BOOK REVIEWS

Asian Village Economy at the Crossroads: An Economic Approach to Institutional Change by Yujiro Hayami and Masao Kikuchi, Tokyo, University of Tokyo Press, 1981, xx+275 pp.

I

Agriculture and rural villages in tropical Asia, which had long been characterized as static or stagnant, have been vigorously experiencing a dynamic change since the second half of the 1960s. One of the most important factors behind this change has been the newly developed fertilizer-responsive, high-yielding varieties of rice, referred to as "modern varieties" (MV), and the modern farming methods on which their cultivation is based. Such technological innovation spread at a surprisingly rapid rate mainly due to the strong government support policy among farmers in countries that had been plagued by rapid population growth and stagnation in food production, and its impact went beyond agricultural production and management to the very socio-economic structure of village society.

A fact worthy of particular attention in this respect is that the trend of impoverishment of the village economy has never been brought to an end despite the continuing substantial increases in production due to modern technology diffusion. Exploration of the reasons for this paradox, the significance of the "green revolution" for farmers, and the future prospects of agriculture and the village economy in tropical Asia are, therefore, questions which must be urgently dealt with at the present time.

II

This book concerns itself with such agrarian change in Aisa. It consists of four parts and a postscript. In part I the scope, methodological framework, and hypothesis of the book are indicated. Parts II and III deal with the actual process of agrarian change through field investigations in village communities in the Philippines and Indonesia, identifying the patterns of such change, and part IV gives the future perspective and policy implications. The postscript briefly considers the agrarian problem in India from the viewpoint of a comparison with East and Southeast Asia.

The main arguments of this book can be summarized in the following three points. Firstly, it identifies population pressure as the fundamental force in the current agrarian change in Asia, pointing out the fact that the trend toward rapid population growth is lowering the marginal productivity of labor, thereby cutting wages and increasing inequality in agricultural communities. The second point is that the technological innovation represented by modern varieties counteracts such population pressure. Because of its scale neutrality with respect to farm size and noncomplementarity with farm machinery, MV technology has neither segregated farmers by size and tenure

nor has it reduced farm employment. Thirdly, the authors identified two patterns of agrarian change, one of peasant stratification accompanied by paternalistic relationships and the other of polarization based on impersonal market relationships, maintaining that the former is considered to be more prevalent at the present time.

In this book particular attention is focused on the various systems existent in agricultural communities, particularly those pertaining to land tenure and harvesting labor. The patterns of agrarian change are discussed in terms of change in these two systems, based on the assumption that the relative scarcity of resources is a determining factor of institutions and systems in rural communities.

What is meant here by peasant stratification is an "increasing class differentiation in a continuous spectrum ranging from landless laborers to non-cultivating landlords" (p. 60) as a result of the recent development of "multistage landlordism" and the emergence of new harvesting systems such as the *gama* or *ceblokan* system whereby participation in harvesting is limited to workers who render free labor services in particular kinds of pre-harvest farm work.

Behind this change are such factors as growing population pressure and falling wages, increasing spread of modern varieties and rising marginal land productivity, and the introduction of a fixed rent system in tenancy contracts and the subsequent acquisition by farmers of the economic surplus (amount accrued as a difference between economic rent and actually-paid land rent). The consequence has been a further increase in the economic disparity between the farming and non-farming households of rural society. Under such circumstances, traditional community norms such as mutual help, income redistribution, and "work-sharing" within the village are operative in the early settled villages with a tight social structure. Well-to-do farmers usually are very paternalistic toward fellow villagers in subletting some of their tenancy land to landless families thereby affording them maximum opportunity to participate in harvesting. The emergence of sub-tenancy and the *gama* system in harvesting are the outright result of such a response on the part of these farmers. A pattern of agrarian change in these villages taking the direction of peasant stratification is argued by the authors.

On the other hand, in the case of late settled villages with a loose social structure, the growing wealth of the progressive farmers (who are supposed to capture the economic surplus) is working directly toward land concentration, resulting in a polarization type of agrarian change in which large commercial farms are emerging at the sacrifice of small peasants. The "crossroads" in the title of this book refers to the crossways which will lead the Asian village economy toward agrarian change represented either by peasant stratification with paternalistic relationships or by polarization with the full force of market mechanism.

III

A prominent feature of this book is its successful integration of microanalysis and macroanalysis, which have tended to be separate, by means of a single theoretical framework. This has been done by analyzing micro data collected at the village level on the basis of economic theory for the purpose of identifying the patterns and mecha-

nisms of change in agrarian systems in tropical Asia and determining the future outlook in this respect. Particularly noteworthy in this connection is the fact, pointed out by the authors, that even slight changes and regional variations in the harvesting system can in fact be very suggestive regarding the state of or change in resource endowment. Nevertheless, the reader can discern some difficulties with respect to the major findings and arguments of this book. In this regard, I will comment on three points that appear to be of the greatest importance, i.e., the impact of technological and institutional change, the emergence of "multistage landlordism," and change in the harvesting system.

One key premise on which the views of this book are based is the appreciation that it is the cultivating farmers who have captured the benefit of an increase in the rice yield derived from technological innovation. This is most critical in connection with an evaluation of the "green revolution," and it is on this point that I have my doubts. In order for this premise to be valid, at least the following points must be taken for granted, i.e., the success of agrarian reform, a tremendous increase in production as a result of technological innovation, and the neutrality of MV technology with respect to the scale of farming. It is, however, very difficult to confirm the above from the prevailing conditions observed in the Philippines' major agricultural regions such as Central Luzon, Southern Tagalog, and Western Visayas.

In connection with agrarian reform, this book points to the disintegration of the hacienda and the establishment of a leasehold tenancy system as direct evidence of the acquisition of an economic surplus by the farmers who benefited from such reform (pp. 78–79). According to government-published figures, however, as of 1979 only about 10 per cent of the land affected by such reform had left the hands of landlords in terms of ownership. This is because of stubborn resistance and sabotage on the part of landlords in negotiations for the determination of land prices, which has often caused prices to be exceedingly high in cases where they have been determined.[1] Furthermore, land title has so far been transferred from landlords to the government and not to cultivating farmers, who will not acquire title for ten or fifteen years, i.e., until after they have paid up their amortization. In many cases, the farmers involved would have to continue over that period to pay annual installments which frequently exceed the land rent they formerly paid. Consequently, it is by no means certain that they would be able to do so to the end.[2] In terms of transfer of title at least, agrarian reform progress is still very much limited, and it is simply not true that the haciendas have disintegrated.

On the other hand, there has been considerable change in the tenancy system from sharecropping to a fixed rent. It is true that under the leasehold system it is the farmers working on the land, not the landlords, who can capture all benefit from

[1] See, Tsutomu Takigawa, "Kaigenreika Firippin niokeru nōchikaikaku no tenkai to nōmin" [Agrarian reform development and peasants in the Philippines under martial law], in *Tōnan-Ajia nōsonshakai-kōzō no hendō* [Structural change of rural villages in Southeast Asia], ed. T. Takigawa (Tokyo: Institute of Developing Economies, 1980), pp. 28–29.

[2] See, Jesucita L. G. Sodusta, "Land Reform in the Philippines: Past and Present," in *Southeast Asian Affairs 1981* (Singapore: Institute of Southeast Asian Studies, 1981), p. 265.

increased production, but it is also they who have to shoulder all risks involved.[3] As a result, there has been a wide occurrence of land rent arrears, which never happened under sharecropping.[4] Frequent pawning and sale of certificates of land transfer (CLT) by the agrarian reform beneficiary-farmers,[5] abandonment of farming by small or marginal farmers,[6] and other similar situations are a good indication of how farmers have been losing their overall economic stability.

The sharp rise in the rice yield mainly due to the spread of modern varieties is also reflected to a certain extent in macro data. However, such increase in yield does not necessarily mean higher farm income, since there is also a marked increase in costs in terms of fertilizer, farm chemicals, irrigation, etc.[7] No one denies that some farmers have been able to obtain unprecedented yields and improve their economic conditions substantially thanks to favorable weather and operational conditions including improved irrigation facilities. However, the fact that the majority of farmers are having a hard time to pay *Masagana-99* and other governmental loans as exemplified by the high delinquency rate is a far more common situation.

The reason for the scale neutrality of MV technology is the divisibility of core technology such as seeds, fertilizer, and chemicals. But this is, of course, only a physical attribute of the technology and it does not change the fact that a substantial amount of working capital is needed in order for farmers to make use of such technology, which in turn makes the system regarding the policy of agricultural financing relevant to such use. Since it is generally common in developing countries for public policy and institutions to tend to have a strong scale bias, it is impossible in reality for MV technology to be neutral with respect to farm size. In Chapter 6 the authors argue that no significant difference exist between large and small farms except in terms of bargaining power in the employment of labor and the purchase of input materials (pp. 133–40). Since the merit of intensive labor input in pre-harvest activities of rice cultivation is not small with respect to yield level, it is hard from the beginning to expect a higher yield on large farms. Consequently the relative advantage of large farmers in making full use of MV technology would be their bargaining power and risk-taking ability.

The big gap between the authors' contention and the general situation in the Philippines is due in large part to the analytical results obtained for East Laguna Village

[3] See, Carolina A. Del Rosario, "Changing Rural Institutions in a Rice Growing Barrio" (Paper presented at the Philippine Sociological Society's 1980 National Convention in Quezon City, November 27–28, 1980), p. 20.

[4] See, Hiromitsu Umehara, "Firippin no nōchikaikaku to nōmin" [Philippine agrarian reform and peasants: case study at a rice hacienda in Central Luzon], *Ajiya kenkyū*, Vol. 26, No. 1 (April 1979), p. 50.

[5] See, *Balita*, August 14, 1977, and *Ministry of Agrarian Reform Memorandum Circular*, Nos. 7–79 (1979), Nos. 8–80 (1980).

[6] See, Benedict J. Kerkvliet, "Classes, Consciousness, and Change in a Philippine Village" (Paper presented at the Annual Meeting of the Association for Asian Studies in Washington, D.C., March 21–23, 1980), p. 22, and H. Umehara, "Green Revolution for Whom: An Inquiry into Its Beneficiaries in a Central Luzon Village, Philippines" (Paper presented at the 24th International Geographic Congress in Tokyo, September 1–5, 1980), pp. 21–22.

[7] See, H. Umehara, "Green Revolution," pp. 15–18.

in Chapter 5. According to Table 5-12, which gives the estimated factor shares of rice output in that village, the shares of land under leasehold tenancy and sub-tenancy are about 20 per cent and 35 per cent of the total output, respectively. The authors see this difference of approximately 15 per cent as the farmers' surplus or economic surplus accruing to leasehold land as a result of the introduction of modern varieties and the implementation of agrarian reform.

However, no evidence at all is set forth in this book to demonstrate that there was no such surplus under the traditional sharecropping system, or that, even if there was a surplus, it increased after the wide spread extension of modern varieties. Since the estimated surplus for sharecropping land is 8 per cent of the total harvest as indicated in Table 5-12, the increase in land share under leasehold tenancy has only amounted to several per cent. In fact, a surplus of less than 20 per cent of the harvest obtained by farmers after toiling in their rice paddies for almost half a year is not very much at all. It might be considered adequate for large operations of 10–20 ha, but hardly so for small farmers working only 1–2 ha. Although there would seem to be grounds for considering that the farmer-beneficiaries now capture all the economic surplus, the amount involved is actually only a very limited portion of the total harvest. Hence the prevalence of rent arrears and the abandonment of rice cultivation among farmer-beneficiaries has become a more marked feature rather than the enrichment of tenants and the concentration of land in their hands as would be expected as a result of a monopolization of the surplus.

The second point to call in question is the emergence of "multistage landlordism," cited as grounds for the identification of the peasant stratification pattern of agrarian change (pp. 112–16). According to this book, one way in which farmers have coped with the widening economic disparity among villagers is "work sharing" by subletting tenancy land, this contention being based on the study of East Laguna Village.

The first problem in this respect concerns the actual situation in that village with regard to the sub-tenancy system. According to the authors, 17 per cent of the cultivated land in the village was in 1976 under a sub-tenancy arrangement (Table 5-10), which is a fairly high percentage. What should not be overlooked here, however, is that this percentage is in terms of the number of plots and not according to the area per se. Another paper by the same author gave a figure of only 8 per cent in the latter terms.[8] Furthermore, these figures include subletted land between father and son, and also land that has been pawned. Such cases should, of course, be distinguished from the sub-tenancy system in the usual sense. This being the case, sub-tenancy is actually less prevalent than either of the above figures would appear to indicate.

This book also emphasizes a sharp increase in the sub-tenancy arrangement in recent years. Looking at the figures given for the number of plots involved (one in 1956, five in 1966, and sixteen in 1976 [Table 5-10]), one does get the impression that it has increased sharply. Here again, however, the figures are in terms of plots and not area per se, and considering as well the fact that the figures for 1956 and 1966 were obtained from farmers in interviews in 1976 and not on the basis of base

[8] See, Masao Kikuchi, "Firippin nōson niokeru seidoteki-henka [Institutional changes in a Philippine village: case study at a rice-growing village in Laguna], *Nōgyō-sōgō kenkyū*, Vol. 32, No. 3 (March 1978), p. 32.

line surveys in those years, there is considerable doubt as to whether or not there has actually been a trend toward an increase in sub-tenancy.

This book maintains that the basis for sub-tenancy is the economic surplus resulting from the recent introduction of modern varieties and the conversion of the tenancy system from sharecropping to fixed-rent leaseholding. But the fact is that sub-tenancy has not been uncommon in villages in the Philippines where nuclear families predominate. Elderly couples or widows there used to sublet their tenancy land so as to be able to survive on the rent in view of their inability to work the land themselves. There have, of course, been cases of subletting of tenancy land for other reasons as well.

In fact, recently there have been cases of a rapid disappearance of the sub-tenancy arrangement as a result of a dynamic turn in the village economy accelerated by the diffusion of modern varieties as well as the issuance of CLTs under the on-going agrarian reform.[9] The contention that sub-tenancy is rapidly increasing is news to me. Granted, that the pawning of tenancy rights is clearly increasing, but sub-tenancy relations resulting from pawning is not the same thing as the sub-tenancy with which this book is concerned. Considering the above, one cannot help being sceptical of the validity of the argument of multistage landlordism.

Other ground for the argument of peasant stratification is the change in the harvesting system. In the present book the change in Inner Central Luzon from the *tilyadora* system (mechanized threshing) to the *hunusan* system (hand threshing for a percentage of the product) is considered to be a regressive shift based on the sense of obligation on the part of new, small elites in rural communities to provide employment to the poor after the disintegration of the haciendas. Thus the poor have been given the opportunity to participate in hand threshing (pp. 93–96), which began after the recent demise of large haciendas in Central Luzon (pp. 86–89). What has to be more carefully examined here are the facts themselves and the reasons for such change.

Judging from Figures 4-3 and 4-4, and Table 4-1 concerning change in the harvesting system, one does get the impression that mechanized threshing is being replaced by hand threshing in Central Luzon, but that is simply not the case. An explanation for this is that both the survey and the compilation methods employed are seriously defective. The survey, which took place in 1978, consisted of interviews of 100 farm households in forty-three municipalities in six provinces of Central Luzon and Southern Tagalog (p. 85), and it appears that the main harvesting system of each municipality in 1968 and 1978 was determined on the basis of such interviews. But how can one make such a determination solely on the basis of information provided by two to three households when each municipality has an average of about 3,000 farm households in roughly forty villages? Furthermore, since the determination was made by choosing only one dominant type out of the three types (namely, *tilyadora, hunusan,* and mixture), any other types that might exist simultaneously were treated as if they were nonexistent in the figures. Hence the mistaken impression that *tilyadora* threshing is disappearing from Central Luzon.

The reason why the change in the harvesting system is considered in this book as

[9] See, H. Umehara, "Firippin no nōchikaikaku," pp. 46–48.

a regressive shift lies in the understanding that mechanized threshing is closely associated with the introduction of sharecropping in large haciendas in Central Luzon. Accordingly, a shift of the tenancy system from sharecropping to fixed rents in the on-going agrarian reform as well as the demise of the hacienda system and the introduction of hand threshing is considered as a logical sequence.

As admitted once in this book (p. 91), the introduction of mechanized threshing in the hacienda system should be considered as being mainly due to the ecological conditions of the rice field as well as to the shortage of labor. There was indeed a relative shortage of labor in Inner Central Luzon until the early 1920s when the *tilyadora* began to be introduced. However, unlike the case of the Coastal Regions that had long since been developed, most rice fields in late settled Central Luzon are rainfed and the irrigation facilities installed were usually limited to the rainy season, making it possible for large machinery to be used in the fields during the dry season when harvesting took place.

Of course, one cannot deny the fact that the introduction of the *tilyadora* system increased the effectiveness of the landlords' control over the tenant-farmers and that the core of such control was control of threshing. The sporadic emergence of hand threshing in Central Luzon in the 1970s can in this connection be considered to be based on a general slackening of landlordism as an impact of the agrarian reform, but it was more directly related to the diffusion of modern varieties and the commencement of intensive cultivation with double or triple cropping. Since modern varieties mature early, crops planted at the beginning of the rainy season are ready for harvesting at the height of the rainy season, at which time it is technically impossible for large machinery to be used in fields other than those along roads. Furthermore, the same circumstance arose as a result of an increase in rice fields with year-around irrigation because of increased investment in irrigation facilities beginning in the second half of the 1960s.

As one can see, hand threshing has been introduced mainly because of a change in field conditions and the pattern of cultivation, but this should not be considered a permanent trend. One hardly needs to point out the fact that it is preferable to have fast mechanized threshing instead of time-consuming hand threshing during the rainy season as substantiated by the fact that even in the rainy season farmers chose *tilyadora* threshing whenever proximity of their fields to roads makes it possible.

To summarize, the recent transition from mechanical to hand threshing in Central Luzon is a limited, temporary phenomenon that has occurred as the direct result primarily of change in field conditions and the pattern of cultivation in association with the loosening trend of landlordism. And it has nothing to do with the contention that "a 'regressive' shift...may be the best choice for farmers wishing to establish themselves as legitimate members of the elite in the community" (p. 96).

IV

From the above review, it is clear that the analytical conclusions of this book diverge appreciably from the actual development of the situation. I would like to conclude by briefly presenting my own views on the reasons for and consequences of such divergence.

The main reason would appear to be the fact that in this book the analysis is limited chiefly to land and labor as the relevant factors of production. Although capital is not entirely excluded, it is not fully incorporated in the analysis. Probably the authors would say that capital is incorporated in technology in this treatment of the subject. The fact is, however, that besides an unprecedentedly high yield, modern variety technology is strongly characterized by capital intensiveness. Accordingly, farmers have to be able to come up with the necessary funds if they want to introduce such varieties. That is why the governments of the countries involved have formulated large-scale agricultural credit and finance schemes.

In spite of this fact, this book has not included capital in its analysis with the result that the core part of agrarian change has been overlooked and acquisition of economic surplus by farmers has been unduly stressed. In the analysis made by this book the factor share of capital is 30–40 per cent, or the highest of any production factor. Up until the 1960s the use of chemical fertilizer, farm chemicals, machinery, and other such input in Southeast Asian agriculture was minimal, and all that was needed for rice cultivation was land. Accordingly, land was by far the chief factor of production, and landlords who provide land and other services captured the lion's share of the product in land rent and other forms. The essence of agrarian change since the 1970s has been a decline in the relative importance of land and a corresponding rise in the relative importance of capital among factors of production as a result of the diffusion of capital-intensive MV technology. The changing pattern of peasant differentiation should be considered as taking place in this context.

However, in this book no attention whatever is given to this point, the focus being entirely on the relative shares of land and labor, and as a result, the share of labor has seemed illusively large since the share of capital has not been taken into account. Furthermore, the authors' awareness of MV technology is entirely used as a counterweight to population pressure which they consider to be the basic force in the growing poverty in Asia. If it were the only factor, there ought to be a considerable difference in the pattern of agrarian change between Java and the Philippines. Furthermore, population pressure is not something that suddenly reared it head in the 1970s or that is an Asian speciality. Considering its universal nature, it can hardly be identified as a reason for the agrarian change that is taking place in tropical Asia.

(Hiromitsu Umehara)

Transatlantic Industrial Revolution: The Diffusion of Textile Technologies between Britain and America, 1790–1830s by David J. Jeremy, Cambridge, Mass., MIT Press, 1981, xvii+384 pp.

Works on technology transfer have attracted wide attention recently, partly because the problem is a most urgent and practical one for developing countries. A study group in the United Nations University has been working on the subject since 1978,