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HOPPER . . .

by a consent order. (Contributed by Geoff Benson and Dale Hoover, North Carolina State University, 919/737-3881).

New Irrigation Restraints

Irrigation permit applications are being accepted in IDAHO after a long ban, but restrictions have been tightened. The minimum stream flow after irrigation take-off is now 5,600 cubic feet per second (cfs) in winter and 3,900 cfs in summer, versus 3,300 year round under old regulations. The new restraints have been set by state legislature, which also required Upper Snake River water rights (some of which have never been recorded) to be quantified and defined.

New procedures for approving new water diversion are still to be established, and much other work remains to be done. But Idaho citizens are now more aware than ever that demands for in-stream uses compete with agricultural uses and that the state's resources are limited. (Contributed by Joel Hamilton and Tony Prato, University of Idaho, 208/885-6262).

ECONOMIC SHORTS

More broilers are in the future of the south and the southwest

The distribution of production of farm products among regions of the country has shifted dramatically over the years. Business people and economists give a lot of attention to these

By developing and disseminating knowledge, economists and policy educators often enhance people's understanding of their dissatisfactions. This understanding can lead to pressures for change in policy. Thus, knowledge is a vital force in the policy process.

Termination of the 1981 act was the "immediate" impetus for developing the 1985 legislation. Legislation doesn't need a terminal date. Labor and industrial policy, for example, has no definite term. Neither does the policy that provides for land-grant research and extension programs, soil conservation services and the Federally sanctioned cooperative credit system.

Changes Come Gradually

The policy process is, for the most part, evolutionary, seldom undergoing abrupt re-direction or reversal. This historical reality belied the recent predictions in some quarters that a "new generation of policy" was in the offing.

Every policy change is indeed a regeneration of some aspect of old policy even when it involves substantial revision. Thus, incremental changes in policy hardly symbolize inflexibility or the status quo.

During these cycles of policymaking we are not likely to just coast along without any decision being made. When the decision does come, as it eventually did with the 1985 policy, not everyone is likely to be pleased with the package of policy instruments for food, commodities, credit and the many other problem areas. On the contrary, all participants are sure to be displeased with certain aspects of the new policy.

Farm organizations, agribusiness firms, consumer groups, political leaders, policy economists and other contributors to legislation are most likely to approve parts of the measure and perhaps even acclaim some of it. At the same time they might abhor parts that they feel lack economic or other qualities.

But those who are familiar with the participatory nature of the process will expect the policy to serve the highly diverse needs and values of our society as well or better than alternative decisions could have.

Beyond the 1985 policy, public problems will still need attention. And we can expect that future policy developments will need additional knowledge, involve vigorous debate and end in yet another compromise.

Harold F. Breimyer on The Teaching Lesson of Agriculture's Financial Experiences

by Harold F. Breimyer

On the blackboards of countless classrooms the wheat market is diagrammed to show how an atomistic market sector works. Agriculture offers the only available real

world example of the dream world model of perfect competition.

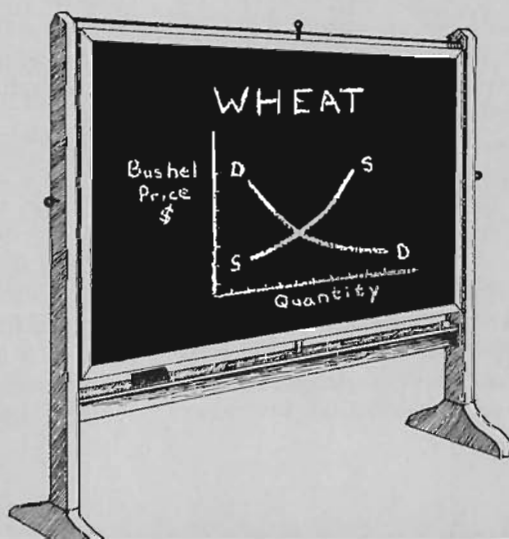
In the mid-1980's, agriculture provides a second illustration of real-world economics that, though by no means confined to the sector, is exhibited there with exceptional clarity. It is the nature and consequence of a monetary policy of tight money.

Since the Federal Reserve Board shifted its monetary policy abruptly in October, 1979, the overall effect has been to convert the low real interest rates of the 1970's to the uncommonly high real interest rates of the 1980's.

Agriculture is a glass house for displaying the outcome of the new policy. Agriculture is

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ILLUSTRATION BY SARAH L. SCHMITT



SHORTS . . .

shifts and why they occur. They hope to anticipate future shifts.

Three economists at West Virginia University—Wu, Jack, and Coyer looked at U.S. broiler production. They concluded that broiler producers in southern states have a cost advantage over producers in the Northeast and the West. However, producers in southern states incur higher transportation costs when they ship broilers to the Northeastern and the Western large population centers.

Here is what they say about the future. Broiler production will continue to shift from the East to the South and Southwest. Texas will gain relative to other states. These shifts reflect increased demands in these areas as population shifts toward the South and the West.

For more detail, see the April 1985 *Northeastern Journal of Agricultural and Resource Economics*.

There are "foreign" investments there and here

Foreign investment in food, spirits, and tobacco processing industries has become a two-way street. U.S. companies invest in other countries and companies headquartered in other countries invest in the United States.

On one side, U.S. firms in 1982 had a combined \$9.3 billion investment position in other countries in these industries.

On the other side, according to MacDonald and Weimer of the Economic Research Service of USDA, foreign food firms had a \$7.4 billion investment in the United States in these industries.

notably capital intensive. Moreover, throughout our national history farmers have borrowed money with which to finance operating costs or land purchases or both.

Farm debt has always been sizeable. The rural mores have called not only for meeting interest obligations but for retiring the principal.

Although the rural lore is that interest and amortization payments are to be made from income generated, the fact is that uptrending commodity prices and appreciation of asset values of the 1970's contributed much of the funding.

The new monetary policy has led to a major decapitalization of agriculture by deflating its asset values. This is discouraging to all farmers but devastating to those carrying substantial debt.

The farm debt situation invites reconsideration of interest theory. Debates over the nature of interest as a factor share go back at least to medieval churchmen. The topic engaged Keynes and identifies the Cambridge School yet today.

Three Views of Interest

There are at least three ways to think about interest rates and interest payments by money borrowers to money lenders.

Rewards to Lenders. First, interest payments by borrowers are rewards to lenders for waiting. Our professors told us that—explaining that lenders can put out money on loan only by denying present consumption.

The micro image of this homily implies that money for lending, irrespective of financial intermediaries, originates with households. It also implies that the lending household is really forced to forego current consumption and therefore must be rewarded for waiting.

Yet in my own case, I save in order to consume in the future. I would do so even if interest rates were zero. We can wonder how high a supply price must be attached to interest on money arising in household saving.

The counterpart is to visualize borrowers also as households. Presumably, they borrow in order to avoid having to reduce their current consumption. They have been caught in illness, unemployment or a crop failure. They pay interest because they cannot wait. These people need loans for survival.

This is the view of interest that goes back to churchmen. To this day, an excessive rate of interest on loans to relieve distress is called usury.

Borrowing for Expansion. The second way to think about interest rates and interest payments is common in a capital-using economy. Money is borrowed to purchase capital goods, and it leads to increased production

and income for the borrower. A farmer borrows to buy a tractor or adds a drill press to his machine shop in order to increase production and income. Thus, the conventional classroom model is delineated.

Capital goods are valued at their cost of production. The borrowers can and are willing to pay interest up to the amount by which the borrowing increases their income. Because the capital good is not used up immediately, an element of futurity enters—of faith in stability of operating costs and in the continuity of the market for the product produced.

This way to think about interest is easy to understand when considering transactions among individual lenders and borrowers such as farmers, ranchers and business people—the micro application.

However, when this thinking is extended economy-wide, we encounter the "nerve center" of our capital-using system. We also face the age-old question: What forces determine the going rate of interest? The appropriate rate? If stability is sought in the system, an inviolable rule comes into play—that the interest rate must conform to the rate of aggregate productivity growth.

A wise Englishman put it well a century ago. Interest cannot be compounded, he wrote, at a (real) rate exceeding the rate of economic growth. Otherwise havoc ensues—maldistribution of income, followed by either widespread divestiture or inflation as correctives.

The century-old instruction raises important questions for our time. Real interest rates of the 1980's have exceeded the economic growth rate.

Does this situation portend increased inequality of income, including that in agriculture? And will the resulting rivalry among the poor and the rich in a setting of fiscal strain lead to dispossession of the rich by either the slough of depression or renewal of the fires of inflation? If so, when?

Borrowing to Earn Rent. The most luminous lesson agriculture teaches today relates to a third way to think about interest. This lesson stems from the role of interest rate in valuing assets that generate income flow.

The classic asset for this lesson is land. Land is a fixed asset. Unlike machinery or buildings it is not produced. The income flow it generates is called rent.

The value of land, its price, as every student of Ricardo knows, is the discounted anticipated future flow of income creditable to land as a factor—rent—as amplified by an anticipation of future capital gains or losses.

Land and its economics may be unique, yet

SHORTS . . .

Investments on both sides of the street have increased at about the same rate over the past 15 years. However, some areas in the United States have been more popular than others in terms of where the foreign firms have placed their money. From 1976 to 1982 foreign investment in U.S. food manufacturing increased only 10 percent. It was up 300 percent in food wholesaling and retailing and up 600 percent in food service.

See *Increased Foreign Investment in U.S. Food Industries* by James MacDonald and Scott Weimer for more detail. For a copy, write to Superintendent of Documents, Washington, D.C. 20402. Ask for Agricultural Economic Report Number 540. GPO Stock Number 001-019-00407-0. The price is \$1.00.

Counties differ

We all know that there are substantial differences among farmers—some have large farm enterprises, some small; some are rich, some poor; some have large amounts of debt, some none—and that these differences give rise to great difficulties in designing and implementing farm programs. Now, Bender and his colleagues in USDA's Economic Research Service argue that there are great differences among non-metropolitan counties as well. They argue that government programs and analyses to support decisions about these programs should recognize the substantial diversity among rural areas as well as the similarities among selected parts of rural America. They set forth a seven-part system for classifying nonmetropolitan

it finds close parallels throughout today's economy. Among them are all long-term assets, even a well-built apartment house; a host of intangibles such as patents and copyrighted brand names; and even capital stock and annuities—not to mention bank deposits. Hence the generalized teaching value of the recent agricultural experience.

Fixed Vs. Variable Interest

In the economics of land, the interest rate does more than affect the asset's value. It also establishes the payments required of a person who buys land on credit. Interaction between the two roles of interest carries a meaning, often overlooked, that is conceptually engaging and powerful in a long- versus short-run context.

In the long run, an equivalence gradually comes about. For illustration we can begin with a low rate of interest that boosts the price of land. Land buyers are willing to pay more for land because the low interest rate eases the burden of servicing the loan.

A high rate of interest works similarly—in the opposite direction. We draw the interesting proposition that, eventually, the interest obligations on land purchase loans (in dollars per year) are independent of the interest rate.

This proposition is innocent enough. The equivalence works out well when the economy and especially the price level are reasonably stable. If, however, deflation or inflation sets in while the loan principal and interest rate are held at their fixed contractual value, wealth is transferred between lender and borrower. Deflation helps lenders and hurts borrowers, and vice versa.

The inflation of the 1970's, in conjunction with interest rates that were not only fixed but low (in real terms), manifestly favored borrowers at the expense of lenders.

Variable Rates Cited. During the decade, a major change in lending practices took place. Interest rates were shifted from fixed to variable—a change that was defensible when introduced. Yet it now accounts for many of the difficulties felt in the 1980's by farmers who borrowed in the 1970's.

The change was defensible when it was made because lenders were justified in asking why they should lend money only to find that the purchasing power of the interest it earned was steadily diminished by inflation.

The new variability in rates would likely have worked out well if the Federal Reserve Board had used a light hand in changing its monetary policy. If it had kept interest rates in line with inflation (perhaps three or four

percent above the prime rate), variable interest rates might have been absorbed into the agricultural economy without severe shock.

But the Board's hand was not light. The agency chose to use monetary and interest rate policy not to keep pace with inflation but to arrest it.

In only one year, 1980, were real interest rates at their normal level of three percent. In the following four years they ranged from two to three times normal.

No matching adjustment was made in the principal of the loans on which interest payments were to be calculated. Farmers who had borrowed to buy land found their interest payment obligations to be two to three times as large as had been expected when the loan was made, and to be up even more in real terms. And with lower farm product prices the earning power of the borrowed money did not improve.

Thus, today, a third of a million commercial farmers plus hundreds of rural banks and other businesses are financially imperiled.

Control Over Money, Credit

Of all the economic instruments central government holds, none has a sharper cutting edge than control over money and credit. All three views of interest discussed in this essay point to important effects of monetary policy on interest rates and in turn on the economic welfare of farm and nonfarm citizens.

However, the third view has special relevance, because it causes us to focus directly on a key factor in the current farm debt dilemma: the substantial erosion in the 1980's of farm wealth that had been accumulated by farm landowners in the 1970's in response to large farm product export sales, low interest rates and high inflation rates.

So we ask, how arbitrary should government be in influencing interest rates? What should policy be? A case can be made for concessionary rates to farmers who have been hurt by a succession of bad crop years. The Englishman's dictum that economy-wide rates must be consistent with economy-wide growth in productivity is persuasive.

Agriculture, though, is a notable surrogate for all holding of assets for their income-generating capacity into the distant future (into perpetuity, in agriculture's case). How heavy should be the hand of the central government over that particular property right? Agriculture may be the most exposed sector at the moment, but all asset-holding is vulnerable to a matching experience.