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Counter-Cyclical Farm Safety Nets

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Since the 1920's, the federal government has used an array of farm programs to provide a “safety net” for American agriculture. Farm programs have used price supports, disaster payments, income supports, direct payments, and supply management to provide a safety net for particular markets and producers. This array of farm programs has rarely been organized or managed with the sole purpose of providing a minimum income level to farmers. With the exception of set aside programs, the programs have provided incentives for production and the diversification of production through out the continental United States.

While the FAIR Act of 1996 has been generously applauded for allowing producers planting flexibility, maintaining export competitiveness through marketing loan programs, and maintaining production, the Act has been criticized for its lack of a sufficient safety net. All crop insurance programs and marketing loan provisions may be considered safety nets. However, the ad hoc passage of emergency relief in each of the last three years 1998-2000 suggests that these programs have not provided sufficient support to program crop agriculture. The safety net issue, therefore, will likely be a major source of debate in crafting the next farm bill. Can the U.S. government reduce the liquidity problem facing major crop agriculture while pressing the popular provisions of the FAIR Act? Developing a whole farm safety net proposal is one alternative being studied.

Components of a Whole Farm Safety Net Program

A whole farm safety net program for agriculture must first define the income measure that is insured or guaranteed. Should society insure net income, total market receipts, total revenue, production costs, price, or yield? Insuring price or yield has been commonly considered a safety net

tool, however, neither necessarily provides a whole farm safety net. Insuring net income or production costs may generate a desired outcome but these risk variables are less practical due to the complications associated with managerial control of the variables.

Generally, proposals for a whole farm safety net focus on protecting either total market receipts or total revenue. Targets for total revenue, defined as total market receipts plus government payments (AMTA, LDP, and disaster payments) protect farmers against market and production risk as well as farm policy risk. Richardson, Smith, and Knutson, however, argue that farm policy risk (driven by government expenditures) in the historical series may need to be excluded because they may not be present in the future periods that the safety net is designed to protect. If this is the case then total market receipts is left as the variable on which to build the whole farm safety net.

An advantage of using total market receipts is that the payments, by definition, are counter-cyclical. Payments would be available when market receipts are low and would not be made when receipts are normal or high. This counter-cyclical provision should address the public concern that farmers receive payments when their incomes are high or “no adverse event has warranted the payment.” A disadvantage, however, is that the defined benefit of a whole farm safety net increases the risk associated with government expenditures relative to defined contribution programs such as the current AMTA payments.

A whole farm safety net program would presumably cover all agricultural enterprises including livestock. Past programs have been commodity specific, will some commodities be excluded? What commodities to include will be a significant issue Congress will have to address prior to the establishment of a whole farm safety net program.

Another significant component of a whole farm safety net program is the method used to determine total market receipts for each enterprise included on the farm. If the program is administered at the farm level, using prices received by farmers introduces two potential problems. The incentive for efficient marketing is diminished and validating individual receipts may be problematic. Market receipts therefore, could be calculated using a price derived at the national level, for example, a season average price.

The production used in calculating market receipts also will be subject to debate. Payment rates may be based on national, regional, county or individual production level. Either extreme of the range of yield options may be problematic. On the individual level enforcement and tracking is an issue. Although such a program provides producers with the greatest protection. If yields are calculated on a national level, regions that are adversely impacted may be denied benefits, and in other cases payments may be made in areas that experienced higher than normal production (Hart and Babcock).

The last major component in designing a whole farm safety net program is the cut off for determining when producers are eligible for a payment. Should payments be made if total market receipts falls below 90 percent or 80 percent of historical average receipts? The trigger percentage will determine the cost of the program to the government and the amount of safety in the safety net program.

Safety Net Proposals

Five whole farm safety net programs are introduced. The safety net programs are described in the following section, starting with the broadest definition of insured income.

Counter-cyclical Payment (CCP)

Two CCP options were discussed by the Commission on 21st Century Production Agriculture. The CCP options are designed to bring total gross revenue for the 8 major crops up to a specified target level. The 8 program crops are: corn, sorghum, barley, oats, wheat, upland cotton, rice and soybeans. Target revenue for the CCP is the sum of market receipts, loan deficiency payments (LDPs), contract payments (AMTAs), and market loss assistance payments (MLAs) for all 8 commodities. Counter-cyclical payments (CCP) would be made if total actual revenue for the 8 crops falls below their 1995-1999 average. The total CCP equals the difference between the 1995-1999 average targeted revenue and the actual revenue. The total CCP is distributed among the 8 crops based on the current allocation formula for AMTA payments under the 1996 farm bill. A second option to the CCP program calls for using a 5 year moving average of total gross revenue rather than a fixed period to determine the target revenue and payments.

A sector level analysis by FAPRI revealed that CCPs average \$5.3 billion in 2003 but decline to \$550 million by 2009 when a fixed period is used to determine the cut-off for targeted revenue. A moving average for targeted revenue results in average CCPs of \$2.8 billion in 2003 and less than \$300 million by 2009.

The CCP programs trigger payments when total revenue over the 8 crops falls below the insured average revenue. Thus, if an individual farmer suffers a loss due to market or weather adversities, he will not receive a payment unless total revenue for the 8 crops nationally falls below the threshold. Conversely, if the national revenue for the crops falls below the trigger, payments are made to all farmers whether they suffered an individual loss or not. These factors appear to be significant for producers of crops whose prices are not highly correlated to national averages. Also, producers

outside the major production areas of the country may find themselves unprotected in times of adversity or receiving a windfall when revenues are high.

The CCP program is simple, easy to implement, and reduces the opportunity for moral hazard. The program would reduce risk about total revenue for crop agriculture in the U.S., but it will do little to protect an individual crop farmer's net cash income. The CCP program provides no safety net for enterprises outside the eight major program crops.

Modified Supplemental Income Payment (SIP)

A modified supplemental income payment proposal has surfaced as a whole farm revenue assurance program. SIP would trigger payments based on total revenue for individual crops. Total national market receipts for each program crop is the target variable under the SIP program. The trigger for payments to a particular crop occurs when revenue falls below the specified percentage of average total market receipts over the 1995-1999 period for the particular crop.

Target receipts for wheat, for example, is treated differently from target receipts for cotton or for other crops. Therefore, payments could be made to one crop when receipts are low, even if receipts for other crops are high or the CCP may not have triggered a payment.

The total payment made for a short fall in receipts equals the difference in actual national receipts for a crop and a specified percentage of the 1995-1999 national average receipts for the crop. The payment rate equals the total payment divided by harvested acres in the current year. Producers are then paid on a harvested acre basis. An equivalent per acre payment rate across the country could cause low yielding regions to be over compensated relative to high yielding regions. Producers in areas experiencing low yields would be relatively under compensated or not compensated at all if producers in other areas did not suffer low yields. This type of result has caused some to call for a regionalized

total receipts trigger and expressing the payment rate on a yield unit basis.

Analyses by FAPRI of the SIP program show that setting the trigger at 93 percent of the 1995-1999 average receipts would result in a \$3 billion per year SIP payment on average. The cost of the program would average \$6 billion per year if the trigger was set at 103 percent of the 1995-1999 average receipts (Adams and Richardson). For this level of expenditure, it was assumed the benefits were provided to only the 8 major program crops.

Farm level analyses show that SIP would be ranked first by cotton farmers over increased marketing loan and increased AMTA payment rate programs, assuming all three programs are designed to cost the federal government \$6 billion per year (Adams and Richardson). Six of 11 representative feed grain, cotton, and rice farms ranked SIP first and 10 of 11 ranked it either first or second. The SIP program provided greater downside income risk protection than the other programs without causing the average market price to fall due to increased supplies associated with higher loan rates.

Safety Net for Farm Households (SNFH)

A recent USDA study analyzed three SNFHs to maintain an income standard for farmer households relative to historical values for:

- regional median household income,
- 185 percent of the poverty line, and
- average adjusted household expenditures (Gundersen, et. al.).

The SNFH would provide a payment if net income for the household fell below the targeted income level. In 1995, median U.S. household income was \$35,050. If a SNFH program had been in place in 1997, the total payments needed to achieve regional median household equity would have cost \$12.58 billion. Projecting this program over the 1999-2003 period, using the USDA Baseline, the

government would spend an average of \$16.55 billion per year. These SNFH payments would be divided as follows:

- 33.4 percent to limited resource farms,
- 20.7 percent to residential lifestyle farms,
- 31.9 percent to low sales farms,
- 10.6 percent to high sales farms, and
- 3.2 percent to large family farms.

If a SNFH program with a trigger equal to 185 percent of the poverty line was in place for the 1999-2003 period, average annual payments are projected at \$49.05 billion. About 32 percent of the payments would go to “low sales farms”, 11 percent would go to “high sales farms”, and 3.5 percent to “large family farms.”

The distribution of safety net payments to support farm household incomes under these SNFH programs stands in contrast to the actual distribution of farm program payments for AMTA and MLA in 1999:

- 1 percent to limited resource farms,
- 3 percent to retirement farms,
- 9 percent to residential lifestyle farms,
- 15 percent to farming low sales farms,
- 25 percent to farming high sales farms,
- 21 percent to large family farms,
- 22 percent to very large family farms, and
- 4 percent to agribusiness.

Whole Farm Revenue Program (WFRP)

Several alternative safety net options that insure receipts at the farm level have been introduced. One such option (SAFE) would insure net income based on a percent of net income as defined on IRS Form 1040 or its equivalent. Procedures would have to be implemented to deal with structural adjustments at the farm level as well as the difficulties associated with the use of cash accounting practices by farmers.

An alternative WFRP would protect a farm's market receipts calculated as: the product of current years planted acres and an olympic moving average of the most recent 5 years of certified yields and national season average prices. By using the current year's planted acres it allows full planting flexibility by not penalizing (or overstating) protected receipts for the historical crop mix. National season average prices would be used to calculate the historical value of production and to value current years actual production, thus maintaining a farmer's incentive to market the crop in a professional manner.

Payments would be made to individual farmers if the total value of production falls below a specified percent of their historical average value of production. Payments could thus be triggered by low yields and/or low national prices. Various trigger levels of this WFRP have been analyzed and 90 percent of a historical moving average appeared to provide reasonable protection of net farm income for feed grain, cotton and wheat farms (Richardson, Smith, and Knutson). The concept is applicable to livestock farms, although higher cut-off percentages are required to provide comparable levels of income protection for dairy and hog farms.

The farm level results have been compared to MPCCI at various levels and at the 90 percent cut-off the WFRP would be preferred over MPCCI75/100 by risk averse decision makers on representative feed grain, cotton, and rice farms across the South (Schumann, et. al.). Because the WFRP is

implemented at the farm level it avoids the problem of not paying for regional disasters and inequitable payment rates across regions due to yield differences. Basing insured receipts on national prices does not avoid the problem of regional price differentials due to grade and location.

Production Cost Coverage (PCC)

The National Association of State Department's of Agriculture (NASDA) and the Farm Credit System proposed a safety net option that would insure the cost of production for major commodities. The option has been proposed as an insurance product to be administered by the USDA-Risk Management Agency. To the extent that a PCC would indirectly support farm income it is included here.

A major criticism with a PCC is that producers can through management affect their costs of production and thus moral hazard would make it very costly to insure. Establishing a national gross margin, and setting the triggers based on national average cost of production would insure half of the producers (low cost producers) receive no benefit from the program, while the high cost producers receive benefits every year.

Other Programs

The USDA Risk Management Agency manages several programs that provide safety net support to farm incomes. For example, CAT, CRC, IP and MPCCI are all established insurance programs that provide income support. These program options are presented in a separate paper.

Also covered in another paper are FARRM accounts. These accounts are counter-cyclical in that farmers make deposits when incomes are high and withdraw funds when incomes are low. Schumann et. al.'s analysis of FARRM accounts for farms in the South suggest that they will not likely increase

farmers incomes if used over the 2001-2005 period because incomes are not likely to provide surpluses for deposit.

The target price/deficiency payment program can be considered to be a counter-cyclical program. Deficiency payments are zero when prices exceed the target price and then grow as prices fall below the target. Target price programs are discussed more fully in a separate paper.

Summary

While the FAIR Act is generally accepted, safety net concerns have arisen. This paper discussed several counter-cyclical derivations that have been suggested as means of providing product agriculture a sufficient safety net. The litmus test for all the programs will likely be the ability to maintain a target level of farm income in adverse times while protecting the popular elements of the FAIR Act.

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