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NUMBER 132

TWO VIEWS ON SOVIET COLLECTIVIZATION OF AGRICULTURE

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Conference on

Studies on the Soviet Rural Economy

Sponsored by

Kennan Institute for Advanced Russian Studies
The Wilson Center

April 13-14, 1981

FACULTY WORKING PAPERS

College of Commerce and Business Administration

University of Illinois at Urbana-Champaign

October 12, 1979

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AGRICULTURE

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Two Views on Soviet Collectivization of Agriculture

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The traditional theoretical presentation of the model of Soviet rapid industrialization has been based upon the debate between Preobrazhenski, the super industrializer, and Bukharin, the advocate of balanced growth of agriculture and industry. The debate purportedly culminated in a dilemma which was resolved by Stalin with the decision to collectivize Soviet agriculture. This model, which was formulated by A. Erlich (Erlich, 1950) and is still common in our textbooks, has been seriously questioned recently on both theoretical and empirical grounds (Millar, 1970a, 1970b, 1974, 1976; Ellman, 1975).

It now seems, for example, that Bukharin was wrong in asserting that the peasantry would withdraw from the market in response to an adverse change in their terms of trade (Millar, 1970a; Guntzel, 1972) thereby undermining Preobrazhenski's proposed industrialization drive. Preobrazhenski's proposals to tax the peasantry as a primary way to finance industrialization might very well have worked so long as the method used would change the terms of trade for agriculture taken as a whole and not merely relative agricultural prices. Interestingly enough, however, the empirical evidence from the period of the First Five-Year Plan shows that Preobrazhenski was wrong in thinking that "exploitation" of the rural sector was a necessary condition for rapid industrial growth. We now know that the terms of trade did not change adversely for agriculture and that the net surplus of agriculture during the First Five-Year Plan cannot explain the enormous increase

in the rate and absolute quantity of accumulation, although there is a certain ambiguity about just how much agriculture did contribute before and after collectivization (Millar, 1974 and Ellman, 1975). Consequently, the dilemma that Alexander Erlich identified was not really a dilemma at all, and thus the appropriateness of collectivization as a "solution" must also be in doubt. I have argued that it was purely and simply a mistake, but Michael Ellman apparently does not agree.

Ellman and I both agree that the empirical data available for the First Five-Year Plan does not support Alexander Erlich's interpretation. Consequently, the question is now: What model(s) do fit best the actual process of early Soviet rapid development? It is on this head that Ellman and I differ, and differ substantially. As best I can tell, Ellman subscribes to what I shall call a modified Preobrazhenski model of primitive accumulation (Millar, 1977). Ellman also concludes that collectivization played a positive role in the process of Soviet rapid development, although this role is not the same as that suggested by A. Erlich, Alec Nove and other bearers of the standard story.

Let me first attempt to specify Michael Ellman's conception of the model of Soviet economic growth during the First Five-Year Plan. Ellman agrees that, no matter how you measure it, "collectivization did not increase the net agricultural surplus (measured in 1913 world market prices, 1928 Soviet prices or Marxist values)..." (Ellman, 1975, p. 859). I have argued in favor of the 1928 price weight measure of the net surplus of agriculture, but Ellman argues instead for some type of "Marxist" weights. The latter represent weighting of intersector

flows by input prices, on the assumption that labor is the only input. He also assumes that relative prices of industrial and agricultural products in 1928 in the Soviet Union did not reflect the true labor-content ratios and must therefore be adjusted. The adjustment increases the relative weight of agricultural products in intersector flows and therefore produces a net outflow of resources to industry during the First Five-Year Plan, as opposed to the net inflow of resources from nonagriculture that one obtains by using constant 1928 prices weights.

Regardless of which weights one uses, collectivization did not lead to an increased (algebraically) net surplus of agriculture, and thus Ellman and I agree on this point. However, the difference in the sign of the net flow between agriculture and nonagriculture represents a real difference also in the way that the role of agriculture in economic development is conceived in a model of Soviet experience. Ellman's analysis lends partial support to the Preobrazhenski model (Ellman, 1975, note 2, p. 860). Where Preobrazhenski called for "exploitation" of the rural sector by the state and "self-exploitation" by the industrial workers, as two sources of accumulation, only the second part came true judging by the empirical evidence. That is, following Ellman, contrary to the standard story which assumed that workers in the agricultural sector would be exploited for development of the industrial sector, it turns out that it was the exploitation of workers transferred to industry from agriculture that explains Soviet accumulation. Therefore, in Ellman's view, primitive socialist accumulation took place in the industrial sector, and the contribution of agriculture was primarily in contributing manpower to the industrial sector. In

addition, according to Ellman, agriculture contributed an "increased supply of basic wage goods" and it "provided substantial exports" as well.

More important with respect to the standard story and its view of collectivization as an effective instrument in support of rapid industrialization, Ellman ultimately attributes these contributions of agriculture to collectivization. That is, he states that during the First Five-Year Plan "collectivization appears as a process which enabled the state to increase its inflow of grain, potatoes and vegetables and its stock of urban labour, at the expense of livestock and the rural and urban human population" (Ellman, 1975, p. 859). He goes on to say that the "two key mechanisms for obtaining the additional investment resources were collectivization (which made possible the increase in the volume of basic wage goods marketed by agriculture and the increase in the urban labour force) and the rapid inflation (which facilitated the fall in urban real wages)" (Ellman, 1975, p. 860). Thus, Ellman sees in the policy of collectivization not simply a mistake, but positive attributes, and I must admit that I find this puzzling.

The increased flow of grain and potatoes was, as Ellman, admits, at the expense of livestock herds and thus livestock products. Most students of the late 1920s argue that the growth of livestock herds was being encouraged by the improving relative price of livestock product prices--caused partly by government restraints on bread and grain prices. Even if it can be shown to have been necessary to change the composition of the population's diet back to a larger share of starches,

as a prerequisite of rapid industrialization, why could this not have been done just as effectively and with much less waste and suffering by simply changing relative prices to favor grains and potatoes? There is plenty of evidence to show that Soviet peasant farmers were highly sensitive to relative prices of farm output.

Ellman claims that collectivization was necessary to generate an adequate off-farm flow of labor, but he offers no evidence in support of the claim other than merely to assert that a large flow was required in the face of falling urban real wages. Obviously, part of the required labor was found among the urban unemployed, but the remainder had to be "mobilized" elsewhere. The first point to note is that no successfully developing country has experienced difficulty in generating a rural-to-urban flow of labor, and in most cases problems have been posed instead by excessive outmigration from rural areas. In addition, the fall in urban-industrial real wages was attributable in large part to the devastation of agricultural production occasioned by collectivization itself. The inflation that was caused in part by this reduction in available food supplies certainly did the Soviet state no good. The state budget may benefit from an inflation that turns the terms of trade in its favor, but it does not stand to benefit from an inflation caused by a decrease in available food supplies and changes the terms of trade in favor of farmers at the expense of urban workers. This is what collectivization accomplished. In short, the burden would seem to be on Ellman to show why a differentially favorable wage would not have been both adequate and more desirable as a means to generate a suitable flow of outmigration from rural areas.

There is another issue that needs to be raised in connection with the transfer of labor from rural to urban-industrial occupations.

Where the additional labor employed in new industrial occupations was either not employed previously in agriculture or was employed where it had a zero marginal product, it is not clear at all to which sector the "contribution" ought to be attributed. Do we credit agriculture, despite the fact that neither outputs nor inputs are affected? Or do we credit the sector that puts these idle resources to work with the contribution to growth? This is another example of the inescapable element of ambiguity that attaches to any attempt to identify contributions of components of any interdependent system.

Collectivization did indeed help to drive people out of rural occupations, nonagricultural as well as agricultural. And it certainly contributed to the decline in real wages in both sectors, which in turn helped to drive previously unemployed wives, children and elders plus the underemployed into industrial occupations with the goal of maintaining real per capita (or family) income. The point is, however, that there were many other alternative ways of accomplishing these ends, and the cost to the human population would have been much less for almost any of the alternatives.

The Lewis labor surplus model of the development process has had a large impact on the theory of economic development. Although Lewis's own statements about the process in the Soviet Union are now clearly seen to have been incorrect--for he relied on a version of what I have called the standard paradigm, his model is still useful in looking at

the Soviet experience as we see it today. Unfortunately, Lewis's misunderstanding of the Soviet growth experience has had a large impact on the profession, and his now famous articles (Lewis, 1954, 1958) undoubtedly contributed mightily, along with Erlich's, to the creation and propagation of the standard story of industrialization at the expense of the agriculture in the USSR.

According to Lewis, what needs to be explained in any model of economic development is how the saving rate gets raised. His main contention is that the increase in the rate of saving out of national income has ordinarily been the result not of changing everyone's rate of saving, but by changing the distribution of income in such a way that "the incomes of the savers increase relatively to the national income. The central fact of economic development is that the distribution of incomes is altered in favor of the saving class" (Lewis, 1954, pp. 156-57). The First Five-Year Plan certainly raised the rate of saving in the USSR--from 14.8% of national income in 1928 to 44.1% in 1932 according to Ellman's presentation (1975, p. 845, Table 1). However, where Lewis was concerned with shifting income among private recipients to those who save more--the capitalists, in the Soviet case the shift was from the private to the public sector.

There are then certain immediately obvious similarities between an analysis based on the Lewis model and one based on Preobrazhenski's. The similarities derive from the fact that Lewis's model is a "classical" rather than a neoclassical model of development. If modified to fit the Soviet experience (and purged of certain rather bizarre discussions of inflationary financing) Lewis's model would appear to fit the

Soviet experience better than Preobrazhenski's. The notion is that the typical developing country has unlimited supplies of labor in the short run, making it possible to increase both output and accumulation by putting idle labor to work. Since supplies of labor are unlimited, increasing employment does not raise the real wage in the growth sectors. Consequently, those initiating employment (in this case the state), stand to reap a disproportionate share of claims on the additional output--claims that could be utilized to increase the rate of saving and thus of capital accumulation.

The Lewis model does not require a decline in real wages for this to happen, merely a noticeable gap between rural and urban employments. Since collectivization did not lead to an adverse change in the terms of trade for agricultural producers, Lewis would certainly not see it as a potentially useful device. In fact, because it caused a decline in the capital stock in agriculture and thus increased labor demand in that sector, collectivization could not possibly be a prescription of the Lewis model.

The problem with the Lewis model, however, is the same as for any model that bases growth upon a surplus of some sort: growth must be explained by increases in the surplus (as Ellman seeks to do in his analysis of the Barsov data). In the case of a labor surplus (as opposed to surplus value or product), eventually the surplus will be absorbed, and, when it is, growth must come to depend upon different factors altogether. The Ranis and Fei (1961) model is a good example of this, for somewhere between stage one and stage two their model is converted from a "classical" model that depends upon absorbing surplus

labor, into a "neoclassical" model in which growth depends upon increases in "total factor productivity" in both the agricultural and nonagricultural sectors.

Lewis attempted to provide a rationale for the necessity to change models in midstream growth by asserting that the nature of the development process itself changes with the process of successful development. Thus the early stages of growth can be explained only by a classical model, and later stages are amenable only to neoclassical analysis. To my mind this has an advantage over a Marxist model, such as Preobrazhenski's, because it is much more awkward to force neoclassical considerations into the Marxist model than it is merely to switch models. To some extent, also, the gradual shifting emphasis in the Soviet economy over time from growth dependent exclusively upon growth of input quantities to growth based upon increases in total factor productivity does seem to illustrate Lewis's point of view.

The Lewis model is not really necessary however. It is possible to conceive of growth within a modern analytic framework (Ellman calls this a "Keynesian point of view" p. 860) as having three components. Consider a typical production frontier. Growth can be quite rapid if actual output is within the frontier by merely increasing demand for output. Second, by changing the conventional definition of "full employment" (of both population and capital), as in wartime or by some similar social transformation, the frontier may shift substantially overnight. These two components of growth correspond to Lewis's labor surplus stage. Subsequently, growth will depend, given the saving rate,

upon two factors: the growth of inputs in physical terms and the increase in total factor productivity. Within this framework, Soviet collectivization could find an economic rationale only as a process necessary to the social transformation stage. Ellman apparently believes that this was the case (as did Erlich before him), but this needs to be established. Collectivization had so severe a negative impact upon the growth of agricultural output, upon the capital stock (and thus the demand for labor in agriculture), and upon the long run capacity of the Soviet agricultural sector to achieve efficiency and increases in productivity, that the burden would seem to be on Ellman to show why it was necessary.

I proposed a way of looking at the role of agriculture in my 1970 article in Soviet Studies. I do not refer here to my formula for ascertaining the net contribution of agriculture (i.e., the net contribution of agriculture to net investment in the economy as a whole). What I described were several alternative ways that are useful in thinking about the contribution of a sector of an economy to growth when it is fully agreed at the outset that no unambiguous measure is possible for a component sector of an interdependent system (Millar, 1970b, pp. 87-92). Agriculture participates in growth if its output grows, and it participates in development if total factor productivity grows also, or if worker productivity grows thanks to the substitution of capital for labor. It is clear that Soviet agriculture participated in neither growth nor development during the First Five-Year Plan.

It has generally been assumed that Soviet agriculture failed to participate in growth and development because its contributions to

other sectors were so great. However, we have seen that the net product contribution of Soviet agriculture was either negative (using 1928 weights), or positive but unaugmented (using 1913 world market, or "Marxist" price weights). The market contribution (which is the extent to which a sector's purchases from other sectors help to finance those other sector's own purchases of products) of Soviet agriculture was clearly negligible or negative during the First Five-Year Plan, and the same is true of the finance contribution of agriculture. The truth is, then, that by any measure, Soviet agriculture proved a dead weight on growth of the Soviet economy, and this was so, I propose, because collectivization was a massive policy error. It was a mistake from which no one stood to gain, including the state.

The "contributions" that Ellman seeks to attribute to collectivization belong instead to the introduction of the predatory agricultural procurement system--which helped to limit the losses collectivization brought about and thus raised the share of marketed output in the face of a decline in total output. While it is undoubtedly true that staunching the flow of blood from a severed artery is a "contribution" to health of the patient, the wound itself is not. Collectivization and the Stalinist agricultural procurement system of the 1930s stand in an analogous relation to one another. Taken together, there was no net contribution to economic growth.

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