, in all the projections reviewed population growth is exogenous, and all the projections neglect the effects of exogenous population growth on the environment through desertification and soil erosion. Most of the models can be critized for being static, more or less ignorant with respect to the effects of changes in relative prices, and relatively ad hoc in specifying the process of technical change. In concluding, Srinivasan speculates that the recognition and utilization of the informational content of flexible market prices could improve the prospects for accommodating increasing populations at a reasonable standard of living, which seems to be feasible from a purely agronomical and technical point of view. Flexible market prices would help to reduce imbalances between supply and demand in the short run, and provide appropriate signals for directing investments to ensure a long-run equilibrium. According to Srinivasan, normal fluctuations in food supply have little to do with population growth. In his view there is overwhelming evidence that the main cause for famine is not a shortage of food or rapid population growth but severe policy failures.

In commenting on Srinivasan's contribution, *Hans Linnemann* argues that Srinivasan's main conclusion from the model results, namely that the demand for food likely to arise from anticipated income and population growth can be met technically, should not be interpreted as optimistic as it may appear to be on first sight: the projections do not say that undernutrition will be eliminated, leave open the question what will happen after the year 2000, do not touch on the probability of large necessary investments in agricultural infrastructure, and do not evaluate the prospects of some poor developing countries to pay for food imports. Therefore, he goes on to ask whether it would be possible to think of policy changes that might lead to better results in terms of reducing undernutrition. The international policy he is thinking of is a reduced OECD agricultural production. For political reasons, the agricultural sector is heavily protected in most of the OECD countries leading to depressed world food prices due to easy supply conditions. Linnemann's model simulations indeed show that poverty and undernutrition in developing countries might possibly be reduced in the longer run by less depressed world food prices.

The paper by *Prabhu Pingali* and *Hans P. Binswanger* analyzes the effect of population growth and density on investment, technology, and choice of technique, especially with respect to agricultural practices in Africa. They note that human capital is becoming an ever more important input into the agricultural production process. One of their findings is that there is a relatively high degree of substitutability of capital and labor for land. The implication is that in the long run the returns to agricultural labor seem to decline quite slowly as population density increases.

In their paper, *Mark R. Rosenzweig, Hans P. Binswanger,* and *John McIntire* discuss the effects of population growth on production relations in agrarian economies. That is, they try to understand how changes in the relative scarcity of land and labor caused by population growth alter the institutional arrangements governing exchange and ownership, thereby focusing on the constraints that arise when market mechanisms for risk diffusion and intertemporal markets are incomplete and information is costly. They argue that the long-run effects of population growth and land scarcity lead to the development of labor markets, property rights in lands, landlessness, credit markets, and purchased inputs, and also bring about reduction in common property resources, livestock tenancy, and horizontally extended markets.

Whereas the previous papers show how increased population density can lead to a change in institutional structures, *Mead Cain* and *Geoffrey McNicoll*, in their paper, develop the idea that the consequences of population growth will be mediated by the pre-existing institutional structure and should not be considered in abstraction from it. They point out that agrarian outcomes in terms of the rate of growth of per capita product are to a considerable degree tied to the family system as well as to the local-level community and administrative organization. These institutional forms are often relatively immune to population growth. Cain and McNicoll suggest to distinguish the family form being nuclear or joint, and the community organization form being defined by kinship or by corporateness and territoriality. This classification scheme leads to four distinct institutional settings and may provide a very useful reference system for analyzing the responses of different societies to similar demographic shocks. For instance, pre-industrial Japan and Switzerland can be taken as illustrations of strong corporate-territorial systems, whereas in Africa village organization has traditionally been quite weak in comparison to tribe and lineage organizations.

Although being a paper on a specific region of a specific country, the contribution by *Robert E. Evenson* almost matches the general question the volume tries to assess. Focusing on North India, he attempts to estimate the negative and the positive effects of population growth on real incomes, holding constant a number of other variables such as investment by farmers and government expenditures for infrastructure and research. His simulation results point to net negative effects. A 10 percent increase in population is found to depress per capita income by 8 percent, but this effect is expected to be partially offset by a positive effect of 3 percent, leaving a net decline of per capita income of 5 percent.

The distributional consequences of population growth are a common additional topic of the three papers in Part III. *Azizur R. Khan* reviews the experience of a number of Asian countries. He notes that there seem to be various so-called escape routes from the effects of rapid population growth on the rural sector. In Thailand and the Philippines, for instance, the land in use expanded rapidly enough to prevent a decline in the land-labor ratio; in Korea and Taiwan, the industrial sector grew rapidly enough to stabilize or lower the number of people in agriculture. Contrary to these developments, Bangladesh provides an example for what Khan calls an archetypal case: population growth led to a growing labor force, which is less than fully absorbed in industry; since the amount of land was fixed, land per worker declined and as a consequence, productivity and real wages also declined; at the same time, there was a disproportionately large increase in landlessness or near-landlessness. Here it is tempting to speculate about the usefulness of the conceptional framework suggested in the paper by Cain and McNicoll in helping to explain the rather different country experiences.

Additional evidence for the potential usefulness of this framework comes from *Graham Chipande's* paper. He analyses the impact of demographic changes on rural development in Malawi where the agricultural production is divided between small holdings and large estates, with more than 90 percent of the rural population earning their living from smallholder agriculture. He reports that although the government has sought to encourage the development of the smallholder sector demographic pressures have resulted in the cultivation of inferior marginal lands and a substantially reduced average cropped area per household. However, because of the tribal ownership of the land, these pressures have not led to landlessness. Contrary to this experience, *Pranab Bardhan,* in his paper on demographic effects on proletarianization in India, presents empirical evidence based on a large cross-area sample pointing to a correlation between a high population density and a high proportion of landless peasants. He notes, however, that a complex pattern of agro-climatic and institutional factors makes this correlation difficult to interpret.

In the last paper of the volume on frontier expansion, agricultural modernization, and population trends in Brazil, *George Martine* discusses the case of a country which can still draw on relatively open land for agricultural expansion. According to Martine, the Brazilian experience is disappointing. He reports that the massive colonization programmes were not capable of absorbing any notable proportion of the rural excess population. The Amazon region, for instance, absorbed only about half a million rural migrants in the seventies, despite government plans to settle ten times that number. Furthermore, a greater distance to markets exacerbated by rising fuel prices, lower soil fertility, natural obstacles and also government policy failures may all have contributed to a progressive lack of success in settling the frontier regions. Given the recent worldwide concern for the preservation of the tropical rain forests one occasionally wonders what would have been the outcome of the Brazilian agricultural development had not industrialization been proceeding so rapidly.

Taken together, this volume discusses various aspects of the effects of population growth on rural development. Instead of providing a definite answer to the question whether population growth should be seen in terms of Malthusian pessimism or Boserupian optimism, it provides a number of stimulating ideas scattered throughout the various papers which might lead the reader to the conclusion that the whole question is inappropriate. To view population growth as an exogenous factor probably puts the problem in a wrong perspective. There is emprical evidence that demographic behavior does respond to economic incentives. Although modelling population growth as an exogenous factor has a long tradition in economics, the recently renewed interest in the theory of economic growth has led to models that seem to provide new possibilities for changing this point of view.

Erich Gundlach