

Remarks by Bruce K. MacLaury, President, Federal Reserve Bank of Minneapolis, at the 13th Annual Convention of National Association of Truck Stop Operators, on July 24, 1974, at the Radisson Hotel, Minneapolis, Minnesota.

The Economic Consequences of the Energy Crisis

Half a century ago, Lord Keynes wrote a small book called The Economic Consequences of the Peace, outlining why the provisions of the Versailles treaty, following the First World War, were unworkable. For at least a decade thereafter, economists debated whether the debts piled up following that conflict could in fact be repaid, as called for by the Treaty.

As so often happens, history didn't follow a neat course that would allow this intellectual argument to be unequivocally resolved. But you'll recall that after several moratoriums, the issue of war debts became lost in the shuffle as the former combatants took up new positions that eventually led toward the Second World War.

I cite this bit of history for a couple of reasons. First, Prime Minister Wilson of Britain the other day characterized the "oil blow" to most of the world's nations as "more severe than has been caused by any event in their histories short of direct involvement in war." And second, this particular blow, like the Versailles treaty, looks like it's going to lead to the piling up of massive debts by oil importing countries to the relatively few oil exporters, debts that could cast a pall over economic relationships for years to come.

Not that one should extrapolate the present situation into another world war. But I think it's fair to say that the world is facing a variety of economic problems as a result of the quadrupling of the price of oil, problems that are going to tax to the very limit the adaptability and cohesiveness of our economic and financial system.

Although in some sense we are only beginning to cope with the problems created by the energy crisis, I think we can take some encouragement from the fact that we have, after all, weathered some pretty severe shocks already, and we're still in business. I recall the consternation with which we learned of the Mid-East oil embargo -- only when one is threatened with the loss of a major industrial input does he realize how vulnerable our sophisticated economy really is. The first question, naturally, was whether there would be enough energy to keep the wheels of industry turning and people employed. And if this was a major concern in the U.S., it's easy to imagine how much greater the shock must have been in Europe and Japan which rely much more heavily on Mid-East supplies.

Yet as the winter months went by, we found to our relief that through a series of ad hoc and on the whole pretty reasonable decisions from the Federal Energy Office, some good luck in the weather, and cooperation from the public, the immediate crisis -- in the sense of inadequate fuel -- could be surmounted. Not without substantial strains, of course. For if the wheels of industry by and large kept turning, the industry of wheels almost didn't! There's no denying, for example, that the auto industry was very hard hit, that truckers in particular found their profits squeezed, and that Winnebago nearly

was done in. In fact, I find it quite remarkable that the sharp dislocations in different industries resulting from the energy crisis haven't had more of a domino effect on the economy as a whole. Yet it's hard to fault the priorities adopted by the Administration in the face of the oil embargo -- to reserve as much fuel as possible for industry and the jobs associated with it, by conserving on fuel used in transportation and in residences. Likewise, I concur with the tough decision to let the shortage be reflected in sharply rising fuel prices, despite the embarrassment of skyrocketing oil company profits. The alternative, it seems to me, would have been rationing and other disruptive economic controls.

With the lifting of the embargo this past spring, attention shifted from the issue of fuel adequacy in a physical sense to the questions raised by the higher price. Here, the ramifications seem almost endless, and the likelihood of relief in the near future much less certain.

Starting at home with the most obvious consequence, energy in every form costs more -- and in some forms, a lot more. In fact, the energy component of the consumer price index, as best we can measure it, accounted for about 2.4 percentage points of the year-over-year increase of 10.7 percent in the CPI. (Food and agricultural products accounted for another 3.9 percent.) Thus, while double digit inflation by any name would spell trouble, I think it's worth pointing out that so far as the energy component is concerned, the traditional remedy of slowing the economy is likely to have little impact in reducing what for the time being at least is a world monopoly price.

(It's also true, of course, that simply the absence of further increases will help to slow inflation in months ahead -- sort of like the relief one feels when he stops banging his head against the wall!)

I've already alluded to the varying impacts of sharply higher fuel prices on different industries in this country. Similar differences show up for different income levels within the U.S., with lower income groups feeling the pinch of higher fuel costs proportionately more. And the analogy can be carried over to international comparisons, where countries vary greatly in their access to alternative energy sources, and where the poorest nations are proportionately much more seriously affected by the increased cost of, say, fertilizer, than are we.

In addition to the obvious effects of dramatically higher petroleum prices on the cost of fuel, the cost of products derived from petroleum (such as fertilizer), and the price level in general, I think we can understand the broader economic consequences of the energy crisis only if we focus directly on what's happened to incomes as a result of these higher prices.

Perhaps the easiest way to illustrate the potentially depressing effects of increased petroleum prices on the pace of economic activity around the world is to think of the price increase as like a very large increase in excise taxes on fuel and related products. It doesn't take much Keynesian economics to see that such a tax siphons off spending power from the world's income stream, and unless that income is somehow replaced in fairly short

order, the stream diminishes, with a consequent depressing effect on world demand. The problem is greatly complicated by the fact that in this case, the "tax" is being levied by a relatively small group of countries -- the oil exporters -- on the rest of the world in a very helter-skelter fashion: in effect, the tax payments are determined by a country's relative dependence on imported oil, and no allowance is made for ability to pay.

If the oil exporters were able to spend their new "tax receipts" on imports from the rest of us, and do so in a way that exactly matched, country by country, our tax payments to them, then the siphoned-off income would be reinjected, and exactly where it was needed to maintain world production. Note, however, that even if this fantasy of income redistribution were possible, there would still be a very sharp wrench in relative, and probably absolute living standards. You and I would still be employed all right, but we'd be producing a sizable amount of goods and services for Arabs instead of for ourselves.

The fact is, of course, that the estimated jump in oil revenues -- from \$27 billion last year to \$95 billion this year (a \$70 billion increase) -- cannot possibly be spent immediately, especially since some of the biggest gainers, such as Saudi Arabia, have small populations and limited spending possibilities. So a sizable share of the "taxes" will end up not spent in the usual sense, but instead invested in financial assets owned by a relatively few countries.

In this situation, is the world's income stream diminished? Or more crassly, are we headed for a world recession? Not necessarily. Theoretically, we could keep the world's economies ticking along if we were all prepared to borrow from the oil producers (and they were prepared to lend!) what they weren't ready to spend themselves. We could sustain production, in other words, by going into debt. In this case, the oil "tax money" would theoretically be channelled back to where it came from, not by earning and spending, but by borrowing and lending through financial institutions. Indeed, it is just this sort of "recycling" of oil monies that has been receiving a good deal of attention in international financial circles recently, not because it's a particularly happy solution, but because there aren't many alternatives in the short run.

The unfortunate fact is that this solution raises a whole host of questions that to my mind, make so-called recycling a hazardous game. The problems derive, essentially, from the fact that vast sums of money are being diverted from their normal channels where risks are known, and pushed through new circuits that may -- or may not -- be able to carry the load. For example, banks that are perfectly sound institutions in the normal course of business may quickly become overextended if suddenly faced with huge new deposits.

Now it may sound odd that banks could run into problems trying to swallow deposits, since they're usually out clamoring for more. But like greedy boys, banks can suffer indigestion. After all, deposits don't come free, they have to be paid for. So banks have to find ways of lending and investing the new deposits safely,

yet at a rate of return sufficient to cover their costs. This is not so difficult when growth takes place in an orderly fashion, but we're not talking about normal growth. Let me tick off some of the kinds of "indigestion" that can result from abnormal growth: 1) a given amount of equity capital that has been adequate in the past to assure confidence for a billion dollar institution may not inspire the same confidence (or more basically, the same protection to depositors against losses from larger, and perhaps riskier loans) if the institution almost overnight grows by, say, twenty percent; 2) taking on large amounts of short-term deposits and lending these funds to long-term borrowers can expose the bank to substantial risks from interest rate fluctuations, or just plain sudden deposit withdrawals; 3) quite apart from the risks of illiquidity (i.e., taking short-term funds and lending long), there's a question of whether banks can find borrowers for these vast sums that are, in fact, capable of making repayment -- this problem may be acute in the case of some less developed countries, but also represents a real credit risk in the case of some industrialized countries as well; and finally 4) large amounts of the oil monies are likely to be channelled through the so-called Euro-dollar market where bank supervision is less well organized, and where there is no lender of last resort to shore up institutions that do get into difficulties, corresponding to the role played by the Federal Reserve System in this country.

Again, I should emphasize that banks face these same sorts of risks every day, and by and large cope with them successfully and

without danger to the public. What makes the situation different in this case is the suddenness with which institutions are being asked to cope with a major rechanneling of financial flows. In fact, of course, there's a close parallel between the potentially disruptive effects of the diverted income streams (e.g., through "excise taxes") on patterns of world spending, and the similarly disruptive effects, potentially at least, on financial institutions from their greatly expanded role as intermediaries for this transferred wealth.

A different facet of the problem we've already been talking about -- the uprooting of previous patterns of income and financial flows between countries -- deserves some specific comment, namely the severe distortions in countries' balances of payments. Obviously, oil exporting countries as a group will see the value of their oil exports jump by some \$70 billion this year if the earlier cited figure was right. While their imports will also certainly rise to some extent, we must expect their trade surpluses to grow by perhaps \$40 to \$50 billion, which implies increased trade deficits of the same size for the rest of the world.

While rechannelled oil monies in the form of capital flows to deficit countries could theoretically compensate for the trade balance shifts, it's most unlikely that the timing of such flows would coincide with trade deficits, with the result that some countries would see their reserves and/or their exchange rates dropping rapidly in the short run. And since the process of adjustment to the new petroleum prices is going to be a protracted affair at best, there's no telling how long this "short-run" may last.

In the meantime, as deficit countries try to respond to their new, and in some cases precarious, situations, there will be a strong temptation to try to right one's own position at the expense of one's neighbors -- a game that the deficit countries as a group can't win. In the process, exchange rates could be subject to wide day-to-day fluctuations, as indeed they have been in recent months, and thus present an open invitation to currency speculation and, I'm afraid, exchange losses such as we've seen.

I guess the point of this catalog of economic problems stemming from the energy crisis is to show, if it needed showing, that the effects of higher fuel prices aren't limited to those felt directly by truck operators. The ramifications raise real questions about our ability to control inflation, not just in this country but worldwide, while at the same time minimizing the deflationary effects of what amounts to a substantial tax increase levied on us by the oil exporters. There's no avoiding the conclusion that the energy crisis, in this sense, has significantly increased the risks of economic and financial instability, at a time when 1) national governments are by and large politically weak, and 2) we are less certain about our economic policy prescriptions than at any time since Keynes taught us how to manage the economy.

I think Harold Wilson was right -- the world has suffered a severe blow that will test to the utmost its ability to absorb shock and recover. I also think that former Secretary Shultz was exactly right in saying that the response of the rest of the world cannot be a helter-skelter effort to strike individually profitable deals with

the oil exporters, tempting as that may look, or concentrate all our joint efforts on recycling oil monies, necessary as that may be in the short run. Instead, our focus must be on coordinated efforts to bring the price of oil back down by 1) placing far more emphasis than to date on sustained efforts at energy conservation, and 2) investing in the joint development of alternative energy sources, to reduce our dependence on unreliable supplies.

As general injunctions, these prescriptions sound obvious, and almost easy. In practice, of course, they are not. Reconciling sharply conflicting interests among oil importing countries is no easy task. Achieving sustained conservation without greatly increased government intervention in economic processes is an elusive goal. Developing huge investments in alternative energy sources without reducing present levels of consumption, and without doing unnecessary harm to the environment, will tax our ingenuity to the utmost. Yet the alternatives are no more attractive.

In the meantime, since there is no obvious way of avoiding a very sizable shift of wealth from oil importers to oil exporters over the next few years, we should be concentrating our efforts on getting those monies invested in ways that will minimize the risks of financial instability. This means, in effect, getting the oil countries to invest their newly acquired funds in direct investments, in equities, or at the least in longer-term bonds, rather than in 90-day or shorter deposits in Euro-banks. Again, this is more easily said than done, but there are some signs that this kind of shift is beginning to take place.

The economic consequences of the energy crisis over the next year or so, then, derive primarily from the \$50 billion wrench to income streams -- of individuals, industries, and countries -- brought about by the four-fold increase in the price of oil, and the massive rechanneling of financial flows accompanying this shift. The risks include a worldwide economic slowdown, self-defeating attempts to shore up one economy at the expense of others, severe economic distress for the poorest countries, and potential instability among financial institutions. An unhappy catalog by any definition. Yet lest we be inclined to toss in the sponge and resign ourselves to economic disorder, let me emphasize that these are only risks, not certainties; that we have already survived some of the energy shocks; that there is evidence that some Mid-East countries are becoming aware that their own interests would not be served, even in a narrow sense, by an economic or financial collapse among developed countries; and that the developed countries themselves are aware of the risks and are formulating policies to defuse them.

No discussion of the energy crisis can end without a word about the longer-run implications of what we've been through, and what we face. At the risk of repeating the obvious, let me join the chorus of those who point out that the Arab oil embargo -- and the accompanying jump in price -- only dramatized the fact that we were already on a collision course in the supply and use of energy. As the preliminary report of the Ford Foundation energy policy project points out, energy consumption in the U.S. grew at an average annual rate of about 3-1/2 percent from 1950 to 1965, and then increased to

4-1/2 percent annually. Domestic production grew at about 3 percent between 1950 and 1970, and has been at a virtual standstill since then.

One obvious consequence of these diverging trends and the growing U.S. energy gap was that while last year only about 15 percent of our total petroleum consumption came from the Mid-East, we were dependent on that region for nearly 100 percent of the growth in our consumption. There's no time to go into all the ramifications of this situation, but I commend to you the Ford project report called "Exploring Energy Choices" as a good summary of the issues and alternatives.

I'd like to conclude with just a few observations about the longer run consequences of "higher-cost energy" (for I think that's the more accurate way to describe the "crisis" over the longer pull). First, I don't see that there's any way of avoiding the conclusion that the U.S. will have to devote relatively more of its output to investment in energy production than it has in the past. This implies either that other investments will have to be curtailed, which I don't think is desirable, or that consumption will have to grow less rapidly, which could be seen as part of a conscious program for energy conservation.

Second, in the past, our rising standard of living has depended upon increasing output per worker. In turn, rising labor productivity has to a considerable extent been made possible by supplying workers with more energy inputs to get the job done. If we have now reached a point where the trade-off between energy and

manpower is less favorable, then it seems likely that our standard of living -- at least as traditionally measured -- is going to rise less rapidly in the future.

Third, I find it difficult to avoid the conclusion that as fuel becomes relatively more expensive, there will be a shift back toward more energy-efficient modes of transportation. As you know, transportation accounts for about 25 percent of our total energy consumption, with autos representing 13 percent and trucks about 5 percent. In terms of BTUs per ton mile, rail transport is four times more efficient than trucks, and 63 times more efficient than air freight. Obviously, fuel is only one component of costs in moving goods, and any change in historical patterns will come slowly. But I think that the recent success, after a long hard fight, in getting some funds sprung loose from the highway trust fund for use in public transit is a sign of things to come.

Lest this all sound like a gloomy outlook, I'd like to end on an upbeat quote from a recent speech by Walter Wriston, in which he cogently takes the prophets of doom to task. This is his cautionary tale:

"Few Americans even remember that from the time of the American Revolution until the Civil War, a major source of artificial lighting was the whale oil lamp. No one should have needed a Congressional commission to predict that the supply of whale oil could not forever keep pace with the demand of a growing nation.

"The tragedy of our Civil War disrupted whale oil production and its price shot up to \$2.55 a gallon, almost double what it had been in 1859. Naturally there were cries of profiteering and demands for Congress to 'do something about it.' The government, however, made no move to ration whale oil or to

freeze its price, or to put a new tax on the 'excess profits' of the whalers who were benefiting from the increase in prices. Instead, prices were permitted to rise. The result, then as now, was predictable. Consumers began to use less whale oil and the whalers invested more money in new ways to increase their productivity. Meanwhile men with vision and capital began to develop kerosene and other petroleum products. The first practical generator for outdoor electric lights was built in 1875. By 1896 the price of whale oil had dropped to 40 cents a gallon. Whale oil lamps were no longer in vogue; they sit now in museums to remind us of the impermanence of crisis. This cycle, repeated in thousands of other instances, is one which the rulers of the Persian-Arabian Gulf area might well bear in mind."

Life has never been easy for the entrepreneur, especially the small businessman. His survival has always depended on his ability to sense trends and adapt to them, since his power to influence the broader sweep of economic events is, by definition, quite limited. The fact that you have survived, and in many cases, I'm sure, prospered is witness to your own agility and enterprise in the face of changing circumstances. I have no doubt that these same attributes will stand you in good stead as we work our way through the admittedly tough problems of the next few years.