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EXCESS CAPACITY: THE EVIDENCE

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All developed market economies have followed policies that have created excess capacity. It has not been the present tense if it were not for the following policies that is resulting in excess capacity. In agriculture, perhaps to a capacity level. In a world with free trade in agricultural products, Australia is not without intervention. In wheat and dairy products, for example, prices are below what they would be in a free market.

But the rest of the developed world, Europe, North America and Japan--have excess agricultural capacity. This excess capacity is maintained by interventions or by efforts to restrict production. It is not for by the economic incentives provided.

What do I mean by excess capacity? I mean by reference to excess resources greater than could earn a reasonable return if similar resources earn in the rest of the world.

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paid by farmers were those that would prevail in the world. Resources used in agriculture are assumed to be used in agriculture, though not necessarily in agriculture. Some resources may find their best and most profitable use by other means and some other activity.

The excess resources, of course, have the potential for an excess supply. This capacity may or may not be realized in the U.S. dairy industry until quite recently. Excess resources were induced to produce an excess supply of dairy products. The U.S. has engaged in supply management through various means, one input--land--that could be devoted to producing dairy products. EC has utilized output quotas for dairy and sugar.

It is worth stopping for a moment to make a distinction between excess resources and excess supply. Excess resources are created by a government program that results in an output restriction at prevailing prices or, if one wishes to use the term, by rationing excess resources, at the prices that would prevail in the world. But what has to be emphasized is that an output restriction, output quotas or input limitations does not result in an excess capacity. The capacity to produce is not restricted by governmental programs. Once the restraints, whether an output limitation, is removed and if the same price is maintained, the excess resources are transformed into an excess supply.

Two applications may be noted. One is the application of output quotas as used in the U.S. supply management programs, which result in an excess supply of the excess resources. This occurs because the demand for other resources that are close substitutes for the

These include short run responses to herbicide imports, which presumably is no longer rationed, but probably includes some long-lived investments that add to productive capacity in the face of reductions in resource demand due to labor that have a low elasticity of substitution when the land input is reduced. Investments in machinery, but perhaps not. When the value of timeliness of field operations is high, farmers to maintain approximately the same reduced area.

The other implication referred to is such as the dairy herd buyout. In the case of a buyout, in reducing both excess resources and decreasing returns to scale of farm production, we assume that the reduction both in land and labor is temporary. Dairy cows can be replaced in numbers is less than 10 percent. Together the other resources that were drawn from dairy production as a result of the commitment to stay out of dairy production is participated in the dairy herd buyout. The reduction in either excess resources or supply of land is not sufficient adjustment is made in the other resources that were withdrawn from being rep...

Limiting Excess Supply with Excess Resources

When does it make economic sense to limit resources exist? In my opinion, it may do so on situation is a temporarily depressed one. In other words, prices are now low and there is near certainty that prices will rise to a higher and more normal level, a temporary effort to reduce excess supply may be both politically and economically acceptable. In such a situation, a temporary effort to reduce excess supply may be an acceptable alternative. Excess supply may be an acceptable alternative if it has resulted in the creation of enormous levels of excess supply of products, including some that are only storable for a limited period of time, such as butter. These products are perishable, of course. Excess supply may be transformed into the market and further depress current prices. If it is known that current prices are about to recover to a level where stocks have grown to unacceptable levels, then a temporary effort to provide for time to achieve resource adjustment may be justified.

Efforts to reduce excess supply while doing so may be difficult. Efforts to reduce excess supply while doing so may have no historical precedent to guide us. The success in improving the long run viability of agriculture is a major piece of U.S. farm legislation that has been the basis for all subsequent legislation over more than a century. The Agricultural Adjustment Act of 1933 and it was created in emergency conditions created jointly by the Great Depression and large stock of farm commodities. Similarly, a temporary effort to deal with an emergency situation caused by a slowdown in demand growth in international markets may be justified.

share culminating in large stocks owned
that emergency turned out to be short
temporarily but then continued at low
stocks were as large as at the beginning

Clear evidence that the price
Western Europe and Japan that have had
excess supplies but have not eliminated
governmental costs in all three areas
supply and demand for rice, after a
subsidized consumer prices and large
has almost eliminated the excess supply
producer prices for production under
ably claim that the excess resources

Even if the United States were
and cotton in 1988 or 1989, it would
total costs of \$20-\$25 billion and annual
billion.

The annual taxpayer and consumer
economies are a rough approximation
sources in agriculture. For the early
(1987, p. 49) estimate that in terms
taxpayer costs were about \$60 billion
\$20 billion in the United States. Less
1980-82 than today. Even so, these
operator incomes in the early 1980s.
income for 1980-82 averaged \$40 billion
average was \$22 billion, for Japan,

upward by about 10 percent to convert into 1985 retaining excess resources in agriculture was equal to farm operator income in the three comparisons.

One reason for the high cost of transferring the circumstances that prevail in Western Europe to the United States is that farmer supplied inputs have now become a large part of the inputs used in agriculture production. A large part of the cost of excess resources in agriculture--goes to the nonfarm economy into agriculture. While directly available, the share of intermediate consumption of nonfarm origin--as defined by OECD were the percentages of the value of farm production in the

The EC-10	50
Japan	42
U.S.	47

Consequently only a part of the costs imposed on farm payers by the farm price and income policies of the EC-10 go to the farmer-supplied inputs of labor, management and capital. In comparison of the transfer costs and net farm operator income in each of the areas there are major components of the transfers that have little or no protection under existing policies. In the United States for all livestock production, except for a considerable number of crops other than grain and oilseed, stock farmers also receive little benefit from the transfers. In Japan for certain fruit and vegetable producers in Ja

The share of intermediate consumption reflect the full significance of nonfarm production and claimants upon the income produced. The United States the net returns to farm land, which was approximately a quarter of farm output. Similar calculations for four EC member states (Germany, France and France) indicate that the returns to farm land as a percentage of farm output range from 10% to 20% in France. Consequently, if all inputs are farm supplied items as well as current inputs--such as land, labor and capital--the percent of total inputs used in agriculture will increase over the next decade, the elasticity of supply of total inputs used in agriculture will be high.

As John Floyd showed over two decades ago, the elasticity of supply of purchased inputs approaches infinity as the share of purchased inputs approaches infinity. If the share of purchased inputs approaches a large share of total inputs, the long run elasticity of supply of total inputs will exceed unity even if the elasticity of supply of farm and nonfarm supplied inputs is quite low. The elasticity of supply of farm supplied inputs (land, labor and capital) is low. Assuming an elasticity of substitution of 0.2, the long run elasticity of supply of total inputs and an elasticity of supply of farm supplied inputs of 0.2, the long run elasticity of supply of total inputs will be several times the 0.3 assumed by Andy ^{later} earlier.¹ Even if you reduce the elasticity of supply of farm supplied inputs to 0.1, the long run elasticity of supply of total inputs will be several times the 0.3 assumed by Andy earlier.¹

¹The formula for this result, as shown by John Floyd, is $e = \frac{1}{1 - \beta_c} \left(\frac{\beta_c \sigma_c + \beta_d}{\beta_c \sigma_c + \beta_d} \right)$ as the share of purchased inputs approaches infinity. σ_c is the elasticity of supply of farm supplied inputs.

$$(\beta_c \sigma_c + \beta_d) / (1 - \beta_c)$$

assume that the elasticity of supply of farm supply
long run elasticity of output supply is in excess

How Many Excess Resources?

Few efforts have been made to measure the
sources in agriculture. There were some attempts
the late 1960s and early 1970s. The measures were
amount of land diverted, with differences in the
the evaluation of the probable product of the div
excess productive capacity included one made by T
Tweeten and another by Mayer, Heady and Madsen.

At the time I argued that these estimates
because much of the diverted land was unlikely to
even if the supply management programs were ended
words, much of the land that was diverted from 1
farming the farm programs and not for growing co
1972, for example, the amount of land diverted u
and cotton programs was 59 million acres. Betwe
were no acreage limitations, the acreage planted
cotton and soybeans was 26 million acres more th
average was just 44 percent of what the farm pro
payments on two years earlier. True, two years
planted area over 1972 was equal to two thirds o
But there is considerable evidence that a signif
in planted area by 1976, and even further increa

purchased and farm supplied inputs, β_d is the el
supplied inputs and K_c is the share of purchased

velopment of new cropland rather

I know of only one estimate
U.S. for the 1980s and that is re

My view that there were few
the early 1970s has been contested
ditures on farm programs, measure
1970-72 as during the early 1960s
government expenditures for 1970-
billion in 1962-65. However, during
being reduced and the dollar was
overvaluation of the dollar did not
existed for a number of years. This
farm income and would have resulted
agriculture than would have been
farm programs, with the deficiency
clearing levels, held more resources
sustained at market clearing prices
Thus during these early 1970s the
vailing prices, but there were re

Another approach, and I was
of excess resources in agriculture
associates for the EC-10 (Brechtlin
estimated. Two critical parameters
tural supply of 0.3 and price enhanc
mid-1970s to the early 1980s. On
it was estimated that EC agriculture
by the CAP. According to this est

EC agricultural output during the past two decades. Or if applied specifically to grain, it might have been a net importer of perhaps 20 million metric tons, approximately its position 15 years earlier.

One can quarrel with some of the assumptions. An aggregate supply elasticity of 0.3 is too high, and even if you still get an output increase of 12 percent from the price enhancement offered by the CAP has produced a 18 percent increase over the past two decades. While output has increased 18 percent by CAP compared to what it would have been, the estimate underestimates the impact of the CAP on other agricultural products since an important impact of the CAP is increased consumption in the EC. Should the 18 percent output increase be taken into account for the increased consumption under free trade? Actually only to a limited degree. EC consumption would then be a factor affecting the equilibrium level of agricultural output in the EC. It would then be a factor affecting world demand and the equilibrium level of agricultural output in the EC. It has increased by 15 percent as estimated by Tyers and others. The long run effect would be to increase EC agricultural output by 15 percent. Thus if all industrial market economies were open to agricultural trade, EC excess agricultural resources might be used for 15 percent of the 1980-82 level of resource use.

There are substantial excess resources in the EC. A combination of tax treatment of agricultural land and the proposed upon the sale and leasing of land make it

many excess resources are in agriculture. It seems idle to speculate about the future of agriculture in Japan as it is highly probable that by domestic liberalization in the EC and the rationalization of Japanese agriculture there will be more excess resources than the relative quantity of resources in the EC. Significant improvements in production in the EC will reduce excess resources in EC agriculture. In an economic sense, such is not the case.

Supply management that results in an appropriate second best policy is not the cause of the disequilibrium between domestic and foreign prices. The objective (target or threshold price) was some reasonable expectation of a price significantly higher prices. Is the present concern about excess resources in EC agriculture a misplaced concern?

I was surprised recently to find that many persons had convinced themselves that supply management make it unnecessary to concern ourselves with excess resources. The call was made in support of information about the effects of a liberalization of domestic prices and low export prices. It would in the long run only increase the number of persons who agreed but the program was considered. GATT negotiations could be concluded.

demand in international markets. If valid, some attractive scenario. It would transfer most of the burden from taxpayers to consumers and promise a market recovery course.

It is true that current international prices are exceedingly low in real terms. Real grain prices during the Great Depression and significantly below the trend of the 1960s decades. In real terms, U.S. export prices of wheat were 20 percent of \$10 per ton (1967 \$) below the 1980-82 level (1983-85) and corn was almost 40 percent below the 1980-82 level of prices is due to some considerable extent to the disposal of stocks accumulated as the result of the high target prices. If and when the stocks return to normal market prices will increase but there is little prospect of recovery to raise grain prices above their long term trend.

True, in addition to the depressing effect of the 1980-82 price depression, current international prices are depressed by slow economic growth and the import restraints imposed by developing countries. Thus sooner or later international prices will strengthen relative to recent levels but are more likely to remain at trend levels. This will be the case even in Canada. Finally, if Tyers and Anderson's (1987) estimate of the impact of liberalization by all industrial economies are accepted, the prices they believe they are. For food products they project that international prices with continuation of farm income support would be about 60 percent of the 1980-82 level.

1

full liberalization international market. However, the largest increases (43 percent) and ruminant meat (43 percent) prices would not bring them to the U.S. for grain are 25 percent for wheat and 25 percent for coarse grains. I believe the price for grain is too low, yet even if one assumes an increase by a fifth due to trade liberalization, prices well below the 1980-82 international

There can be little doubt that prices for wheat and soybeans will increase from the current levels in a few years. How much the prices will rise depends on economic growth, the degree of resolution of the reduction of incentives for the production of grain in industrial countries. Prices will remain low if the ratio of world stocks to consumption falls to current levels. But since it is always a mistake to assume good as they seem, it is equally wrong to assume bad as they seem. Thus tomorrow will be a good foundation for the assumption that the price increase anticipated will be great enough to get us now engaged in U.S. agriculture at rates comparable to the rest of the economy. Thus resources in agriculture is to receive its returns from the international market and not the U.S. market. It is to pay in excess of world market prices

Excess Resources have Other Origins

While agricultural price and income policies for the existence of excess resources in industrial countries there are other sources. Most of the excess resources were due to national and individual decisions.

The substantial growth of investment in agriculture was due to macroeconomic policies that resulted in negative real interest rates for several years, federal income tax policies that made agriculture an enormous tax shelter, and inaccurate expectations of high prices for farmers that the good times would continue to roll. These expectations were fueled by misleading statements emanating from industry leaders in Washington, culminated by a national disgrace, The President. The erroneous expectations infested the Reagan Administration as evidenced by the 1981 Farm Bill, which was based on the assumption that world demand for food was increasing for years to come.

It wasn't only in the United States that unrealistic expectations were held by both farmers and government officials. In Japan, Japanese officials continued to emphasize that world demand was highly likely and have not as yet retracted their position as far as I know (Johnson). In its 1981 Guidelines for the EC Commission justified high and stable prices for agricultural products. European consumers could not be assured that they would be able to buy long at low and stable prices if Community supply exceeded production, would depend to a greater degree on i

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