This study is an attempt to analyse certain aspects of the development of the Soviet oil industry and to provide the necessary perspectives to understand the future trends in oil exports. To appreciate the real dimensions of the export potential of the Soviet Union, it is imperative to consider the economics of the Soviet oil industry; the country's petroleum resources position in relation to other energy sources; and the nature of the domestic market as well as the demands of the other Socialist countries that depend upon the Soviet Union. Factors such as transport and technology have been excluded, not because they are any the less important for a study of the subject under consideration, but because they are well-researched areas and also for reasons of space and time. This, though an important limitation, is not likely to affect, to any significant degree, the validity of the conclusions that we have drawn on the basis of our analysis.

There is no doubt that the Soviet Union is richly endowed with energy resources. The oil reserves alone are estimated to be 14,000 million tonnes. In addition the proven gas reserves of A+B+C are estimated to be 24,400 billion cubic metres. However, the sheer magnitude of the
ultimate reserves should not lead one to any facile conclusion; for in the long run, production is limited not only by the ultimate oil reserves but also by the rate of oil recovery. The increase in the rate of production beyond the maximum compatible with efficient recovery (MER) would lead to a tremendous loss of ultimate recovery. By its stress on short-term results, the Soviet Union seems to have decided to trade off its long-term interests.

In spite of being endowed with immense resources, the country suffers from another major handicap viz. that the distribution of energy resources is skewed. The deficit regions are obliged to import from the surplus areas. The need to transport energy resources from the deficit regions to the surplus ones raises the cost to the ultimate consumer. In view of this, the Soviets are inclined to make do with a comparatively high-cost local energy source in the deficit regions so that expenditure on inter-regional fuel shipments may be minimized.

Thus, one of the most pressing and challenging tasks before the Soviets is to decide upon a rational "energy mix" for each major economic region lest the country should suffer loss because of suboptimal matrices of distribution and spatial substitution. The Soviet Union seems to be fast approaching the point of equilibrium at the national level. If the current trend continues, it may well reach a position of near-spatial equilibrium during the 1980s. Cost differences
at the margin among substitutable fuels is least at equi-
librium. This would mean optimal spatial allocation of
energy sources for the country. However, it should be
mentioned that the optimum is a dynamic one. On account of
constant substitution of more expensive fuels for cheaper
ones the national "fuel mix" undergoes change in line with
the changes in the production functions based on scale of
economies and technological trends.

In 1973 the Soviet Union successfully completed one
century as an exporter of oil; and in 1974 it became the
biggest producer of oil in the world - a position which it
had lost to the USA in 1902. For a long time, oil has been
an important source of foreign exchange for it. As early as
1923 oil accounted for 13.5 per cent of the value of its
total exports. In 1974, when the Soviet Union became the
biggest oil-producer of the world, oil accounted for 21 per
cent of the total foreign exchange earned by it during that
year. The Soviets would not, therefore, like to sell for
merely political reasons a commodity which brings in so much
valuable foreign exchange.

Although political considerations do play a role in Soviet oil trade, it is possible to explain the oil-
export policy of the Soviet Union essentially in economic
terms. If the oil exports are motivated by economic consi-
derations, in the long run their profitability is conditioned
by their comparative advantage. When we calculated the cost
of production of a representative Soviet oil, we found that at the current world price of oil the Soviets did enjoy comparative advantage in the cost of production.

However, if we consider the opportunity cost of producing oil, we shall find that the absolute cheapness of oil cannot in itself warrant its export. If the volume of oil that is exported were to be replaced by an equivalent quantity of energy in the form of, say, coal, the cost of export of one tonne of oil would be equivalent to the cost of producing one tonne of coal. It is only if oil is replaced by gas at home that export of oil becomes attractive. We, therefore, suggest that the Soviets cannot really afford to export oil in substantial quantities if the opportunity cost of oil is computed on the basis of replacement cost by coal. Conversely, the Soviets can afford to export oil in substantial quantities if the cost of oil is calculated on the basis of replacement cost by natural gas. Thus the attractiveness and magnitude of the oil exports of the Soviet Union depend on the rate at which gas output is expanded.

In order to enter into the world petroleum market and to build a secure share in it, the Soviets have adopted a strategy of their own. They readily barter oil for commodities of the importing countries; and they offer "discounts" to "sweeten" the deals.

After a close examination of a number of cases we find that the Soviet Union generally does not indulge in
distress sale of oil. The export market for Soviet oil is politically limited, and, within the constraints that this imposes, the Soviet Union would naturally try to maximize its export revenue.

The geographical distribution of oil exports has undergone significant change. In 1950 almost all Soviet exports were destined for countries of the Soviet bloc. But in 1965, when the total amount of the oil exported by the Soviet Union was 64.4 million tonnes, only half the quantity went to the Soviet bloc. The rest went to countries outside the Soviet bloc and met about 5 per cent of their total requirements. However, in recent years, Soviet oil exports to the Socialist bloc have once again picked up. They are far higher than the Soviet exports to the other countries. Exports to non-Communist countries at times decreased as in 1972 and 1974. Even when they increased, they increased at a very slow pace. However, Soviet exports to the countries of the Soviet bloc increased without exception, and they did so at a steady rate, too. Even in a year like 1974, when the total exports declined by 2 million tonnes, exports to the Socialist countries increased by 4 million tonnes, and exports to the non-Socialist countries decreased by 6 million tonnes.

Sale of oil to Eastern Europe is one prong of Soviet exports; and sale to the Western markets, another. Though, by selling to Eastern Europe, the Soviet Union loses...
valuable convertible currency, it gains many economic and political advantages. It can, for instance, use oil as a means by which to further its interests in Comecon. As the Soviet Union attaches greater weight to this gain, it may well be content to forgo the convertible currency that would have accrued to it if it had sold the same oil to the Western markets instead. There may be another reason why the Soviet Union does not step up its exports to the Western markets. It is that any oil that goes into the Western markets may be viewed with suspicion by OPEC, which has a vital interest in controlling the various supply sources of oil. For one thing the Soviet Union is not a member of OPEC. And then it is a Communist country. For these reasons many members of OPEC are not friendly in their disposition towards it. As the biggest oil-producer and also as an exporter by and large of raw materials, the Soviet Union is extremely happy about the emergence and functioning of an effective producer-cartel like OPEC whose avowed objectives include exercise of constant vigilance to ensure that there is no decline in the price of oil. As the Soviet Union has also benefited from the price-hike brought about by OPEC, it is very cautious lest its export activities should in any way weaken OPEC or attract any retaliatory action on the part of OPEC.

Some Western scholars like John Hardt, Jean-Jacques Berreby, and Samuel Pisan have predicted that the Soviet
Union would be a net importer of oil by 1980. This in our view is most unlikely. Production increased by 9 per cent in 1974, and by 7 per cent in 1975. If we assume a modest 6 per cent growth rate in production, the total Soviet production of oil should be about 631 million tonnes in 1980. Consumption at home was 317.4 million tonnes in 1973, and an annual oil-consumption growth rate of 3 per cent would mean 544 million tonnes in 1980. If consumption increases by 10 per cent a year, it would be 619 million tonnes in 1980. However, in either case, production would outstrip domestic consumption, and the Soviet Union would remain a net exporter of oil. But if production increases at 5 per cent a year, and consumption increases at 10 per cent, the Soviet Union may become a net importer of oil in 1980. But the chances are very remote. As for gas, experts are generally agreed that the Soviet Union would continue to be a net exporter in 1980. It may produce about 550 billion cubic metres, import only 12.5 billion cubic metres, and export at least 40 billion cubic metres.

The Soviet Union may try to maintain the level of its oil exports to the Western countries or enhance it marginally, but there is no possibility of a major surge. Exports to the Third World (about 3 million tonnes) may not receive any priority in the Soviet export strategy. The present volume of exports may well continue into the eighties.
In 1980 the total import needs of Eastern Europe are likely to be about 110 million tonnes. If the Soviet exports to the non-Socialist developing countries, Western Europe, and Japan remain constant at their 1973 levels and if the volume of Soviet exports continues to be only 100 million tonnes of oil in 1980, there will be 46 million tonnes of oil left for all the Communist countries put together excluding Yugoslavia. If a total of 10 million tonnes is exported to Cuba, Korea, Mongolia, and Vietnam, only 36 million tonnes can be delivered to Eastern Europe. The countries of Eastern Europe, therefore, will be obliged to import about 74 million tonnes from outside the Soviet Union, say from the Arab countries and Iran.

Owing to an acute shortage of foreign exchange Eastern Europe would find it virtually impossible to import oil on a large scale from outside the Soviet Union. The Soviet Union also would not like Eastern Europe to require from it smaller quantities of oil, for that would reduce its economic leverage in the countries of that strategically and economically important region.

As the Soviet Union is anxious to maintain its crucial role in Eastern Europe, it would try to supply to it as much oil as it can. However, it is just not possible for it to cope with the staggering consumption growth rate. It would, therefore, not mind the countries of Eastern
Europe obtaining their oil from the Arab states and Iran to a certain extent. It is, however, anxious that they should not stop their oil imports from the Soviet Union altogether. Thus the Soviet Union would keep up its oil leverage in Eastern Europe without putting its own oil programme in jeopardy. It may very much prefer to meet half the oil requirements of Eastern Europe, but this is a stupendous task. It can accomplish it only if it steps up its oil production to 7 per cent and maintain it at that level till 1980.

Before we close, we may mention that to make definite forecasts as regards the oil situation is too hazardous an undertaking. As Richard Bailey wisely observes: "It could be argued that the only thing to be learnt from energy forecasts is that, while all are likely to be wrong, some will be farther off the mark than others."¹