The Concept of *Sebestoimost’* in Russian Farm Accounting: A Very Unmagical Mystery Tour

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This article examines the use of the concept of *sebestoimost’* – production cost – on large-scale commercial farms (former collective and state farms) in European Russia. This examination is based on fieldwork carried out by the author and some Russian colleagues in 1996 and 1997. This concept and the accounting magnitudes it generates are of no utility now, and should be abandoned as an actual impediment to effective farm management in current market conditions. But the manipulation of *sebestoimost’* magnitudes in the Soviet period served, it appears, very important functions for farm chairmen and directors. In uncovering the mystery of those functions, an important revisionist hypothesis concerning the inefficiencies, or alleged inefficiencies, of Soviet agriculture emerges. The data cited in this article are too scanty to prove the hypothesis, but are certainly sufficient to suggest that it warrants further investigation.

Keywords: Soviet and post-Soviet agriculture, farm management, farm enterprise accounting, production cost

INTRODUCTION

In the supposed new world of capitalist/free enterprise Russia, all economic magnitudes have acquired a fresh significance. Of course, from the days when ‘independent cost accounting’ (*khozraschetnyye*) was introduced to Soviet enterprises, they were supposed to keep a full account of all their direct and indirect ‘production costs’ (*sebestoimosti*) and all their sources of revenue and to calculate both an amount and rate of ‘surplus’ (*rentabel’nost*) both for each item of output and for the enterprise as a whole. But in fact, with many items of cost covered by soft credits, output prices set by the state and levels of capacity utilization often significantly underestimated for ‘slack plan’ reasons, it was often difficult to know what a stated level of surplus actually signified. Certainly, even high level and rates of *rentabel’nost* could not be taken as measures of ‘efficiency’ in the Western sense. To take the example of the enterprises – state and collective farms – which are examined in this article, a Soviet state or collective farm on reasonably
good land and with abundant supplies of inputs could show high levels of rentabel'nost' both for individual crops and overall, while still having crop yields well below those prevailing internationally and a quality of output also internationally uncompetitive.

As is well known, however, things have changed significantly in rural Russia since the onset of free market economic reform in 1991–2. Supplies of state credits to farms have fallen to a fraction of their Soviet levels, and are often not forthcoming in practice even when granted on paper. Moreover, the farm sector now has to compete with imported food and raw material supplies not only from the West, but also from newly independent CIS states (and most especially from Ukraine and Belarus), and, above all, domestic demand for food products has fallen sharply as a result of the sharp contraction in the real incomes of Russian Federation citizens which occurred in the period of hyper-inflation between 1992 and 1996. In short, former state and collective farms, now privatized into varying types of joint stock companies but still dominating Russia’s cultivated land area and agricultural production, now face a fiercely competitive environment in which mere survival has required sharp cuts in wage and other input costs and an obsessive pursuit of what sources of demand remain for their output.

The author of this article and his Russian colleagues conducted a sample survey of 40 former state and collective farms in the Vologda, Tver, Vladimir and Orel regions of north and central European Russia in the summer months of 1996 and 1997 and was thus able to observe this struggle for survival and the sharp changes in both management and worker behaviour which it is producing. Some first reports on these wider changes have already been published by myself and my Russian colleagues (Fillipov and Fillipov 1996; Kitching 1998a, 1998b) and more such reports will follow.

Here, however, I simply wish to comment on one apparently narrow and restricted aspect of these changes – enterprise accounting practices. More exactly, I want to describe the way in which one central Soviet accounting concept – that of sebestoimost' or ‘production cost’ – is still to be found in Russian national accounts, but in which the use made of it, certainly at the enterprise level, has altered so radically in current market conditions as to give it an entirely new meaning and significance. I suggest, however, that the new use, or uses, made of the concept in current conditions lead one to doubt whether the concept, and the magnitudes it generates, are really required at all now. For sebestoimost', I suggest, continues to mystify many of its users about what they are trying to accomplish managerially, in a way that the adoption of more conventional Western accounting concepts and practices would not.

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However, in tracking down and clarifying the current use being made of sebestoimost’ by Russian farm enterprises, I began to reflect on the coherence of the concept itself, on the history and purpose of its use in the Soviet period and indeed on its clear provenance in Marxist economic theory. These reflections then opened up a much wider set of issues concerning the whole economic rationality of the Soviet planning system, and especially of the relations between its macro (central planning) and micro (enterprise management) levels. Some of the issues thus opened up are, in general terms, well known to students of the Soviet economy, but the approach to them adopted here – through the sebestoimost’ concept – is, so far as I am able to tell, previously unexplored, certainly in the Western literature. Moreover such an approach sheds, I think, some new light on Soviet planning practices and on Marxist theory, as well (as already noted) on some still continuing forms of Soviet ‘mystification’ in the conduct of economic affairs in the new capitalist Russia.

SEBESTOIMOST’: A LITTLE MYSTERY ENCOUNTERED

In the section of the Rossiiskii Statisticheskii Ezhegodnik for 1995 (Goskomstat 1995, 354) devoted to agriculture, there are two unnumbered tables, one headed ‘Production Cost [Sebestoimost’] of 1 Centner of Output in Agricultural Enterprises’ and the second ‘The Level of Output Profitability [Rentabel’nost’] Realized by Agricultural Enterprises (Ratio of Profit to Production Cost of Realized Output in Percent)’. The data provided in the two tables cover the same years (1970, 1980 and 1990–4) and the same categories of output (grain, sugar beet, sunflower seeds, potatoes, other vegetables, milk and milk products, meat, live cattle, sheep and pigs, eggs and wool).

This similarity of structure and proximity of presentation is not accidental, for the tables are logical twins. Thus, in order to know the level of ‘profitability’ of a given item of farm output, we must know (a) what it costs to produce per unit and (b) the sales price, or so-called ‘farm-gate price’, of that unit. Then you express the excess/deficit of the latter as a percentage of the former and you have your level of rentabel’nost’. For example, according to the first of these tables, it cost

2 The most generalized references to sebestoimost’ in the standard Western literature on Soviet pricing are brief and relatively straightforward, and give no hint of the kind of complexities discussed in this article. Thus the foremost Western authority on the subject noted in 1962 that ‘The Soviet cost concept of sebestoimost’ has no exact equivalent in Western cost accounting. It includes direct and indirect labour, including wages, salaries and social insurance payments; basic and auxiliary materials, including fuel and power; depreciation (but not depletion) allowances; and various overhead expenses, such as those for postage, business travel, and expenditures for workers’ housing and for workers’ education’. In an account published 25 years later, near the end of the Soviet period, the same authority was content to use virtually the same form of words (Bornstein 1962, 74 and 1987, 95). For the particular issue with which this article is concerned – the ubiquity of joint production in farming and its implications for determining sebestoimosti – I have located only one Western source (Gray 1979, 548–9) which has anything to say at all. For the actual use of the concept by farm management, Humphrey’s unique monograph (Humphrey 1983) is invaluable in this, as in many other respects. But even her account is not without its problems and contradictions (see notes 5 and 28 below).
(on average in Russia in 1994), 4710 roubles to produce 1 centner (100 kg) of sugar beet. According to the second table, the average level of rentabel'nost of this 1 centner was 42 per cent, so (one assumes) the average sale price was 6688 roubles. In the unfortunate case of sheep, however, the second table tells us that the average level of rentabel'nost of 100 kg live weight of mutton and lamb in 1994 was actually minus 44 per cent. So given that the average sebestoimost' of the 100 kg was, according to the first table, 157,726 roubles, the average sales price to the slaughterhouse can have been no more than 88,327 roubles, and so forth. In short, the level of ‘profitability’ of any farm product is determined by deducting its production cost from its farm-gate price, and where production cost exceeds farm-gate price that product is loss-making.

A simple enough matter then – or so it may appear – and at the regional and district level and at the farm level, just as at the national level, economists and administrators will duly provide one with figures for the sebestoimost’ and rentabel’nost’ of each crop and (in the case of farms) for the enterprise as a whole. We regularly collected such data in the standardized economic questionnaire which we administered – or attempted to administer – on each farm visit. But, of course, to know the meaning of the figures so collected one must know, clearly and in detail, both what is included in the production cost of each crop or item of output and, more particularly, how indivisible costs are divided between different items of output.

A PARTIAL SOLUTION TO THE MYSTERY

Formally, at least, the first task poses no difficulty. The latest set of Russian Federal Government regulations on sebestoimost’ were issued in August 1992 and constitute an amending and updating of older Soviet rules. They are readily available in any regional department of agriculture and a copy was kindly made available to us by the department in Vladimir (Pravitel’stva Rossiiskoi Federatsii 1992).

The document begins by defining the production cost (sebestoimost’) of output as ‘the estimated value of natural resources, raw materials, semi-finished materials, fuel, energy, fixed capital and labour resources utilized in the production process (of goods and services), together with some other outlays on their production and realization’ (p. 1). In broad accord with this definition, enterprises are required, when presenting their production cost data to the tax authorities, to group their outlays under four headings, which undoubtedly reflect the main types of costs involved. These are:

1. Materials expenditures (excluding outlays on wasted materials).
2. Payment of labour.
3. Amortization of fixed capital.
4. Other expenditures (p. 10).

But the bulk of the document is taken up with specifying, in some detail, no less than 23 types of expenditure which may be included under these four headings.
and which may be legally counted as part of the production cost of a good or service for tax purposes. It would be tedious in the extreme to reproduce all of these clauses. In any case they are, for the most part, simply specifications of (for example) what types of labour use may be counted in production cost and what may not, or of what types of uses of raw or semi-finished materials are permissible and which are not. If there is a common thread running through these 23 sub-clauses, it is that (1) only current expenditures, including capital repair, maintenance and depreciation allowances but not new capital investment, may be counted as production cost outlays and that (2) only the cost of labour actually directly or indirectly employed in producing goods or services (including administrative and managerial labour) may be included in production cost outlays.

However, what is perhaps most significant about these 23 sub-clauses is not their general intent but their detailed content. For once one has read this, it becomes clear that an enterprise may include in sebestoimost virtually all its expenditures, save the actual purchase of new plant and equipment, the provision of certain cultural facilities and costs arising from waste and breakage. Thus, for example, materials required for the refurbishment or repair of administrative offices can be counted as part of ‘materials expenditures’ (p. 4), as can materials used in the clearing, draining or improvement of land (p. 2), whilst ‘payment of labour’ can include, aside from money wage payments, everything from transportation costs of management and workers (p. 6), through ‘free’ meals and other payments in kind (p. 7), to consultancy fees for imported specialists, training and retraining costs of workers and managers (p. 5), the labour cost of marketing output (p. 8) and repair and maintenance (but not construction) costs of worker housing (p. 8). In addition, if enterprises borrow money either from the government budget or from private banks to meet production costs, they may include capital and interest repayments on these loans as themselves part of production costs (pp. 7–8), and so forth. Moreover, the production cost of output must include compulsory enterprise contributions to government pension funds and medical and unemployment insurance schemes and the document makes clear that fines will be levied by the tax authorities on enterprises not making these contributions (pp. 6–7). We will see the significance of this last point shortly.

The Mystery Deepens

So the answer to our first question is that the monetary cost of virtually anything that a Russian economic enterprise does (except new capital investment, material or labour wastage as a result of errors, and the costs of some types of cultural and social facilities) can be included as part of the ‘production cost’ of enterprise output. On our second question however – the division of indivisible costs between different items of output – the government regulations are totally and significantly silent. In fact the document, far from providing solutions here, shows no recognition that this might even be a problem. This matter is left, in effect, totally to the discretion of enterprise managements. So what do managers do with this discretion?
In the later days of the Soviet Union, for farms as for other enterprises, the matter was essentially simple. Managers, and other enterprise workers, gained bonuses by fulfilling their planned quotas of output and (more particularly) by maximizing ‘over plan’ production. The strategies which managers typically used to ensure that they fulfilled these reward-inducing criteria are familiar enough to all students of the Soviet economy – systematic understating of planned output capacities (so that soft targets could be met and exceeded) being the most well known. But in the case of farms, certainly, the manipulation of production cost (by the ‘loading’ and ‘unloading’ of indivisible costs on to particular items of output) was also important.

So, for example, if there was a centrally sponsored campaign for the production of a certain crop and an enterprise manager did not feel that this crop was profitable enough for the enterprise at the given administered price, s/he could load greater electricity or fertilizer or diesel fuel costs on to that crop and thus demonstrate it to be ‘loss-making’ for his/her enterprise at that farm-gate price. If the centre’s desire to see output of that crop was strong enough, such an enterprise or group of enterprises might then be reclassified into a higher price zone in order to make the crop ‘profitable’. And conversely, if a farm was well situated to produce a particular crop, but did not wish the centre to know quite how profitable that crop was for it at the present administered price, a little loading on of indivisible costs was a good mechanism to disguise the real level of net farm income. Thus production cost manipulation was one of the mechanisms (though probably not the most important) producing that well-known phenomenon of Soviet agriculture in its last 20–25 years, i.e. the highest cost farms often obtaining the highest farm-gate prices and thus the highest implicit subsidies (Wegren 1998). But it was also just one of several mechanisms available to farm chairmen for simply keeping the centre generally misinformed about the real conditions of Soviet agricultural production in ways which benefited them and their workers (Hedlund 1984, 146–50).

In the present period, however, the environmental and policy parameters facing farm managements have changed radically from the Soviet days. In particular, farm-gate prices are now largely determined by market competition, rather than being centrally administered. This also means that they are highly unpredictable both from one agricultural season to the next and even through a season (imports in particular having induced a previously unknown variable in price formation, both in food markets and agricultural raw material markets). In addition to uncertainties deriving from the market determination of prices, farms now face considerable taxes on declared profits and fines for selling output ‘below production cost’ or for not making contributions to pension funds, health funds, etc. Many farm chairmen in fact complained to us that they have been placed in a ‘no win’ situation by government tax policies. That is, if they declare any overall gross profit they face heavy profits taxes, but if they officially sell output at market clearing prices which the tax inspectors believe do not cover production costs (and especially the items of production cost which are in fact government taxes – compulsory pension funds, etc.) they will be fined the full
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amount of the unpaid contributions plus penalties. It is small wonder in this situation that the favoured solution of many farms to their difficulties is the black marketing of undeclared output for ready cash. Of course, since this output does not officially exist, questions about its ‘production cost’ cannot be raised, and since the revenue from its sale also does not officially exist, questions about taxes on its ‘profits’ also cannot be raised.

But even if farms do revert in large numbers to the black marketing of production (and current informal estimates suggest that half or more of Russian agricultural output may be so marketed), they still have to have some set of formal accounts to report to their official superiors and to show to the ravenous tax inspectors. What should appear in such accounts? That is, what is the ‘optimum’ accounting result for an enterprise management to show both to minimize tax obligations and not to incur fines?

The answer, according to most of the farm chairmen and economists we interviewed, was that:

1. none of a farm’s ‘enterprises’ or types of output must be loss-making. That is all loss-making activities must be eliminated, and
2. indivisible production costs should be so distributed among the remaining items so that all show a profit, but not a sufficient profit (overall) to attract any profits tax.

In the current situation, however, production costs do not have to be, and are not, manipulated to show losses. Rather, the price and cost regime facing all the farms we surveyed is such that some enterprises (for example, pig and sheep raising or flax production) simply cannot cover their most basic and unambiguously minimal costs of production (say the cost of animal feed or the most minimized costs of cultivation and harvest) from revenue. Thus these enterprises had been, or were being, eliminated, on all the farms we surveyed.

Things are scarcely better, however, even on the ‘profitable’ side of things. The only crops produced on virtually all the farms we surveyed whose farm-gate prices were said to regularly exceed their production cost, and thus to have a positive rentabel’nost’, were milk and (in the Black Earth Orel region) grain – notably wheat, barley and oats.3 But when pressed as to what this meant, farm chairmen made it clear that what was being counted in production cost for these purposes was only the wage and other direct labour costs involved in the planting and harvesting of crops or the tending of animals, plus the most basic material costs (usually fuels, lubricants and electricity) used in the production and storage of the output. In other words, the large majority of those 23 sub-categories of production cost mentioned above in the official regulations were simply being ignored by farm managements for the purpose of officially calculating the sebestoimost’ of milk or barley, including the ‘fine-carrying’ contributions to government pension, health and unemployment insurance funds!

3 Quite how and why this is is a complex matter, which need not be elaborated on here. It also will be the subject of later publications.
What then do the tax inspectors do when faced with this gloomy reality? An interview with the Vladimir Tax Inspectorate was particularly illuminating on this matter. The Senior Inspector pointed out that:

(a) it has always been the case that many items of *sebestoimost’* are permissive but not compulsory. That is, farms can legally make a ‘nil’ or ‘nominal’ entry for things such as labour training costs, land improvement costs, office refurbishment or housing repair costs, etc.

(b) when ‘compulsory’ taxes or contributions are not paid, ‘fines’ of course are ‘levied’, but since enterprise accounts show that they have no money to pay them, the fines (plus interest on unpaid contributions and fines) simply accrue as enterprise debt! The general tenor of the Tax Inspector’s humorous comments on all of this were of the ‘you can’t get blood out of a stone, and anyway the government’s tax policies are idiotic and self-defeating’ type (Vladimir Tax Inspectorate, 11 August 1997).

So, in short, and as continually stated by the Russian farm lobby, the vast majority of Russian farms (75+ per cent) are now officially loss-making and even those that declare themselves minimally profitable can only do so by neglecting all items of current, let alone capital cost, that are not absolutely essential for day-to-day survival. In particular, as also endlessly pointed out by the same lobby (*Selskaya Zhizn*, 25 and 27 May 1996), all expenditures on land drainage, protection and improvement have effectively ceased and land fertilization is at minimal levels. That is, the longer-term viability and productivity of Russian soil is, currently, being sacrificed for the immediate survival needs of farms. These generalizations ignore, of course, the lubricating reality of black money, but if the minority of farm chairmen who were willing to talk openly about this are to be believed, even black money incomes go to meet essential recurrent costs (and especially the wage bill), rather than being accumulated for any form of capital investment or improvement.

**MYSTERY, HISTORY AND THEORY**

So in current circumstances ‘production cost’ has lost virtually all its manipulative potential for farm managements (except perhaps as a way of minimizing profits taxes, but even in that role it is a lot less important than black money). Therefore, the unravelling of the mystery of its manipulative potential (as above) is an exercise which is now almost totally of historical interest. But that historical interest is considerable and the history itself also has considerable theoretical implications. It is to these broader historical and theoretical dimensions of the use of the concept that I now turn. For, as we shall see, if the concept and the accounting magnitudes to which it gave rise were manipulated in as broad and significant ways as I here postulate, this has considerable revisionist implications for how we are to understand the history of Soviet agriculture. In particular, it reopens the question, discussed by a number of other authors, of whether Western measures and discussions of the ‘economic inefficiency’ of the Soviet
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farm system did not occlude or obscure as much as they reveal about the workings of that system.

To begin with then, the sebestoimost’ concept represents one of the most significant ways in which the national accounts of the Soviet Union and (still, as we have seen) of post-Soviet Russia have been marked by its Marxist heritage. The whole notion of sebestoimost’ – of a unique and calculable ‘production cost’, not only for every enterprise, but for every item of output produced by that enterprise – seems to come direct, so to speak, from the pages of Marx’s Capital.

Let us retrace some familiar historical and ideological terrain. If the Soviet Union was to create a production system orientated to the satisfaction of ‘human needs’ and not to the maximization of profit, then once the needs had been specified (by the central planners) in all their variety and quantity, the next step was for ‘society’ (as represented by the Party and the Planning Commission) to become informed about the production cost of all the material components of the ‘needs’ so specified. And once production costs were, in their turn, specified, then administered prices of all those items could also be specified, and set at a level which would determine whatever amount of surplus (if any) enterprises were to be allowed over and above the income necessary to cover ‘production costs’.

So sebestoimost’ as a concept and as a magnitude, or set of magnitudes, was at the centre of Soviet planning economics.4 And, as, in its last decades, the Soviet Union became more concerned with attempting to increase the efficiency and quality of production, than with focusing overwhelmingly on physical quantities, so sebestoimost’ found another role. For now it could become a measure – perhaps the primary official measure – of efficiency.5 Crudely, the sebestoimost’

4 But quite when it became so, particularly in agriculture, is rather unclear and somewhat disputed among authorities. In particular, although some data on the production cost of farm products were available to Soviet planners from the time of collectivization onward, the matter was complicated in the Stalinist period by the state’s draconian policy of demanding physical quotas of output at set procurement prices and letting the farms worry about costs. Notoriously, where prices were set below costs – as they were frequently in this early period – agricultural workers paid for this out of the wages, which were the last distributed ‘residual’ from farm revenue. Thus, it seems, at least, that no serious or concerted attempt either to determine what farm production costs were, or to set prices to cover them, really occurred until after Stalin’s death. But precisely when and how this occurred is still rather unclear, although the late 1950s/early 1960s seems to have marked the turning point. See the discussion in note 17.

5 In a lengthy account of the valuation of ‘on farm’ production of inputs in Soviet farm cost accounting, Humphrey (1983, 84–5) notes that the farms she studied valued such inputs (home grown seed for example) ‘by their actual prime cost, or cost of production, sebestoimost’, rather than at their – generally higher – retail prices. The reason for this was that valuing these inputs at retail prices ‘would make a difference on paper to the total cost of production’ and ‘since lowering the cost of production is one of the main indicators of success, collective farm leaders might have to forego some of their own prizes and bonuses if they changed to the new system’. But Humphrey’s account of the matter is not consistent (in this, as in some other respects). Just a page later she tells us that val – or the value of aggregate production – was ‘the success indicator par excellence’ and that this led farms, to a preference for ‘using costly raw materials which will push up the price and hence the level of “realized” val,’ and that this occurred ‘because val is a more powerful success indicator than lowering the cost of production’. However, the inconsistency here was probably not in Humphrey’s
of a product or products, measured in a stable currency, should manifest a steady and continual downward curve over time. If it, or they, do not, then efficiency of production is not increasing. Aside from mere administrative inertia, such 'efficiency measuring' considerations seem to be the only reason why post-Soviet Russia would wish to keep the concept – and the accounting magnitudes it generates – in its national accounts and, indeed, in the official recording and reporting responsibilities of every enterprise economist/accountant in Russia.

But, of course, even a revamped *sebestoimost*’ (updated to cover marketing costs or bank borrowing costs, for example) can only be a measure of efficiency if it provides at least roughly accurate data on *what the production costs of products actually are*, and as I have already intimated earlier, this seems to me to be (at the least) highly doubtful given the assumptions which were built in to its construction. For, in essence, *sebestoimost*’ embodies the classical Marxist assumption that the production cost of any item or unit of output can be determined independently of, or prior to, the determination of its selling price.

That is, and to take the case of agriculture, *sebestoimost*’ embodies the assumption that a farm chairman or director can simply add (say) the cost of seed, the cost of fuel expended on sowing and harvesting, the cost of fertilizer and insecticide applied and the cost of labour required (‘directly and indirectly’) to do all these things, and thus ‘know’ or ‘determine’ what the production cost of (say) a hectare of wheat is going to be *before* she/he knows what the farm-gate price of the yield of that hectare is. But aside from the age-old problem of the crucial role of climate in agriculture and its unpredictable effects in turning sown areas into highly variable harvests, this procedure is fundamentally flawed by its failure to take into account the problem of dividing indivisible inputs among joint products.6

account, but in the reality she describes. It is just one example of the way in which the actual functioning of the Soviet pricing system – like the planning system of which it was a part – defied all forms of logic or consistency.

6 See Gray (1979, 542–3, 548). The author notes that this problem, together with problems produced by the failure of Soviet agricultural cost accounts to include an opportunity cost of land, and their failure to allow for ‘the complications of seasonality’ made for ‘grave shortcomings’ in the *sebestoimost*’ concept as a measure of production cost. But while these shortcomings were acknowledged by Soviet authors, they did not affect the official reliance on *sebestoimost*’ (and *rentabel’nost*) in practice. Nor does Gray consider the manipulative potential of *sebestoimost*’ for farm managements, despite the fact that he himself presents a table showing that in the late 1960s, when procurement prices rose rapidly for both crop and livestock products, ‘no more than half’ of this increase could be accounted for by rising real wages for agricultural workers, despite this being the favoured explanation of ‘Soviet spokesmen’. On this see also note 15.

The issue of joint production has been discussed, however, albeit in a very different place and context. Back in the late 1970s an arcane debate in high mathematical economic theory broke out between two groups of left-wing economists in Britain, associated with the Conference of Socialist Economists. One group, whose principal theorist was Professor Ian Steedman, styled themselves ‘neo-Ricardians’, while their adversaries regarded themselves as the guardians of orthodox Marxist theory. One of the issues in the debate was Steedman’s claim (Steedman 1977) that Marxian value theory was incoherent as a theory of production since there was no plausible way of dividing labour
Thus, when Oleg the tractor driver sows the wheat seed, he also (say) sows barley seed in an adjoining field. Moreover, prior to doing this he has also applied fertilizer to both fields and when 3–4 months later he sallies out to harvest the wheat, he also harvests the barley. How then to divide the cost of Oleg’s labour, the cost of the fuel in his tractor (and its maintenance costs) and the cost of the fertilizer, to determine a ‘unique’ production cost for the wheat and a similar ‘unique’ cost for the barley? Fairly obviously, it cannot be done. Sometimes it cannot be done for technical reasons that might, in principle, be rectified. (Nobody is measuring the fertilizer applications by field, but they might. There is no fuel gauge able to measure tractor fuel consumption by field or task, but in principle one might be devised). But in the case of labour in particular, the problem is more than merely technical.

Thus, two days before Oleg climbed into his tractor to harvest the wheat and barley, Ivan, a farm mechanic, spent long hard hours mending an old and leaky transmission. He was paid his basic task rate and some overtime for that repair, since it was a matter of urgency to get the old tractor into the field. How to divide the cost of Ivan’s labour (and, for that matter, the spare parts he had to use) between the wheat and the barley? Again this cannot be done. And in this case such is the deep ontological indivisibility both of the labour Ivan has performed and its practical consequence (a functioning transmission) that there is no

values between different products in a situation of joint production. Steedman was especially fond of the agricultural example of mutton and wool as a classical case of joint production. But, to my knowledge, no one involved in the debate actually thought that the matter might be germane to the actual practices of any actual farmers any actual where. (For what was probably the best attempt made by the orthodox group to provide a ‘technical’ adaptation of value theory to joint production see Harrison et al. 1978, 1–31).

This is not all, however. Another of Steedman’s theoretical objections to Marxian value theory was that it became incoherent in any case where ‘depreciated’ or ‘second-hand’ machinery continued to be used in production. His argument was that, given the logic of Marx’s accounting of constant capital – that it has an original ‘store’ of value acquired during its own production which is used up as it depreciates – such machinery would actually be deducting value (i.e. labour value) from every commodity it produced after its ‘complete’ depreciation. Meanwhile, in the very same year in which Steedman produced his critique – but a world away – two Soviet authors had produced a textbook on collective farm accounting practices (Kosinskii and Mikhailik 1977) designed to modernize and rationalize those practices while maintaining their consistency with ‘Marxist economic science’ as officially understood. This textbook was apparently widely used in training courses for Soviet farm managers and is extensively quoted and discussed by Humphrey (1983, 83). One of its concerns, she notes, was ‘the problem of tractors whose period of life is reckoned to be twelve years, after which, according to Marx, they must have transferred all of their value to the product; but what if some of those tractors are still in good working order? Insofar as they go on being used after the period has elapsed in which they have transferred their value . . . they are in a sense creating more value. Collective farms have been in the habit, Kosinskii and Mikhailik say, of destroying such machinery because of the unreckoned-for amortization payments required for their maintenance. However (regardless of Marx), they themselves recommend that such tractors should go on being used, without setting aside amortization money, on the very pragmatic grounds that ‘the demand for new machines by collective farms is not fully being met by industry.’

Appropriate comment on this would be too lengthy and take us far beyond the concerns of this paper. Suffice to say that Steedman appears a more consistent economic theorist than Kosinskii and Mikhailik, but then he did not have to draw up accounting procedures for farms which needed to be told – among other things – precisely when (12 years, why 12 years?) a tractor had ‘transferred’ all its ‘value’ to its output!
technical way in which the ‘crop’ division of these types of production cost even might be performed.7

So, given that in effect enterprise managements were/are being asked to perform an impossible – because intellectually incoherent – task in determining the sebestoimost’ of every different item of their output independently of prices, and that they have been in this situation for at least 40 years (since the mid-1950s at least), what did they actually do, and what do they still do, in practice?8 We have already intimated what they do. They begin (and even in the Soviet period they began) not with production costs, but with farm-gate prices. That is, they do not and never did (as they were supposed to) determine farm-gate prices by providing independently determined production costs to the planners above them. Rather, they ‘began’ by learning – from the planners – what the farm-gate price of any unit of output was going to be and loading costs on to that (putative) income to determine the surplus or profit (rentabel’nost’) of each item.9

7 Since, in the case of joint production, it is the assignment of labour costs between products which is especially problematic, this also makes doubtful all correlation-based generalizations about ‘rising labour costs’ ‘accounting for’ rising production costs (whether in whole or part), as is done by Gray (1979), for example. It is also worth noting that, in the Russian case, there would be further complications in the ‘tractor repair’ case cited above. These are produced by the fact that, in the Russian countryside, tractors perform a wide variety of transportation and haulage roles as well as cultivating ones (typically a far wider variety of such roles than they do in the West, where there is a more abundant supply of other types of transport available in rural areas). Thus, among the other claimants on the cost of the fixed transmission might (for example) be a group of Russian farm children able to resume their movement back and forth to school or a rural bride enabled to ride ‘in style’ to and from her wedding!

8 The account which follows is derived, essentially, from an informal interview with Aleksandr Sergeevich Kolotilov, Director of the SPK (and former kolkhoz) ‘Barbeeva’, Vladimir Region, 11 August 1997. This interview was, however, the culmination of a long and increasingly anxious hunt on my part, for a coherent account of the use of sebestoimost’ in the Soviet period, a hunt which, up to this time, had been met by various forms of evasion or simple ‘blocking’ by other informants. Having got this account out of Mr Kolotilov, however, I was able to obtain – rather reluctant – confirmation of it, from other farm directors and chairpeople, notably Nikitina Lobov Vitalevna, chairperson of the TOO ‘Pervomaiski’, also in Vladimir region (interview 23 August 1997). It must be said, frankly, that I owed Mr Kolotilov’s honesty, at least in part, to the vodka which flowed liberally at a reception he held, at his farm headquarters, for our survey team (and at which the interview was obtained). His honesty may also have owed something to his personal friendship with a former local Agricultural Department administrator in Vladimir who accompanied us in the field, and whom (I know) informally encouraged Mr Kolotilov to tell me what I wanted to know.

9 Gray (1979, 548) does note that in the 1960s the Soviet Central Statistical Administration set norms for farm managements to follow in dividing costs between joint product crops. (He gives the example of sugar beet used partly as an industrial raw material and partly as a livestock feed). Many chairmen whom I interviewed about joint products referred to the existence of such ‘norms’ as the means by which they solved this problem – or by which it was solved for them. But it is unclear to me how far these ‘arbitrary uniform allocations’, as Gray calls them, were actually followed by farm managements, or could indeed be policed to ensure that they were followed. Mr Kolotilov was my first informant who was willing to openly state that in fact they were not policed or (therefore) effective in constraining farm directors’ accounting practices, so that the kind of discretionary ‘loading’ analyzed here could be carried on widely so long as nothing too violently unlikely appeared in farm accounts. I would very much welcome any further detailed information on this subject which any reader of this article may be able to supply. As already indicated, the published Western studies are infuriatingly vague on this topic, which is clearly a vital one, and whose importance only became clear to me toward the end of my fieldwork period. It is certainly a matter I will follow up on return to the field.
In fact, the whole relationship between the macro and micro levels in the later Soviet period might be modelled as a rather amusing type of 'stand-off' game. That is, the macro-level central planners could not determine the state procurement prices of output until they knew the 'real' production costs which were to be determined at the micro (enterprise) level. But the managers at the enterprise level could not in reality determine the production costs until they knew the procurement prices! In practice, of course, the stand-off was resolved by the oft-described\textsuperscript{10} process of iteration, bluff, counter-bluff and misinformation between planners and enterprise managements, in which central planners routinely assumed that real production costs were less than enterprise managements claimed they were, and enterprise managements tried, in their turn, to 'second guess' the influence what the prices were going to be by manipulating production costs in the ways described earlier.

It is important to note, however, that this form of production cost manipulation was only a possible or worthwhile tactic for the Soviet farm chairman from the 1950s onwards. Prior to 1953, state procurement prices were not set with any reference to agricultural costs of production, and were in any case completely subordinated to compulsory production targets and quotas set in physical terms. That is, a farm was told to produce a given physical output volume and mix and was simultaneously told what it would be paid for that output and for each individual item (crop) in the mix. Brutally, whether the prices paid, either individually or overall, covered production costs was of no concern to the Stalinist state. Moreover, and notoriously, when they failed to do so, kolkhozniks in particular 'took the strain' by having payments for their work points reduced accordingly. That is, as is well known, payment of labour, especially on collective farms, was treated as a residual in farm costs right up to the early 1960s, and was (therefore) the item of cost which kolkhoz chairmen were supposed to manipulate in order to make expenditure and income balance. And balance them they did, but only at the cost of a miserable standard of living for most agricultural workers and their families and a headlong population flight from agriculture and the land.

Thus, manipulation of sebestoimost' as a way of increasing farm income only became a feasible farm management tactic when procurement prices were related

\textsuperscript{10} For one very good example of such a description (but there are many others) see Nove (1989, 173–99). It is really crucial, in the particular case we are concerned with here, to know – in detail – precisely how 'average' costs of production for agricultural products were set in the USSR, and in particular, the influence that 'production cost' data coming up from the farm level had on that price setting. None of the standard textbook accounts tell us this and even the most detailed English language accounts of the organization and operation of the Soviet price system are similarly silent on this vital matter. See for example, Bornstein (1978, 406–90). Gray (1979, 549) tells us that Soviet 'planning textbooks say simply that planning decisions are made through a "complex of indicators"' and that they 'list dozens of coefficients which characterise the economic effectiveness of agricultural production, but do not say how these coefficients are combined'. One strongly suspects, however, that the influence of (at least aggregated) farm data was profound, simply because 'averaging' them (in some no-doubt weighted way) provided the 'present' level of costs of production on which the 'next' round of price increases was based. On the necessary ubiquity of this principle in Soviet planning, see Igor Birman’s celebrated piece on the 'achieved level' (Birman 1978, 153–72).
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to ‘average’ production costs (from the mid-1950s onwards) and when, more particularly, procurement prices for any individual crop or item of output were set at levels designed to cover the costs of the least efficient farms producing that crop or type of output. As is equally well known, this itself only occurred, at least widely and systematically, after the fall of Khrushchev and the major agricultural price reform of 1965. From this point on, however, any farm producing a range of crops of varying profitabilities to it (i.e. in effect, all farms) had a systematic incentive to load joint costs disproportionately on to its least profitable enterprises! In fact, as noted by several authors, the setting of ‘average’ sebestoimosti in agriculture on marginalist principles (the practice which prevailed in the Soviet Union from the late 1960s until its end) itself militated strongly against farm, and even regional, specialization in agriculture, since it provided a positive incentive for every farm, and every region, to keep comparatively disadvantageous output in its crop mix.

EXPENSIVE COWS AND OTHER ANIMALS

One wonders, in particular, about the oft-observed Achilles heel of Soviet agriculture, livestock raising, in this context. Despite continual rises in meat and milk procurement prices in the Soviet Union from the late 1960s to the late 1980s, official statistics of ‘average’ sebestoimosti and rentabel’nost of these products continued to show them less profitable than crop production, and often barely

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11 In fact there were two stages in this process: the introduction of procurement prices based on average ‘production costs’ (mid-1950s to early 1960s) and then the setting of those prices on a marginalist basis (mid-1960s onwards). For a detailed account of the first stage and the change it implied from the previous draconian system of agricultural procurement, see Durgin (1964, 375–407). It must be said, however, that the precise chronology of policy here is unclear, and in particular we still know far too little about the role played by sebestoimosti in the setting of procurement prices in the 1950s. Professor Naum (1963, 187–218 and 1964, 285–307) suggests that some serious attempt to relate procurement prices to production costs may have pre-dated 1958 somewhat, at least for livestock. See below for a detailed discussion of Jasny’s analysis.

12 On the reform and its effects see, for example, Clarke (1968, 159–78) and Karcz (1965).

13 See Gray (1979, 552) ‘The effect of paying higher prices in regions with higher costs (and vice versa) is to interfere with the tendency for specialization to occur where it should occur.’ It must be said, however, that if Soviet farm pricing policy was a maze of inconsistency, the comments of Western scholars upon that system were hardly themselves a model of coherence. For example, prior to the price reform of 1965, Western experts on Soviet agriculture were highly critical of the price system then prevailing for – in effect – paying the highest prices to the most efficient producers and producing an ‘environment in which backwardness bred backwardness and success engendered success. With quotas based on sown area, those farms with a higher ratio of capital to land and labour ... were enabled to realize a higher percentage of their output at the higher above-quota prices, thereby receiving a higher average price for their output than did their backward counterparts’ (Durgin 1964, 385). Thus adoption of the marginalist principle was strongly advocated by Durgin, Karcz, Nove and many other Western scholars, despite an uneasy awareness of the way this might conflict with specialization (see, for example, Karcz 1965, 152). Once, however, this marginalist principle was widely adopted and applied, it came under increasing criticism for subsidizing the most inefficient producers! Indeed, among a later generation of Western commentators, such as Wegren and Hedlund, the adoption of this pricing principle is put down primarily to economically irrational Soviet obsessions with social equalization, rather than to a belated seeing of the marginalist light (see, for example, Wegren 1988).
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profitable at all, over large areas of the USSR. But it is, I would argue, at least a possibility that, from the late 1960s onwards, the perverse effect of the sebestoimost’ system in Soviet agriculture was to produce the fastest rising ‘costs of production’ for the items with the fastest rising procurement prices, with – after a while at least – the latter causing the former and not the former the latter!

A detailed study of the ‘animal industry’ in the USSR carried out by Professor Naum Jasny in the early 1960s is particularly intriguing in this respect, because it suggests that this process may have begun, at least in the livestock sector, well before 1965. Jasny shows that whereas in 1962 the farm-gate prices of pigs, cattle, milk and poultry in the USA were two to eight times the price of the grain required to feed the animals, in the USSR the ratios varied from four to 40 times for the same products. He also shows that, despite procurement prices that in the decade 1952–62 rose nearly 15 times in real terms for pigs and cattle and between three and four times for eggs, milk and wool, in 1960 only 14 per cent of all kolkhozes in the RSFSR could produce milk at a cost below the procurement price, while the figure for cattle was about 38 per cent and for pigs about 30 per cent. In other words, despite these massive price increases, the overwhelming majority of Russian kolkhozes could still not produce livestock products profitably. As already stated, despite further price increases in the 1960s, 1970s and 1980s, livestock and livestock products continued, up to the end of the Soviet period, to manifest profitabilities well below field crops, and even to be loss-making in the ‘least efficient’ kolkhozes and sovkhozes.

But the real question, however, is why – why was this so? In the section of his article concerned with the ‘Composition of Production Costs’, Professor Jasny attempts to provide an answer to this question. He begins by citing a Soviet study suggesting that, in the year 1960, labour and feed costs together accounted for between 80 and 90 per cent of the production costs of pigs, cattle, poultry and milk on Ukrainian kolkhozes, with the respective weights of labour and feed costs varying somewhat by crop and by the method used to calculate labour costs. Similar data are then presented for pig production costs on Russian, Ukrainian and Byelorussian sovkhozes and for milk production costs for all Soviet sovkhozes, all again for 1960. He then goes on, from this basic data, to provide a cautious, multi-factor causal analysis of the massive ‘inefficiency’ of Soviet state and collective farms in livestock raising in this period. And, of course, he focuses strongly on these dominant ‘feed’ and ‘labour’ factors in doing so. In sum, he suggests that the following phenomena accounted for most of this ‘inefficiency’:

1. Soviet state and collective farms were required in this period to make grain deliveries to the state, the volumes of which were not set with any regard to

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17 Jasny (1964, 287, Table 6).
18 Jasny (1964, 289, Table 7).
19 Jasny (1964, 290, Tables 8 and 9).
‘on farm’ animal feed requirements. Hence, many farms found themselves in feed deficit and, simply to meet their compulsory livestock quotas, had to buy in manufactured mixed feed and/or to substitute other farm-produced crops ‘with production costs higher than grain’ (notably potatoes) for their own grain feed. 20

2. Both on-farm produced grain and other feeds and Soviet manufactured feed were far lower in nutritional quality than their Western counterparts, and so the sheer volume of feed required for animal weight gain was a large multiple of the Western requirement, thus pushing up costs. Jasny here commits himself to the view that ‘excessive amounts of feed used [were] probably the principal reason for the high production costs of animal products in the USSR’. 21

3. In addition, excessive animal deaths before sale (due to poor care standards on the farms) also led to waste of the feed and labour used in their rearing. 22

4. Moreover, Soviet data suggest a volume of labour costs, and indeed a volume of labour, involved in animal rearing in the Soviet Union massively in excess of Western levels. This drove up the labour costs of animals and animal products, this despite the notoriously low levels of wages – especially on kolkhozes – throughout the 1950s and early 1960s. Moreover, argues Jasny, gains in labour productivity in this sector of farm production over this period were decidedly limited. 23

Given our concerns in this article, one cannot help but notice, however, that in this whole analysis the cost data themselves are treated as entirely, or almost entirely, unproblematic, despite the author’s (quite conventional) initial warnings to the reader about the unreliability of sebestoinost’ magnitudes. 24 By this, I mean that Professor Jasny simply assumes that if the aggregate data show that ‘on average’ kolkhozes in Russia required over 11 ‘feed units’ to get a kilogram of weight gain for a live pig (when the official norm was only eight units and a Soviet authority thinks that this norm should be reducible to six units), then the only possible explanation of this is that 11 such units were indeed required (on average) by these massively ‘inefficient’ farms. And similarly, if the accounts of a kolkhoz in Moscow region in 1961 showed that the wages and other ‘labour costs’ of 21 milkmaids, 16 stablemen, 11 feed men, seven herdsmen, four milking

20 Jasny (1964, 291).
21 Jasny (1964, 292).
22 Jasny (1964, 293).
24 Jasny (1963, 200–4). In fairness, however, there is an important qualification to be made to this generalization. Professor Jasny does draw attention to the heavy loading of the cost of administrative-auxiliary personnel on to animal and animal products in a number of kolkhozes and sovkhozes throughout the USSR, and quotes Gogol’s ‘Couriers, couriers, ten thousand only of couriers’ as a comment on this massive burden of overhead costs. But he draws no general implications from this discrete observation, nor does he ask why these overheads were loaded so overwhelmingly on to livestock production costs specifically when livestock was already massively loss-making – or supposedly so – when counting only direct feed and labour costs (if indeed these indirect labour costs were so disproportionately loaded – his data are too impressionistic to be clear on this). Jasny (1964, 299–300).
Point heads, three milk accountants and three guards—‘altogether 1 worker per 7 cows’—were carried on the milk output of the kolkhoz herd, the only explanation of this possible is that this number of people were indeed required to do the milk production job in this ‘inefficient’ (even if relatively ‘advanced’ for its time) Soviet dairy farm.

In other words, and to repeat, no consideration is given even to the possibility that the costs loaded on to the production of animals and animal products by Soviet farms in this period may not have reflected technical norms or any form of physical production requirement (including physical labour requirements) so much as the need of farms to distribute their indivisible costs—and especially labour costs—on to the products to which (a) the state had given most priority in production plans and campaigns and which therefore (b) stood the best chance of having costs reimbursed by raised procurement prices.

It might seem an adequate reply to this hypothesis to point again to the massive numbers (60–70 per cent in this period) of Soviet farms whose animal production was loss-making despite the procurement price rises up to 1962 (and who, just for that reason, received further price rises on animal products of up to 50 per cent in June that year). But, of course, if the hypothesis being advanced in this article has any merit, this reply would not be an automatically conclusive one because:

(a) we could not be certain that these losses were indeed losses, and
(b) from the early 1960s (at least) we enter the period of procurement pricing the prime objective of which is to eliminate loss-making enterprises. In this situation what one might call ‘loss maximization’ (or at any rate ‘profit minimization’) becomes an ever more rational cost strategy for Soviet farm managements.

25 Jasny (1964, 298).
26 And this is why this matter is so important and so deserving of further systematic investigation. For if this kind of production cost manipulation was a regular and widespread feature of Soviet agriculture from the late 1950s onwards, then this is yet another reason for treating very broad generalizations about Soviet agricultural inefficiency with a degree of scepticism.
28 Humphrey’s study also provides some support—albeit oblique—for this view, and for a slightly later period than that covered by Jasny. She tells us that ‘Prices are still tied to centrally defined (prime cost) sebestoimost’, and they are always underestimated [emphasis added], since kolkhozy have to pay out social security, insurance and costs of transport and realisation, none of which are commonly counted in sebestoimost. This is one reason why prices are still too low. Another is the failure to compute the increase in costs in particular branches of production. The idea of prices based on average costs means that in any case some enterprises will be operating at a loss. In particular cases whole sectors of production operating at a loss are covered by profit from another sector at the republic level, or else have to be heavily subsidised by the state. This is the case with livestock farming, which from 1971–5 has operated at a loss in Azerbaijan and probably also in other areas of the USSR.’ (Humphrey 1983, 98).

A number of points here:
(a) Humphrey’s assertion that ‘social security, insurance and costs of transport and realisation’ were costs not ‘commonly counted’ in sebestoimost is at least partially incorrect if the account given by Bornstein (see note 3) and other authorities on Soviet pricing is correct, and vice versa.
(b) The general effect of procurement price increases in the 1970s and 1980s, was, as we have already stated, to make the least productive Soviet farms and farm enterprises ‘profitable’ by setting ‘average’ production costs at levels prevailing on these farms—hence the biggest subsidies to the least efficient.
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(And this may account for so many Soviet livestock farms continuing to be only minimally profitable or even loss-making even when some of the ‘causal factors’ identified by Professor Jasny, e.g. non-coordination of grain procurements with local feed requirements or the low quality of Soviet-manufactured animal feed, became less in evidence). But further,

c) loading labour costs on to animal products, in a situation where those products were in high demand by the state (to raise urban nutritional standards), was a rational economic strategy for farm managements even prior to the late 1960s, in so far as it held out the best promise of raising farm revenues absolutely and thus, ceteris paribus, of raising farm real wages. This was especially true for kolkhozes where in this period (1950s to early 1960s) wages were still treated as a last-in-line residual claim on that revenue.

In short then, it seems to me at least worth exploring the idea that, in the last 30 years of the Soviet period at least (and perhaps even before that) production cost manipulation (in a situation – farming – where the room for that manipulation is greater than in other sectors) was a tactic and strategy used by farm managements in a continual battle with a state which had done little or nothing – and continued to do little or nothing – to change the dominant rural perception of it as an enemy.

The essential history here hardly needs restating. The massive social and economic costs of collectivization in the 1930s were followed by a horribly destructive war, and then, for at least 10–15 years after the war, by a procurements regime which basically continued the Stalinist policy of sacrificing rural standards of living to the attainment of physical crop and product delivery targets ‘at any cost’.

Thus when – and this was vital – state agricultural policies began to change tack (from the late 1950s onwards) and to relate procurement prices, however

(c) In a later section of her work devoted to the profitability of grain and livestock production in the Buryat Republic (her area of fieldwork), Humphrey herself notes that despite procurement price increases in 1960, 1965 and 1970 ‘the precarious profitability of livestock farming was not improved’ and this was because although Buryat was ‘climatically and ecologically most suited to livestock production’ and had been designated as a livestock specialization zone, farms there had ‘to operate in a situation where arable farming is very profitable, but livestock can only just be made to pay’. She then produces a table on the comparative profitabilities of arable and livestock farming in Buryat in 1966 (drawn from official data) to show this (Humphrey 1983, 182–3). But given (i) the point above about the definition of sebestoimost’ which she has accepted from her informants, (ii) the admitted ‘climatic and ecological suitability’ [my emphasis] of the area to livestock and (iii) the nomadic background of the (Mongol) Buryat people, and their strong preference for livestock herding (which would make them disinclined to specialize in arable farming anyway), one wonders about the accuracy of the data on the local sebestoimost’ – and thus profitability – of livestock production provided both to her and to Soviet authorities from Buryat farm chairmen (and reproduced in Humphrey’s table). This is not to deny, of course, that livestock production may not have been genuinely loss-making, or only marginally profitable, in other areas of the USSR (especially the non-Black Earth zones), or to deny that formidable problems rose in the determination of farm procurement prices by the failure to take varying soil fertility (and thus differential rent) systematically into account. But much – in fact absolutely everything – turns on how the central authorities calculated so-called ‘average’ costs of production, both at any one time and through time, and the influences of micro or enterprise level cost data on those calculations. And, as already stated, we know little or nothing in detail about this.
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inadequately and laggardly, to ‘costs of production’ (sebestoimosti), Soviet farm managements and especially perhaps Soviet collective farm managements moved quickly to use the one weapon available to them (production cost manipulation) to strike back against the state. They did so, essentially, by making the state pay as much as they (the farms) could squeeze out of it for what it demanded and, more pointedly, to make it pay most for what it wanted most. Of course, that farm managements would, or could, pursue such a strategy en masse, presumes that those managements saw themselves more as representatives of the peasants/agricultural workers and other rural people in their employ, than as representatives of the enemy state in the countryside. But certainly the kolkhoz chairmen whom we encountered in 1996 and 1997 (many of whom, of course, had served throughout the last decades of the USSR) seemed a lot more like the former than the latter. They almost invariably, for example, described their social backgrounds, proudly, as ‘peasant and local’ and many of them manifested a distinctly paternalistic (occasionally maternalistic: a few were women) attitude to the people in their employ which it was hard to believe was purely a product of ‘post-reform’ hard times or without much deeper social roots in the history of a long-abused Russian peasantry.

But however all this may be (and in the nature of things, it can only be a speculation, pending further research), it remains unclear – to return to our central concern – when, or even if, it became obvious to the more astute of the central planners in the Soviet Union that there were no ‘real’ production costs for any individual item of agricultural output. Certainly no enterprise manager had any interest in enlightening them! That figures on the sebestoimost’ of a large number of agricultural and industrial products still appear solemnly not only in the national accounts data but (as I have said) at the regional, district and enterprise levels of Russian account-keeping too, leads one to wonder whether, even now, the fundamental problems with the concept have been grasped by senior Russian policy-makers. (Although, arguably, they may have too many other problems on their minds currently to give the matter serious attention!)

NO MYSTERY NOW

But all this, whether true or false, is, as I have previously emphasized, history – Soviet history. For farm chairmen and directors now, the problems they must confront in regard to sebestoimost’ and its logical corollary (rentabel’nost) are markedly different from what they were in the Soviet period. As already noted, in the Soviet period farm-gate prices, being administered prices, were stable and relatively predictable. But now they are market prices (including black market prices) and are neither stable nor predictable. Hence working ‘backwards’ from

29 Jasny calculated that in 1962 the ‘additional cost’ to the state of locally produced livestock products (‘additional’ that is to US costs for the same products) amounted to about 7 billion roubles, or about 10 per cent of the total income of the Soviet non-farm population at that time (Jasny 1964, 306).
farm-gate prices to costs of production is a lot more tricky and difficult task than it used to be, and this still matters in so far, as we have seen, as sales ‘below production cost’ can attract tax fines and penalties, and in so far as declared enterprise ‘profits’ attract heavy profits taxes.

Fortunately, if that is the right word, the number of farm products which are at all profitable, at least in northern and central Russia given prevailing market prices (and even loading on the most basic of production costs), are so few that there is little or no difficulty in identifying them. (They come down currently to milk and some grains, as we have seen). More significantly, identifying loss-making crops and enterprises by the same basic procedure is even easier and, as I have already noted, requires no sophisticated manipulation of production costs, as in the old game of bluff with the centre. Losses are now genuinely and indubitably losses and require no sophisticated accounting tricks to make them so. A few typical quotations from farm chairmen and economists in their interviews with us will show clearly that they are:

(1) ... in pig raising there is a technical norm. For 1 kg of weight gain you have to supply the animal with 6 kg of feed concentrate. This costs now almost 9000 roubles and to this you have to add the cost of loan repayments, electrical energy, wages, and so on. The local factory pork price is about 7000 roubles a kilo. Need I say more? 30

(2) Stock rearing has always been loss-making, during the socialist period as well as now. It involves a lot of expenses every day with no very high level of productivity. There are only a few enterprises which really get high outputs of meat or milk. And these days there is a lot more cattle disease. In crop rearing there are less irreversible losses. At least you usually get some kind of crop. But our locally grown animal feed is not of very high quality and we simply cannot afford proper feed concentrate. And tuberculosis has killed a lot of animals around here. It also means that weight gain is low (about 400 g per day) and to get a good income you need to have a daily weight gain of 1200 g plus. Otherwise you cannot recoup the expenses and you are wasting the grain you feed them. 31

(3) Why have we given up potatoes? The labour. It takes a lot of labour to harvest the crop and the prices don’t even cover that cost, let alone any others. It is still all right as a private plot crop though, because there the labour is free... 32

(4) ... for example, we get about 600,000 roubles for a tonne of wheat, and out of that we are supposed to pay wages, the cost of the fuel we burn, and the running and repair costs of the machinery required to sow and

30 Interview with V.V. Gudkov, Head of Scientific Department, Vologda Regional Department of Agriculture, July 1996.
harvest it. It’s obvious that it just can’t be done. You don’t need to do any fancy accounts.33

(5) The whole enterprise is loss-making. Only crop raising is in any way economic, and that is only because it provides a cheap way to feed our animals. Fifty per cent of our outlays go on fuel and lubricants alone, and because our machinery is worn out and leaky it needs even more fuel and oil than it should. The whole situation is hopeless.34

What these quotations all reveal then is that, although it is impossible to determine a unique production cost of every separate item of output, as required by the Soviet version of Marxist economics, there is, as it were, a set of minimum direct costs of producing any item, which can be known with some degree of precision, and if prices do not even cover those costs, farm chairmen and economists – reasonably enough – declare that item loss-making.

And the most eloquent evidence that these forms of output are now genuinely loss-making is, of course, that they are being, or have been, removed from a farm’s output mix. That is to say, whatever else it may have done, the market has removed the perverse incentive to maximize ‘loss-making’ in pursuit of higher prices and farm revenue. The reason is, of course, that the market in agriculture – if left to itself – does not set prices on the Soviet version of the marginalist principle. On the contrary, it applies that principle in precisely the opposite way to the Soviet planners. That is, in the absence of subsidies and other forms of support, free competition among farms producing the same items of output reduces the prices of those items to the level of the production costs on the farms enjoying the highest differential rent – or the greatest absolute advantage in soil and other natural conditions. Producers not enjoying such natural advantages for a product or products are driven out of the market for those products altogether. This, of course, is precisely why no Western state allows this market pricing principle to operate in agriculture, either nationally or globally. But as their managers now remark with some bitterness, finding themselves in an almost entirely open agricultural economy, struggling with the difficult climatic conditions that have always plagued Russian agriculture, and effectively unprotected by a bankrupt state, Russian farms have been suddenly forced to confront the most pure and ‘wild’ (diki) of market conditions, and conditions moreover which no Western farmer has to confront.35

But at any rate, the way Russian farm managements are responding now to market conditions gives us a clue to how they must have understood and used

33 Interview with A.B. Velechov, Chairman, Cooperative ‘Rodina’, Pokrovskoi district, Orel region, July 1997.
34 Interview with T.I. Zebnitskaya, Chairperson TOO ‘Vtorovo’, Kameshka district, Vladimir region, August 1996.
35 This is quite apart, of course, from the exacerbating effects of subsidized agricultural imports from the West. That is, Russian producers of butter (say) not only have to face competition from domestic competitors enjoying the benefits of differential rent, but also have to face competition from (for example) New Zealand farmers, who may or may not enjoy differential rent, but certainly enjoy differential subsidies!
sebestoimost' as a management technique over the last 30 or so years of Soviet agriculture. That is, for each item of output on each farm there must have been a 'hard core', as it were, of production costs unambiguously assignable to that item, and then a wider set of costs, not unambiguously assignable to any item (especially in cases of joint production) and manipulable between and across different items (in the light of expected and desired procurement prices) as hypothesized above. What is crucial, of course, is to know the comparative magnitudes of the fixed 'core' and manipulable or discretionary 'periphery' of costs (and thus the accounting 'room for manoeuvre' available to a farm chairman or chairmen).

One might say that official Soviet agricultural statistics embodied (and the official Russian ones still embody) the comfortable and comforting assumption that, for the farm sector as a whole, the cost of production core assignable to output items was large and the manipulable periphery comparatively small (and thus disregardable). But I see no persuasive evidence for believing this assumption to have been correct, and some – albeit circumstantial – evidence that it was in fact the reverse of the truth and that farm chairmen’s room for manoeuvre in the cost periphery was considerable in many, indeed most, cases. But, to repeat, at the moment this can only be a speculative hypothesis requiring systematic investigation.

CONCLUSIONS

If the analysis which I have provided above is correct, it is impossible – and always was impossible – for anyone to know the sebestoimost’ of any individual item of output produced by large numbers of Soviet enterprises. (Our research is concerned with farms, but the point holds for all enterprises where joint production is endemic.) Moreover, although times and economic realities have changed, that impossibility is still an impossibility, although, as I have also noted, at least some influential people in Russia seem still not to be aware that it is. So if farms cannot meaningfully determine their real levels of profitability by deducting sebestoimost’ from farm-gate price for each item of output, what can they do? Well, like any other enterprise operating in a capitalist or market context anywhere in the world, they can know:

1. their total (direct and indirect) costs of production for their total output over any given period of time and

36 Our survey covered a small number of food processing factories as well as farms themselves. In one of these, a meat products factory in a small district centre in Vladimir region, I saw two types of Russian sausage (kolbasa) baking in an electric oven. Again, how might the cost of this (now much less subsidized) electrical energy be divided to provide ‘production costs’ for the two types of sausage? Here there might be a technical solution – i.e. bake the two types of sausage separately. But this procedure, given the size of the oven, would have been good for sebestoimost’ measuring, but bad (i.e. highly wasteful) for production costs!
The Concept of Sebestoimost' in Russian Farm Accounting

2. their total revenue or income from all sources over the same time period – conventionally, of course, over a single accounting or financial year.

In short, they can know their total gross profit (or loss) over a given period and how (in toto) it was obtained. And that is all they really need to know.

Obviously (and this is what the ‘preservation’ of sebestoimost’ is clearly meant to encourage, albeit mistakenly), enterprises operating in a market context need to be concerned both to maximize total output and to minimize the total cost of that output, and in pursuing the latter objective they need both to reduce direct or proximate costs of production, and to minimize or even eliminate as many ‘indirect’ or ‘overhead’ costs as possible. Thus, crudely, they need to (say) increase the efficiency of fuel consumption in machinery and streamline and reduce the wider overhead costs of enterprise as much as possible. In the desperate ‘post-reform’ situation in which they now find themselves, the best managers of Russian former state and collective farms are of course engaged in both types of cost-cutting exercises all the time. Thus, they may be tightening up labour supervision and pay systems on the one hand, and also, for example, introducing ‘user pays’ principles into the maintenance costs of farm housing and the supply of utilities to that housing.37 Or again, they may be substituting ‘in farm’ organic manuring of fields for unaffordable mineral fertilizer, while at the same time off-loading the running costs of schools or health centres on their farm territory to local authorities.38

But in pursuing none of these cost-reducing tasks do Russian farm (or other enterprise) managers need to be concerned with determining or reducing production cost (sebestoimost’) in the old Soviet sense. And indeed they are not (in practice) concerned with sebestoimost’ at all, except as a matter of formal reporting requirements and tax avoidance and (in some cases, and rather amusingly) as a way of getting a better price from a market buyer by giving him or her the same old flim-flam about ‘selling below production cost’!39

In short, I conclude, briefly and brutally, that Russian enterprise accounting systems, and the tax system, need to be reformed – in perfectly conventional Western ways – both to reflect Russia’s new market economic realities and (no small matter) as an aid to clearer managerial thinking in the desperately difficult situation so many Russian farm managers now confront.

37 The Director of the still profitable TOO ‘Maslovo’ in the Orel district of Orel region claimed that his enterprise was doing both these things. Interview with N.I. Drogaitsev, July 1997.
38 The Director of the still profitable TOO ‘Maslovo’ in the Orel district of Orel region claimed that his enterprise was doing both these things. Interview with N.I. Drogaitsev, July 1997.
39 In July 1997, myself and my colleagues were invited to attend a fascinating meeting at the Vladimir Regional Department of Agriculture, at which the head of that department endeavoured to persuade a number of farm chairmen to make grain available to the local prisons department as part ‘repayment’ of input credits (mainly fuel and lubricants) previously made available to them – in kind not in cash – by the regional authorities. However, the initial prices quoted (which were not in fact prices at all – but postulated barter rates of ‘offset’ against the credits) produced loud protests about ‘sales below production cost’.
REFERENCES