PROPERTY RIGHTS AND RESOURCE ALLOCATION UNDER ALTERNATIVE LAND TENURE FORMS: A COMMENT

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In a recent article [4], R. K. Sau develops a model of resource allocation under different forms of agricultural land tenure. Two critical comments are appropriate: first, Sau's theory of agricultural rent in its most complete specification is internally inconsistent, and his derived division of the output between the landlord and the tenant is therefore incorrect; second, his conclusion that an owner cultivator applies less labour and hence produces a smaller output than a fixed-rent tenant is false if transferable private property rights in land exist. In addition to explaining these critical propositions, this note extends Sau's model to consider a case in which the labour supply functions differ among tenant families. Finally, it draws attention to some essential but neglected features of the economics of land tenure.

Fig. 1 is similar to Sau's Fig. 1 except that it lacks some lines he employs for purposes irrelevant to the present discussion. Sau first shows, implicitly assuming that the tenant has no alternative employment, that the equilibrium commitment of tenant labour is determined by the intersection of the marginal product of labour curve $AB$ with the supply curve of tenant labour $OK$. (It should be noticed that the position of the marginal product curve is determined on the assumption of a given plot size, which Sau makes no attempt to explain. In Steven Cheung's model [1; p. 1112], plot size is determined simultaneously with the other inputs and the rental percentage.) The tenant supplies $OF$ hours of labour. At this equilibrium position, the rent is $OAE$ and the tenant's return $OEF$. Since all tenants have the same labour supply function, and assuming—as Sau implicitly does—an absence of transaction costs in the land rental market, competition among tenants ensures that the rent is not less than $OAE$; competition among landlords ensures that it is not more than $OAE$.

This model can be extended to consider an empirically important case of differences in the labour supply functions of different tenants. Suppose two sizes of tenant family exist, 'small' and 'large'. Assume further that the family head holds property rights over the labour services of all family members and that he forces his children to work without any compensation besides their subsistence, which they receive in any event. In Fig. 1, the small families supply labour according to the function $OK$, the large
families according to $OQ$. With no transaction costs in the land rental market, competition ensures that the prevailing rent for the plot size implicit in Fig. 1 is, as before, $OAE$. This rent is established by the marginal tenant families, namely the small ones. The large families are intramarginal; they pay the same rent, but they produce a larger output. By supplying $ON$ hours of labour, the large family produces an output $OADN$; its return is $OEDN$, which exceeds the small family’s return by the amount $FEDN$. This extra return constitutes a ‘surplus’ that accrues to the head of the large family by virtue of his ‘exploitation’ of his family. The ‘surplus’ cannot be eliminated by a change in plot size, which shifts the marginal product curve, because the large families remain intramarginal for any plot size. The absolute size of the ‘surplus’, of course, increases as plot size increases. Provided the cost of subsistence is sufficiently low, tenants under such circumstances have an incentive to produce a large number of children. Conditions bearing some similarity to this model have been observed, for example, in parts of the American South in the late nineteenth and early twentieth centuries.

Return now to the assumption of a single supply function of tenant labour $OK$. Sau next introduces an alternative employment, wage labour in agriculture, assuming that the supply of wage labour is perfectly elastic at the wage rate $OL$. He concludes that under these conditions the tenant
works $OH$ hours and hires additional labour $HI$; in equilibrium, the rent is $OGJA$, the tenant's return $OGH$, and the wage bill for hired labour $GHIJ$. (He implicitly assumes, therefore, that tenant labour and wage labour are perfect substitutes in production.) Now this is odd, because here the tenant receives in equilibrium a return less than he might obtain by offering the same quantity of labour services in the market for wage labour; that is, $OLGH > OGH$. Actually, the highest rent obtainable by the landlord, if the labourer is free to offer his services to the highest bidder, is $LAJ$, which is less than the asserted rent by the amount $OLG$. Sau obtains his curious result because he develops his tenant-labour supply function $OK$ under the implicit assumption that the tenant labourer has no alternative except leisure. Clearly the supply function must be modified if the alternative of wage labour at the wage rate $OL$ exists and if the labourer has property rights over his own labour services. (In a feudal system, for example, labourers might lack such property rights, but this apparently is not what Sau has in mind.) In fact, given that tenant labour and wage labour are perfect substitutes in production and that tenants have property rights over their own labour services, the tenant-labour supply function $OK$ becomes quite superfluous once the infinitely elastic supply of wage labour at the wage rate $OL$ is introduced.

To reach the conclusion that an owner cultivator works less and therefore produces a smaller output in equilibrium than a fixed-rent tenant, ceteris paribus, Sau starts with the following proposition: 'A peasant farmer owns the land, and he does not pay any rent, unlike the fixed-rent tenant' [4; p. 440]. From this statement his argument follows logically, but this statement is obviously false if transferable private property rights in land exist. For then the owner cultivator pays a real rent by sacrificing either the annuity equivalent of the sale value of his land or the rental return he might obtain by leasing rather than cultivating his land. Sau's statement is valid only if the owner cultivator has no alternative to remaining an owner cultivator. (Again, under certain feudal conditions Sau's implicit assumption might hold, but this apparently is not the problem he wants to consider.) Cheung's argument that resource allocation is invariant with respect to the form of tenure, which explicitly assumes exclusive and transferable private property rights over the services of all resources [1; pp. 1110, 1118–19], is unaffected by Sau's challenge [4; p. 440, n. 2].

In general, Sau's paper discusses the economics of land tenure within a framework that assumes certainty in production, homogeneous resources, and an absence of transaction costs in resource markets. The assumptions underlying the discussion of 'exploitation' within the tenant family complicate matters a bit by admitting differences in the labour
supply functions of different tenants. But any satisfactory analysis must go much further and must recognize at least (1) the stochastic nature of agricultural production and hence the uncertainty surrounding prospective output levels, (2) the prevailing property rights over inputs and outputs, and (3) the costs of negotiating and enforcing different kinds of contracts. In reality, wage labour and tenant labour are probably never perfect substitutes for either the landlord or the labourer; and little can be understood about the actual organization of agricultural production unless some account is taken of the incidence of risk and of the transaction costs of negotiation and enforcement associated with various contractual arrangements. Some recent research has considered these questions [2; 3]. It is to be hoped that future research will consider them more fully and that further effort will be directed toward empirical testing of the implications of existing models.

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REFERENCES