

# Why Did NEP Fail?\*

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## Introduction

The New Economic Policy pursued by the Soviet state from early 1921 to the summer of 1929 can be defined as the regulation of the economy's transition to socialism by means of a series of balances between socialist and pre-socialist forms of production, centralized administrative planning and decentralized commodity exchange, industrialization and agricultural development, worker and peasant interests. By the summer of 1929 these balances had become hopelessly disrupted, and after this point Soviet development entered a new phase of forced, rapid industrialization on the basis of a highly centralized economy, excluding or subordinating petty commodity forms.

Why did NEP fail? I should like to distinguish three ways in which this question has been answered, indicating why the third appears to me to be the most satisfactory. In the first view, NEP was abandoned because it was inconsistent with any further industrial development of a socialist kind, and its abandonment was therefore a rational economic decision. In the second view, strongly reacting against the first, NEP is seen as consistent with a wide variety of development patterns, including the industrial development actually achieved in the inter-war Five Year Plans. Therefore the abandonment of NEP had no strictly economic rationale, but was an outcome of brute political struggles and the formation of the Stalinist political system. In the third view, NEP is seen as inconsistent with the degree and rate of industrialization actually undertaken from 1928 onwards, but contained the possibility of alternative development patterns involving a lesser commitment to industrial growth. In this case, the abandonment of NEP was neither simply rational (according to the first view) nor irrational (according to the second), but was the outcome of a political conflict over the course of Soviet economic development.

The main source of authority for the first view, that NEP had become inconsistent with any further socialist industrial development, was Stalin who in 1928 identified the small-scale, petty commodity character of agriculture under NEP as a principal constraint on economic growth:

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in our country the principal holders of grain available for the market are the small and, primarily, the middle peasants. This means that not only in respect to gross output of grain, but also in respect to the production of grain for the market, the USSR has become, as a result of the October Revolution, a land of small peasant farming, and the middle peasant has become the 'central figure' in agriculture.

... the abolition of landlord (large-scale) farming, the reduction of kulak (large-scale) farming to less than one-third, and the change to small peasant farming with only 11 per cent of its output available for the market, under conditions of the absence in the sphere of grain growing of any more or less developed large-scale farming in common (collective farms and state farms), was bound to lead, and in fact has led, to a sharp reduction in the output of grain for the market as compared with pre-war times. It is a fact that the amount of marketed grain in our country is now half of what it was before the war, notwithstanding the fact that gross output of grain has reached the pre-war level. (Stalin, 1940, pp. 208-209).

This view, formulated in 1928 on the basis on 1926/27 statistics, was the foundation for the view that industrial development could only proceed by replacing small-scale agricultural commodity production with large-scale production and the direct appropriation of surplus product by the state. In itself, of course, this view did not dictate the pace and methods of the transition, which were set in the unfolding of the economic and political crisis of 1928 and 1929.

Since 1928, Stalin's view has been subject to three main revisions. The first is that it embodied an underestimate of the productive potential of the small-scale peasant agriculture produced by the October Revolution. The second is that the grain crises of 1928 and 1929 were, at least in part, provoked by the planners themselves; policy adjustments would have permitted rapid industrial growth to be reconciled with NEP. The third is that actual Soviet growth in the first Five Year Plan period involved significant avoidable costs; a continuation of NEP would have avoided these costs while still producing the results. Taken together, these revisions back up the view that the abandonment of NEP was irrational, serving only Stalin's lust for power. In my view the first revision is well founded, but the second and third are overstated.

### **How great was the productive potential of peasant agriculture?**

Did Stalin underestimate the productive potential of peasant farming in a socialist economy? Today some historians continue to emphasise the constraints imposed on agricultural development by the inefficiencies of land parcellation, the medieval three-field strip system and repartitional tenure, the parochial, backward peasant culture (Nove, 1976, p. 56; Vyas, 1978, p. 95). This picture of unchanging backwardness may be an unrealistic stereotype.

The sharpest focus of historical scrutiny has always fallen on rural-urban grain transfers. Undoubtedly the level of grain marketings in the 1920s really was much

lower than before the war. A Soviet challenge mounted against the statistics used by Stalin, arguing that they understate grain marketings during NEP (Moshkov, 1966, pp. 20-24), was probably misdirected (Carr and Davies, 1974, p. 971). Grain marketings may have deteriorated by as much as half. But the focus upon grain marketings alone is one-dimensional and in fact misleading, since in other respects Soviet agriculture revealed unprecedented vitality under NEP (Moshkov, 1966, pp. 19-20).

The evidence, most recently collated by Danilov, shows for a start that by the mid- twenties grain yields and harvests had matched or even substantially exceeded the prerevolutionary 1909-1913 benchmark. Meanwhile the degree of monocultural dependence upon extensive grain cultivation was diminishing. The arable hectareage devoted to relatively input-intensive, high-yielding commodity (industrial) crops had doubled. The country's livestock herds had recovered quickly from wartime losses and, after recovery, continued until 1928 to grow at an annual rate of 3-4 per cent compared to the sluggish prerevolutionary precedent of less than one per cent. Quantitative growth in livestock was accompanied by improvements in milk and meat yields (Danilov, 1977, pp. 279-301). Many of these encouraging trends were sharply checked after 1928. Farm technology remained backward, and yields vulnerable to environmental fluctuations. But the picture of peasant fanning under NEP as stagnant and unresponsive to new opportunities is sharply refuted.

The decline in grain marketings relative to prerevolutionary standards is partly explained as a healthy reaction to the abnormally high levels previously demanded by Tsarist policies for financing investment and public expenditure. If grain marketings had contracted,

the cause ... was not the liquidation of large-scale production in agriculture, which had brought not a contraction but growth in agricultural production. The cause was the growth in peasant consumption. This growth in fact amounted to the attainment by consumption standards of a level at which the normal reproduction of labour- power of the direct producer in agriculture could take place — the chief productive force which, before the revolution, had been exhausted and degraded by kulak and landlord exploitation (Barsov, 1969, p. 23).

In other words, as a result of the October revolution Soviet agriculture had gone through a transition from a combination of large-scale and small-scale producers, to overwhelmingly small-scale farming. But the disappearance of the large-scale high-yielding producer had not meant the rise of the small-scale low-yielding subsistence farmer. The small-scale farmers themselves were developing intensive, high-yielding branches of diversified commodity production. In fact this view had been urged by Lenin many years earlier (Lenin, 1964, p. 33): the most rapid development of agriculture's productive forces would come on the basis of the petty producer, with increased yields and large-scale productive forms arising through an organic process of development — not implanted or enforced from above. At the same time, of

course, neither Lenin nor his successors had solved the practical problem of finding socialist forms for such an organic process.

### Could NEP have been better managed?

The second revision to the view that NEP was doomed by the end of the 1920s concerns the extent to which the grain crises of 1928 and 1929 were provoked by the mismanagement of economic policy. For the year 1926/27 state procurement prices for grain had been lowered, sharply altering the relative advantage to the peasants of grain cultivation in favour of shifting resources further into industrial crops and livestock herds. Although the procurement price of grain was allowed to drift upward again in 1927/28 and 1928/29, the relative advantage for sellers of livestock products which had been created in mid-NEP was not eliminated; in the latter market the state remained a minority purchaser and was unable to hold down its own demand price. The imbalance of relative prices in favour of non-grain products was also noticeable in comparison to the pre-war conjuncture (Timoshenko, 1932, p. 178). From the viewpoint of grain procurement planning it was a clearly irrational course (Malafeev, 1964, p. 115).

The difficulties of the grain procurers were further exaggerated by the management of aggregate demand in the economy. By the latter 1920s 'goods famine', i.e. chronic excess demand for manufactures, was endemic in the Soviet economy. Peasant commodity producers, unable to use money balances accumulated from the sale of foodstuffs in order to purchase manufactures, withdrew from both markets. Attempts to remedy the situation by increasing grain procurement prices in autumn 1928 only increased the excess of rural monetary demand. An inflationary gap had developed, which could only be closed by a reduction in rural or urban living standards (or both), or by postponing current investment plans. By 1926/27 gross investment in Soviet large-scale industry had considerably exceeded the standard set by pre-war growth; the industrial capital stock was growing at rates exceeding 10 per cent per annum, although expansion was patchy across the major industrial sectors, badly coordinated and reflected serious problems of absorption of new technology (Cooper, Davies and Wheatcroft, 1977, pp. 4-5). Industrial growth was itself contributing to the economic tensions, partly through the investment demand for plant and machinery. But a significant part of the industrial growth, which ranged between 17 and 22 per cent per annum between 1925/26 and 1928/29, was still being accounted for by the reemployment of unused fixed capacity. The resulting demand for working capital, of which in physical terms agriculture was the most important source, was also contributing to the strained situation.

It has been argued that policy adjustments would have reduced the strain, relaxed the constraints and allowed rapid industrial growth to continue within NEP. Preobrazhensky, not an advocate of NEP but seeking room for manoeuvre within it, criticized the domination of the economy by competitive market forces, as a result of which the surplus product of peasant farming was being retained within the petty commodity sector. His solution was to challenge the competitive market forces with a combination of political force and market power. The state should use its political

and economic monopoly to redistribute the surplus product of the petty commodity sector towards socialized industry. The method which he advocated was a combination of direct and indirect taxation which would compel the peasants to sell their products at unfavourable terms of trade (Preobrazhensky, 1965, pp. 91-112).

Discussion of the impact of increased indirect taxation of the peasantry has often failed to distinguish its macroeconomic and microeconomic effects. Some additional burden of indirect taxation would have helped to close the inflationary gap opened up by ambitious industrial investment plans. An increase in the supply price of manufactures would have choked off excess demand for them, and an unchanged quantity of manufactures supplied to the rural market would have called forth increased marketings of grain. The opposite policy of price reductions on manufactures, if not combined with a simultaneous reduction in industrial investment plans, would have intensified the inflationary disequilibrium and the breakdown of market relations. The 'goods famine' was a more immediate cause of peasant withdrawal from product markets in 1927 and 1928 than the equilibrium response of peasants to terms of trade which are only relevant when trade actually takes place and all markets are cleared.

Beyond the restoration of macroeconomic balance, would further increases in indirect taxation have increased or reduced net marketings of grain? On the basis of microeconomic reasoning Millar argues, rather categorically, 'that the peasants were not self-sufficient and that a turning of the, general terms of trade against them would have increased marketings, not just production (Millar, 1976, p. 59).'

In this case greater indirect taxation would have stimulated the peasants to greater productive and sales effort, and would have achieved an unambiguous increase in net rural-urban product transfers. To the extent that this was feasible, alternative policies could have secured the regime's economic objectives within NEP, marking out a superior solution to the Stalinist one (Millar, 1978, p. 393).

Millar's view rests on two foundations. The first is the hypothesis that peasants exhibited an inelastic demand for income or some kind of target-income motivation (Millar, 1970). This idea was elaborated by Chayanov, who obtained the result by assumption,<sup>1</sup> and there is little evidence to support it (Harrison, 1975, pp. 400, 412). The second foundation is the hypothesis that peasants exhibited an inelastic demand for manufactures (Millar, 1976, p. 52). Millar finds important support here from the work of Guntzel (1972) on the 1922/23 scissors crisis. However I remain sceptical of the possibility of statistical identification of an equilibrium peasant response to changes in the terms of trade, whether in the early twenties (when imbalances were extreme, when there were large exogenous fluctuations in production combined with grave statistical deficiencies, and when the state controlled only a small part of the rural market for manufactures) (Dmitrenko, 1964,

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<sup>1</sup> In Harrison (1975, pp. 393-396) I follow Chayanov's theoretical analysis of the elasticity of supply of family labour. I am grateful to Abu Abdullah of the Chr. Michelson Institute, Bergen for explaining to me in correspondence how this treatment assumes the result which it appears to demonstrate. See also Blaug (1964, p. 291) and Harrison (1977, p. 22).

pp. 58-63); or in the later twenties, where my own empirical investigations (Harrison 1977, p. 18) have not led to any conclusions.

The more conventional view that, other things being equal, worsened terms of trade lead peasant farmers to reduce their sales, finds negative support in the highly successful surplus appropriation policies of Tsarist governments, which had to combine indirect with direct taxation. Direct taxation was organized through a battery of coercive rural institutions ranging from the manorial system and medieval commune to the standing rural militia, and was designed to compel peasants to market produce at unfavourable prices. Preobrazhensky did not envisage a return to such measures, and Nove suggests that this was the very point of his self-criticism before the 17th CPSU Congress in 1934 (collectivization, that was the point! Did I anticipate collectivization? I did not.) (Nove, 1972, p. 220). Without new forcible institutions of direct taxation, the effects of indirect taxation would be contradictory. Use of the market power of the state industrial sector to shift the terms of trade against peasant farming would mean higher price-cost margins per unit of industrial production and, up to a certain point, an increase in the total surplus-product realized within the state industrial sector. Excess aggregate demand would be reduced or eliminated. But it would be on a basis of lower rural living standards and consumer demand, lower industrial turnover and employment, and therefore more inequality of urban incomes, access to jobs and access to the means of consumption — in the short run, at least.

Finally, the objectives of indirect taxation of manufactures could always be thwarted while peasants had access to markets not fully controlled by the state. Indirect taxation of manufactures would be nullified if the state could not drive down livestock product prices while it was successfully lowering grain prices. Indirect taxation would be evaded if peasants could turn to petty rural industries supplying manufactures in competition with nationalized producers. Additional administrative measures would be needed to enforce state monopolies in the supply and purchase of these commodities, and meant the end of NEP.

### **Could rapid industrialization have been reconciled with NEP?**

The third revision to the view that NEP was doomed by the end of the 1920s can be put as follows. Actual Soviet industrialization was unprecedentedly rapid. However the Stalinist policies of forced collectivization and over-ambitious planning resulted in grave economic losses along the way. Had these losses been avoided, the same economic transformation could have been achieved with a much smaller burden upon the peasantry and working class. This smaller burden, it is argued, would have been consistent with the NEP framework.

In what sense did Stalinist policies result in avoidable losses? It has been argued that these were of two kinds: the destruction of assets, and the misallocation of resources. On the first score we know that Stalin's agricultural policies brought about the loss of half the country's livestock herd between 1928 and 1932. It is less clear whether the slaughter of livestock which brought this about was occasioned by peasant responses to forced collectivization, or by the reallocation of grain flows from animal consumption to state procurement for human consumption. In either

case the result was the same. Supplies of meat and milk dried up but bigger quantities of inferior foodstuffs were made available for urban consumption. At the same time increased quantities of manufactures, particularly tractors using precious steel and engineering resources, had to be supplied to agriculture to make good the deficit of animal draught power. As a result of these factors, combined with petty commodity transfers on the free kolkhoz market' which proved impossible to suppress and were legalized at an early stage, collectivization did not achieve any significant increase either in the net transfer of resources from agriculture to industry, or in the net financial contribution of agriculture to investment in the economy as a whole (Barsov, 1969; Barsov, 1974; Millar, 1974; Ellman, 1975; Ellman, 1978). Since actual Soviet industrialization did not require these magnitudes to rise much, if at all, above their 1928 levels,

a continuation of the New Economic Policy of the 1920s would have permitted at least as rapid a rate of industrialization with less cost to the urban as well as to the rural population of the Soviet Union (Millar, 1974, p. 766).

On the second score of resources misallocation, Gisser and Jonas have argued that Stalinist policies in agriculture resulted in a shortfall in total factor productivity growth beneath that obtainable under other arrangements. Using a two-sector (agriculture and non-agriculture) model with Cobb-Douglas production functions, Kaplan's indices of historical inputs and outputs, and Bergson's estimates for factor shares, they calculate that between 1928 and 1940 total factor productivity in agriculture declined at 0.1 per cent per year. Had it risen at the rate achieved by United States agriculture in the same period, reflecting enhanced freedom and incentives to innovate imported technology, then Soviet agricultural output growth would have been raised from 1.6 to 2.7 per cent per year; alternatively, if agricultural output growth were held to the historically achieved level, sufficient labour supplies could have been released to Soviet industry to raise industrial output growth from the achieved 8.1 per cent to 10.67 per cent per year. They conclude:

industrialization without the 'super-industrializers' could have occurred at the same rate or even a more impressive rate than actually happened ... The acceptance of the Stalin-Preobrazhensky path led to unnecessary sufferings on the part of the Soviet population and misallocation of resources ... It seems that Bukharin was right after all (Gisser and Jonas, 1974, pp. 346-347).

It has also been argued that avoidable efficiency losses resulted from the Stalinist industrial strategy. Some years ago Holland Hunter suggested that the Soviet economy between 1928 and 1941 was a case study in excessive 'tautness'. 'Taut' planning, involving the setting of highly ambitious, probably unattainable growth targets, may be necessary to achieve high industrial growth rates in a developing economy. By this means resources are mobilized, reserves are uncovered and slack is eliminated. As a result the production frontier is pushed out more rapidly than would result from a process of planning for what is already known to be 'realistic'. However, if taken too far, the approach of taut planning results in

cumulating imbalances and sharply reduced growth achievement; in this case, 'further relaxation of aggregate targets would yield still higher rates of achieved improvement (Hunter, 1961, p. 586).' This diagnosis, at any rate with respect to industrial development in the first Five Year Plan, is shared by Barsov:

the level of accumulation in 1931 and 1932, above all considering the reduced level of agricultural production, was in all probability excessively high and scarcely yielded optimal conditions for solving the problems of the most rapid industrialization of the country. It seems to me that approximately the same effect in increasing industrial production and heavy industrial growth could have been achieved by allocating a somewhat smaller share of the national income to investment, increasing resources for consumption and creating optimal conditions for material incentives and growth in the productivity of social labour (Barsov, 1969, p. 96).

More recent work by Hunter has also supported the view that the first Five Year Plan was excessively taut and strained the economy. Hunter attempted to measure the expansion potential of the 1928 Soviet economy on the basis of the technical norms and environmental expectations of the first Five Year Plan 'optimal' variant using a six-sector linear programming model. He found that:

No allocation of resources among the six sectors and over the several plan years would enable the terminal-year levels of capital and output to be reached, along with the intended levels of household, consumption and other final uses. Even with the plan period extended to six, seven or eight years, the full set of official targets is unachievable (Hunter, 1973, p. 251).

Model imperfections, leading to both understatement (Hunter, 1973, pp. 252-253) and overstatement (Davies and Wheatcroft, 1974, pp. 790-792; Vyas, 1978, pp. 152-153) of plan infeasibility, have been acknowledged. But it is hard to object to the measured conclusion:

if Bolshevik targets are reinterpreted as calling for a very substantial increase in the economy's capacity (especially in, industry and construction), put in place as quickly as conditions permitted, then the estimates ... suggest that these Bolshevik objectives might have been achieved without the Draconian methods that Stalin used. A number of alternative paths were available, evolving out of the situation existing at the end of the 1920s, and leading to levels of capacity and output as good as those achieved by, say, 1936, yet with far less turbulence, waste, destruction, and sacrifice (Hunter, 1973, pp. 252-253).

Thus consideration of Stalinist policies both for agriculture and for industrial planning lends support to the view that heavy avoidable wastage was involved.

But this conclusion falls far short of a much more far-reaching proposition which is sometimes held to follow, which states that the same industrial growth could have been achieved, and the wastage avoided, while retaining the NEP framework. Could

the greater allocative efficiency which is presumed to be a feature of NEP have provided the necessary conditions for historically achieved rates of Soviet industrial development? Some kinds of economic reasoning take this to be the logical conclusion. They are clearly reflected in the views of Gisser and Jonas and of Millar: since actual Soviet performance in the thirties was based upon degraded efficiency and/or degraded resources, another arrangement which would have enhanced efficiency and averted the pure losses ascribed to collectivization would generate enhanced performance. The 'other arrangement' is assumed to be NEP and a decentralized mixed economy. Along with this view goes a picture of the economy of 1928 as a rather flexible system containing a large number of possible trade-offs.

Some criticisms of this view are misjudged (as an example, Vyas rejects it primarily by refusing to contemplate all options in between extreme super-industrialization and economic stagnation: 'it all depends on what one means') (Vyas, 1978, p. 165). A more serious challenge comes from the second line of reasoning including other elements of Vyas's work—which emphasizes sectoral bottlenecks and consumption commitments in the later NEP economy. It is argued that the economy had become quite rigid and overdetermined, and that while an array of moderate industrialization and balanced development possibilities were still consistent with NEP, rapid industrialization required institutional change in order to operate on binding constraints. In particular, even without the distortions and losses involved in the Stalinist style of policy-making, the achieved level of Soviet growth rates required a major shift from consumption to accumulation.

What degrees of freedom faced Soviet planners given the resources and the social relations actually existing in 1928? At the beginning of the first Five Year Plan the Soviet economy was already in 'a very tight situation'; 'Shadow prices in the first year are extremely high (Hunter, 1973, p. 289).' This strained situation was primarily the result of carrying out existing industrial development plans, ambitious but still modest compared with the targets set in 1929 and 1930. Increasing disequilibria were being introduced into the NEP economy by attempts to industrialize rapidly without prior institutional change. To carry through the advanced targets of the first Five Year Plan 'optimal' variant necessitated radical changes in the allocation of resources, which could not have been financed by greater efficiency and the avoidance of waste. In Hunter's experiment he asked whether it was possible to meet the 'optimal' terminal-year capital stock targets in five years, allowing consumption per head to vary but requiring it to be spread evenly over the five year period. Given the optimistic assumptions of the planners the problem was soluble.

The trouble with this solution, of course, is that it would have reduced household consumption from its 1928 level of 21.2 billion rubles to about 15.7 billion rubles in 1929. ... One thinks of the surgical operation that was technically successful although the patient died (Hunter, 1973, pp. 251-252).

On the other hand,

If we set a consumption floor that requires constant per capita household consumption, there is no feasible solution, even over an eight-year plan period. The Soviet economy was tightly constrained at the end of the 1920s, and there was no easy way to build an altered structure. Experiment indicates that roughly a 9 per cent cut in household consumption would have freed enough resources to set the growth model in motion (Hunter, 1973, p. 252).

In summary,

Lower growth rates and slower structural shifts might have brought the Soviet economy out of its strained situation by the middle 1930s, and might have done so fairly smoothly. A milder set of targets would still, of course, have required some difficult changes. The regime would have had to coax more off-farm output from the peasants, raising the level of 1928 procurements by perhaps 4 per cent per year. It would also have been necessary to divert a larger share of the national income away from consumer goods and into capital formation. In the face of difficulties arising from the world depression, poor harvests or construction delays, the plan period might have had to be stretched out (Hunter, 1973, pp. 253-254).

It should be noted that Hunter's most recent ten-sector, variable-technology linear programming (KAPROST) model of interwar Soviet growth is less pessimistic. Given technical norms and environmental expectations derived from the first Five Year Plan 'optimal' variant, the model is able to match achieved Soviet industrial growth while allowing consumption per head to rise sharply in the first two-year period after 1928. In the following two-year period it falls back, then resumes a meteoric rise. The injection of real trends in the world trading environment, Soviet defence spending and agriculture has catastrophic results on consumption levels after 1930 (Hunter, 1980, p. 10). Assessment of this model and its projections is not complete (Harrison, 1980), and it is not yet certain whether it can be used to answer the questions which concern me here.

The need to shift resources out of consumption and out of agriculture is also reflected in Vyas's approach to structural change in the Soviet economy. He concludes that the building of an altered structure could not have been achieved without an initial decline in the industrial wage. Reconstruction requires an increased share of investment going to heavy industry. With growing industrial employment, static or falling labour productivity, and an unchanged allocation system in agriculture, the real wage must decline in terms either of foodstuffs or of consumer manufactures or both:

substantial declines in real wages were inevitable, given the objectives of the Soviet regime... hence it is misleading to suggest that the sharp declines that took place during the course of the actual [first Five Year Plan] were merely the result of breakneck speeds of industrialization and rapid collectivization (Vyas, 1978, p. 147).

Ultimately it seems very difficult to reconcile the existing commitment of resources both to household consumption and to peasant agricultural production in 1928 with the fixed and working capital requirements of subsequent industrial growth. Gisser and Jonas's expectation of possible increases in foreign investment (Gisser and Jonas, 1974, p. 344) is not realistic (Dohan, 1976, pp. 624-625). Therefore in Ellman's view collectivization was not just irrational:

Comparing 1932 with 1928, collectivization did not increase the net agricultural surplus... It did, however, increase procurements of grain, potatoes and vegetables, thus facilitating an increase in urban employment and exports, swing the terms of trade between agriculture and the state in favour of the state, and facilitate the rapid increase in the urban labour force.

In this period collectivization appears as a process which enabled the state to increase its inflow of grain, potatoes and its stock of urban labour, at the expense of livestock and the rural and urban human population (Ellman, 1975, p. 859).

Cooper, Davies and Wheatcroft also emphasize the importance of the physical form of the gross transfer of inferior wage-goods out of agriculture (as opposed to the net flow of investment finance) as a condition of industrial growth, secured by collectivization. They point out that, had the 1928 livestock herd been maintained through the 1930s, it would have demanded an additional diversion of grains from human to animal consumption reaching a maximum of 19 per cent of the actual harvest in 1933/34 (Cooper, Davies and Wheatcroft, 1977, pp. 10-11). In the same spirit Vyas calculates that, had the actual trend of declining agricultural marketings between 1926/27 and 1928/29 been projected to the end of the first Five Year Plan, on the basis of the 'minimal' and 'optimal' employment targets, the industrial wage in terms of food would have declined by 22 or 25 per cent. In the event industrial employment grew far in excess of the 'optimal' variant, while there were drastic unforeseen declines in meat and milk marketings. Nonetheless, because collectivization ensured supplies of basic foodstuffs to industrial workers though not to peasants, the actual decline in the industrial wage in terms of food up to 1932 was held to 26 per cent (Vyas, 1978, p. 144). This is because by means of collectivization, in Ellman's words, agriculture 'was transformed into a residual sector which absorbed shocks (e.g. bad harvests) (Ellman, 1975, p. 859).'

### **Why was NEP abandoned?**

In summary therefore it is difficult to agree with Millar that the NEP economy was consistent with industrialization on the scale of the 1930s, and that therefore the decision to abandon NEP was irrational. The crisis and abandonment of NEP followed directly from decisions to give priority to rapid industrialization. The evidence supports the view that:

the New Economic Policy led to an expanding economy, but ... the rate of industrial expansion feasible within NEP was far lower than that actually achieved during the first two five-year plans (Cooper, Davies and Wheatcroft, 1977, p. 1).

The NEP economy could have yielded further economic expansion and restructuring of production relations, with rather less industrial growth, more agricultural revolution and more attention to living standards. The latter tasks could not be reconciled, however, with the task of rapid, large-scale industrialization.

The abandonment of NEP reflected the needs of a state committed to rapid, large-scale industrialization to reduce the commitment of resources to agriculture and to enforce reduced living standards on both town and country. This was a political choice, but it had an economic logic. The fact that it was a choice, and the fact that such choices belong to politics not destiny, make it difficult in turn to agree with Vyas whose view, the exact opposite of Millar's, is that 'the decision of mass collectivization was made in response to the logic of objective circumstances (Vyas, 1978, p. 171).' Of course there were alternatives to the Stalinist route. However the crisis of NEP was a real, systemic crisis caused by the system being called upon to fulfil tasks probably not within its production and consumption possibilities.

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