

The Case For and Against Farm Programs

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Risk and Profit Conference
August 17-18, 2006
Manhattan, KS

Helpful comments and suggestions from Art Barnaby, Terry Kastens, Brad Lubben, and Dan O'Brien are gratefully acknowledged.

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As the expiration of the 2002 Farm Bill approaches, debate is intensifying regarding the legislation that will replace the current Bill. Much of the debate focuses around the attributes and mechanics of current farm programs, but there is also considerable debate regarding the need for any farm program. Some believe that U.S. farm subsidies are necessary for the survival of farms while others argue that they should be reduced or eliminated. Likewise, some contend that U.S. farm subsidies have benefits that extend beyond farmers, while others maintain that those subsidies have negative impacts for farmers and the general public. This paper will discuss the common economic arguments for farm programs. The goal of this process is to separate fact from fiction and help those interested in the Farm Bill debate make informed decisions regarding future U.S. agricultural policy.

Supporters of U.S. farm programs offer many justifications for the current and future use of these programs. The most common of these justifications include: saving the family farm, supporting rural communities, providing a cheap food supply, maintaining the environment, and competing with large agribusinesses and subsidizing countries. Oftentimes these justifications are cited by supporters and treated as fact. But are they fact? Following is a discussion of the primary arguments for farm subsidies.

Saving the Family Farm

The rationale for saving the family farm through farm subsidies is both emotional and economic. The emotional aspect has its roots in the founding of the United States. At the time of its independence from Great Britain, the United States was essentially a nation of farmers. Prominent founding fathers like George Washington and Thomas Jefferson were farmers themselves. Jefferson's vision for the United States, later termed the Jeffersonian democracy, was "a nation of landowning farmers living under as little government as possible." (Worldbook.com) As the nation expanded westward, so did agriculture—fulfilling Jefferson's vision, at least in part.

The image of a nation of small farmers still resonates. Certainly, small farm advocacy groups promote such a system. The fact that 42% of the 2.1 million farms in the U.S. are residential or lifestyle farms (Hoppe and Banker, p.11), indicates that many people still value aspects of the agricultural lifestyle. Likewise, the fact that U.S. taxpayers have been willing to subsidize farmers at an average rate of \$15.7 billion over the last 10 years (USDA-ERS, 2006a) suggests that they, at least to a certain extent, value Jefferson's vision as well.

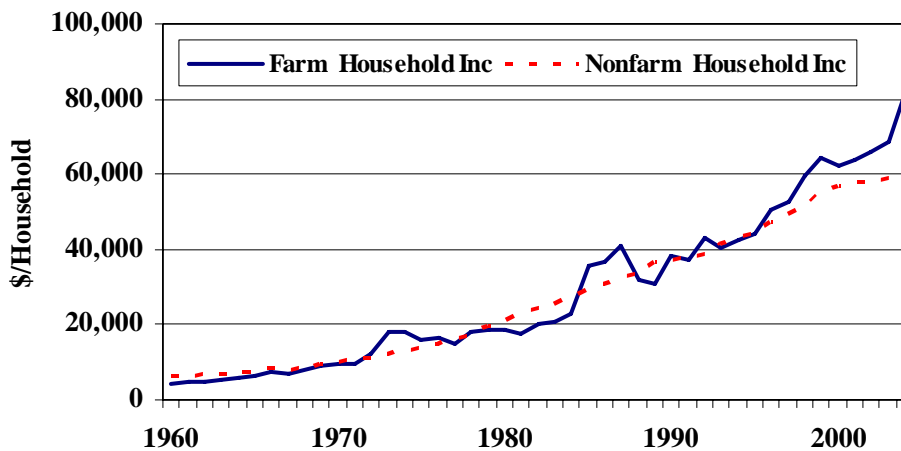
Farm and Non-farm Household Income

Current farm subsidies originated in Franklin Roosevelt's New Deal legislative package in 1933. At that time, average farm household income was about half of that of non-farm households (Jones, et al.). Also, in 1930, 21.5% of the U.S. workforce was employed in

production agriculture that contributed 7.7% of the total U.S. GDP. With a large workforce earning income half that of their non-farm counterparts, the federal government felt compelled to provide assistance to farmers in the form of price supports and supply management.

Today, the situation in agriculture is much different. In 2000, only 1.9% of the U.S. workforce was employed in production agriculture, and agriculture contributed only 0.7% of U.S. GDP in 2002 (Dimitri, et al.). Moreover, farm households now routinely earn more than non-farm households. Figure 1 shows farm and non-farm household income in the U.S. from 1960-2004. After reaching a level basically on par with non-farm income in the 1960s, farm household income was 33% higher than non-farm income in 2004 (Jones, et al). Based on these numbers alone, it would be hard to justify subsidizing farms on the basis of disparities in income as was originally the case when farm programs were first instituted in 1933.

Figure 1 U.S. Farm and Nonfarm Household Income



Supporters of farm subsidies may make the argument that farm income would not be greater than or equal to non-farm income without subsidies. If one considers that government payments contributed 32.4% of net farm income from 2000-05 (table 1), that argument would seem to have some merit. However, one must also remember that not all government payments go to farmers. Since commodity program payments are tied to land, landowners benefit as well.

Farm subsidy proponents will also often point out that the majority of farm household income comes from non-farm sources. That is certainly true when household income is averaged across all farms. However, when broken out by USDA farm typology class, not all farms receive the majority of household income from non-farm sources. Table 2 shows household income from farm and non-farm sources by USDA farm typology group in 2004. Rural residence farms, which include limited-resource, residential/lifestyle, and retirement farms, had an average household annual income of \$75,316. Non-farm sources were responsible for 100% of total household income for these farms. Because 42% of all farms are residential/lifestyle farms, which claim a

primary occupation other than farming, it is not surprising that the average farm would earn a high percentage of household income from non-farm sources. But as table 2 also indicates, commercial farms (i.e., farms with sales over \$250,000) earn over 75% of household income from farm sources.

Table 1. U.S. Net Farm Income and Direct Government Payments by Decade*.

Decade	Net Farm Income (\$ billion)	Govt. Payments (\$ billion)	Govt. Payments % of Net Farm Income
1930s	3.9	0.3	7.1
1940s	11.7	0.6	5.9
1950s	12.7	0.5	4.0
1960s	12.3	2.4	19.1
1970s	22.9	2.2	11.0
1980s	29.1	8.6	29.6
1990s	48.1	10.4	21.9
2000s	58.6	18.1	32.4

Source: USDA-ERS, 2006a.

*Net farm income and direct government payments are in nominal dollars.

Table 2. Household Income from Farm and Non-farm Sources by USDA Farm Typology.

Farm Typology Group	No. of Farms	Total Farm Household Income	Income from Farm Sources	Income from Non-farm Sources	% from Farm Sources
Rural					
Residence	1,373,956	\$75,316	\$-76	\$75,391	-0.1
Intermediate	529,071	\$64,789	\$12,240	\$52,549	18.9
Commercial	157,795	\$191,115	\$145,080	\$46,035	75.9
All	2,060,822	\$81,480	\$14,201	\$67,279	17.4

Source: USDA-ERS, Agricultural Resource Management Survey, 2004.

Differences of opinion exist regarding the interpretation and importance of household income data. Some argue that non-farm income should not be considered when comparing farm household income to non-farm household income or when determining the need for farm programs (Wise). But not considering income from off-farm sources can be misleading as well. First, it raises the issue of whether farms *should* earn all household income from the farm—clearly a value judgment. If that issue is to be raised for farms, should it not also be raised for all non-farm households? Should not all non-farm households have the opportunity to earn an average income from one business or job? If they do not, should they be subsidized? Second, it minimizes the freedom of investment and career choice in farm households. Certainly, some farm families must seek off-farm income to continue farming. Others may do so as a business investment or career choice. If farmers have spouses that earn high incomes off the farm, or have investments that earn high returns, should the government subsidize the farm because it is less profitable? Basically this all leads to the warning that people should be careful not to draw too strong of conclusions when comparing farm household income to non-farm household income.

Equity of Farm Income Support

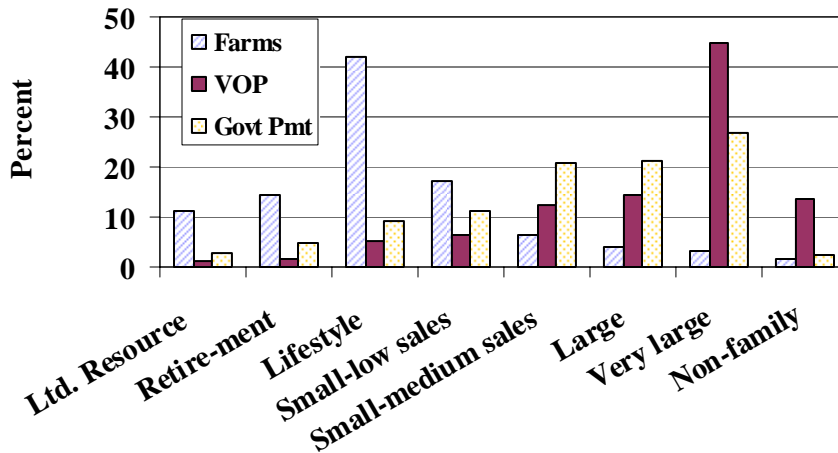
While the goal of saving the family farm may be noble from a social standpoint, there are questions as to whether the current farm income support programs are meeting that objective from an economic standpoint. These questions revolve around two primary issues. First, are government payments distributed equitably across the farm sector? Second, is profitability enhanced for farms that receive government payments?

According to data from USDA, only 39% of U.S. farms received government payments in 2003 (Hoppe and Banker, p. 25). Of those farms that received farm subsidies, 66% of total payments went to five commodities: corn, cotton, wheat, soybeans, and rice (USDA, CCC Net Outlays by Commodity and Function). Table 3 shows the percentage of each farm typology group that specializes in producing a particular commodity. Because medium, large and very large farms (those farms with annual sales greater than \$100,000) have a higher percentage of farms that specialize in cash grains and other field crops that receive subsidies, they receive a higher percentage of payments (figure 2). This, in turn leads to criticisms that “large farms get all the payments”. However, the fact that large commercial farms receive the bulk of government payments has less to do with large farms abusing subsidy programs to the detriment of small farms (as some try to make the case), than it does with the structure of the farm programs themselves. If the goal of U.S. farm income support is to save the family farm, and between 35 to 41 percent of small farms (limited-resource, retirement, residential/lifestyle, and farming-occupation/low sales farms) produce beef, should beef producers not receive income supports as well? Given the current structure of farm programs and the equity issue created from tying farm program payments to specific commodities, the argument that farm subsidies help save the family farm is debatable.

Table 3. Percentage of Farms Specializing in Producing Specific Commodities.

Commodity specialization	Small family farms					Large-scale farms		
	Limited-Resource	Retirement	Residential/Lifestyle	Farm-occupation Low-sales	Medium-sales	Large	Very large	Nonfamily farms
Cash grain	11.7	6.5	8.7	18.1	42.5	42.3	27.1	10.7
Other field crops	17.8	32.6	20.5	14.8	9.0	9.6	10.9	33.0
High-value crops	5.5	4.9	3.8	8.4	7.0	10.6	13.1	17.5
Beef	35.4	40.8	38.4	38.6	15.3	13.1	9.3	19.9
Hogs	d	d	0.8	d	1.4	3.1	6.9	d
Dairy	2.5	d	d	5.7	20.0	11.0	10.4	3.3
Poultry	d	d	1.0	0.9	2.1	7.6	20.4	d
Other livestock	26.3	14.3	26.5	13.1	2.6	2.8	1.9	12.5

Figure 2 Share of farms, value of production, and government payments by farm typology group, 2003



Nevertheless, as previously shown in table 1, government payments have contributed a significant portion of net farm income over the last two and one half decades. But as previously mentioned, not all the benefits of government payments go to farmers, as a portion of those benefits gets capitalized into land values. This reality has two ramifications. First, it demonstrates that family farms are not the only beneficiaries of farm subsidies. Second, it indicates that as farm income would decline from a reduction or elimination of government payments, farm asset and equity values would also decline.

A study by Kastens and Dhuyvetter estimated that average cropland values by state would fall by 2.1% to 42.9% if government payments were eliminated. In Kansas, cropland values would decline by an estimated 33.3% if direct government payments were eliminated. Certainly, a reduction in land values of that magnitude could have a devastating effect on the financial viability of many Kansas farms. The estimated decline in land values, however, assumes that 100% of government payments are capitalized into land. In reality, government payments are not likely to be fully capitalized into land values.

A study by Dumler (2005) estimated the impact that the elimination of government subsidies would have on farms enrolled in the Kansas Farm Management Association (KFMA). Since farm size issues are common for farm policy debates, in this study, farms were divided into four size categories. These size categories basically follow the major categories of Hoppe and Banker. Thus, the four farm size categories based on gross farm income (GFI) are: small farms under \$100,000 GFI, medium farms with GFI from \$100,000 to \$249,999, large farms with GFI from \$250,000 to \$499,999, and very large farms with GFI over \$500,000.

To account for the fact that government payments get capitalized into land values, land values were reduced by 33.3%. This provides a “worst case scenario” because it assumes that government payments are fully capitalized into land values, and because cash rent for cropland was not reduced in conjunction with land values. The latter was necessary

because the KFMA data do not distinguish between crop, pasture, and other cash rent. According to the data shown in table 4, if government payments are eliminated, the average rate of return on assets (ROA) decreases by over 5 percentage points for the two smallest farm sizes, and by 4.4 percentage points for very large farms. Rate of return on equity (ROE) drops by approximately 12 percentage points for small and medium farms, but only by 9.5 and 9 percentage points for large and very large farms, respectively. In spite of the declines, rate of return on assets and equity remains positive for very large farms.

Table 4. Net Farm Income, Rate of Return on Assets, and Rate of Return on Equity for KFMA Farms by Farm Size, 1995-2004.

Measure	Small	Medium	Large	Very Large
Net Farm Income (NFI)	\$-20,467	\$1,226	\$37,579	\$124,484
NFI w/o Govt. Pmts	\$-30,549	\$-21,480	\$-3,186	\$57,037
Rate of Return on				
Assets (ROA)	-5.22%	3.22%	8.20%	12.31%
ROA w/o Govt. Pmts	-10.67%	-2.02%	3.21%	7.90%
Rate of Return on				
Equity (ROE)	-15.51%	-1.00%	8.37%	17.63%
ROE w/o Govt. Pmts	-27.53%	-13.01%	-1.17%	8.66%

Average total assets for small, medium, large, and very large farms fell 18.5%, 15.9%, 14.5%, and 13.2%, respectively. The difference in asset values is due to small farms having a greater portion of assets in land. Larger farms tend to rent a higher percentage of land versus owning, making long term assets such as land a smaller percentage of total assets relative to small farms. As liabilities remained constant, the average debt/asset ratio for each size of farm increased by about 6 percentage points, with small farms having the lowest ratio at 32.0%, and with very large farms having the highest ratio at 42.6%. Average declines in equity ranged from 23.4% for small farms to 20.2% for very large farms. Although the average financial position declined for KFMA farms when government payments were eliminated, the number of farms that become insolvent during the 1995-2004 timeframe increased by only 2 percent (0.7% to 2.7%).

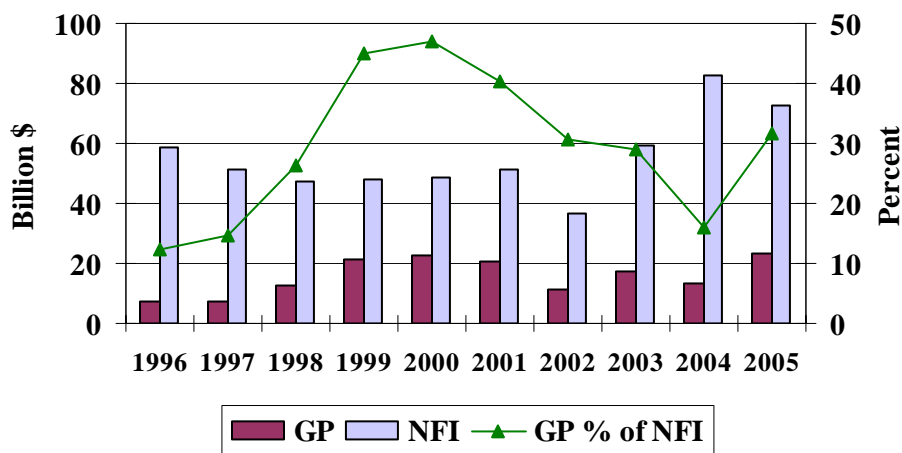
The Dumler study indicated that larger farms would remain more profitable than their smaller counterparts if government payments were eliminated. However, it also indicated that there was a tremendous amount of variability within farm sizes as well. For example, the average ROA for small farms without government payments was -10.7%. However, at one standard deviation above and below the mean, ROA would be 2.8% and -24.1%, respectively. This indicates that many, but not all farms will become unprofitable if government payments are eliminated.

The greatest challenge facing most commercial farms in the U.S. is variability of income. Figure 3 shows U.S. aggregate net farm income (NFI) and direct government payments from 1996-2005. Over that timeframe, NFI averaged \$55.7 billion per year, with a range from \$36.6 billion in 2002 to \$82.5 billion in 2004. Government payments, as previously noted average \$15.7 billion during those same years, accounting for 28% of NFI. Certainly, farm income is variable and government payments have contributed a

significant share of income over the last 10 years. However, the aggregate U.S. data actually mask income variability and the importance of government payments associated with some regions and commodities. For example, in Kansas, NFI on KFMA farms averaged \$40,284 from 1996-2005, with a range of \$16,778 in 1999 to \$62,604 in 2005. The coefficient of variation (standard deviation divided by mean) of income for Kansas was 44.8% versus 24.1% for U.S. income. Government payments on KFMA farms also accounted for 75% of NFI, on average, during this time period. Even though the previous study by Dumler indicated that not all farms will become unprofitable if government payments are eliminated, it is also important to realize that in some years, in some regions, government payments contribute a large portion of NFI. Undoubtedly, an immediate elimination of farm programs would have severe consequences for farmers and rural communities historically dependant on those programs. How farms manage the variability of income, especially if farm programs were to be reduced or eliminated, will be a big factor in determining the long-term success of a farm. Because the U.S. has chosen to help some farmers manage risk through farm supports does not imply that there are not other means to manage financial risk.

Figure 3

U.S. Net Farm Income and Direct Government Payments



Supporting Rural Communities

Oftentimes the words “farm” and “rural” are used interchangeably. In the past, such use may have been reasonable. Today, however, that likely will not be accurate. According to information in USDA’s 2007 Farm Bill Theme Paper on Rural Development, “less than 10 percent of rural people currently live on a farm and only 6.5 percent of the rural workforce is directly employed in farm production.” That compares to 40 % of the rural population living on farms, with 33 percent of the rural workforce directly employed in agriculture in 1950. Although only 10% of the rural population currently lives on farms, 20% of rural counties are classified as farm-dependant (greater than 20% of county personal earnings come from farming). Of those counties, 78% had a population loss from 2000-2005. The poor economic performance of these farm-dependant counties and

subsequent population losses have led to subsidies being viewed as a remedy for rural America.

By supporting farm income through farm programs, proponents of farm subsidies argue that these programs help save rural communities as well. The logic of this argument is straightforward. If farmers make more money, that money will then be spent in the community—stimulating economic growth. In other words, if farmers are doing well, then rural communities will do well. If one follows the logical progression of this argument then one would expect rural communities that receive high amounts of farm subsidies to perform well economically. However, a recent study by the Center for the Study of Rural America of the Federal Reserve Bank of Kansas City suggests that such an argument may not hold. Instead of growing, U.S. counties that were most dependent on farm payments relative to the local economy actually experienced job and population growth rates lower than counties less dependent on payments. As the article points out though, it is possible that economic performance would have been even worse without the payments.

The question that naturally comes to mind when seeing such results is: Why do most counties that are most dependent on farm payments perform worse than other rural counties? There are several possible explanations. First, the government payments themselves may have a negative impact. Programs such as the marketing loan program encourage production above market clearing levels. That, in turn, keeps prices lower than they would otherwise be without the loan program. In such a scenario, the low cost producer will be most profitable. Moreover, low cost producers have advantages over their high cost counterparts in lowering costs. Low cost producers can afford to outbid other producers in acquiring land, which enables them to get larger and spread fixed assets such as machinery over more output. This process encourages farms to get larger in order to be profitable. Since there is a limited amount of farmland available, not all farms can expand to remain profitable. Consequently, farms go out of business and the economic viability of communities suffers.

A paper by McGranahan and Beale offers some other possible explanations for rural population loss. Although poverty rates declined in 85% of rural counties in the 1990s, many farm-dependent counties continued to experience population loss. However, it is not necessarily the economic viability of agriculture in farm-dependent counties that is causing population loss. As McGranahan and Beale state:

“what distinguishes farm-dependent counties from other rural counties is less the presence of farming than the absence of nonfarm activities. Farm-dependent counties are more likely to be remote from metro areas, to have low population density, and to lack natural amenities. These characteristics, which discourage other types of development, account for much of the population loss in farm-dependent counties.”

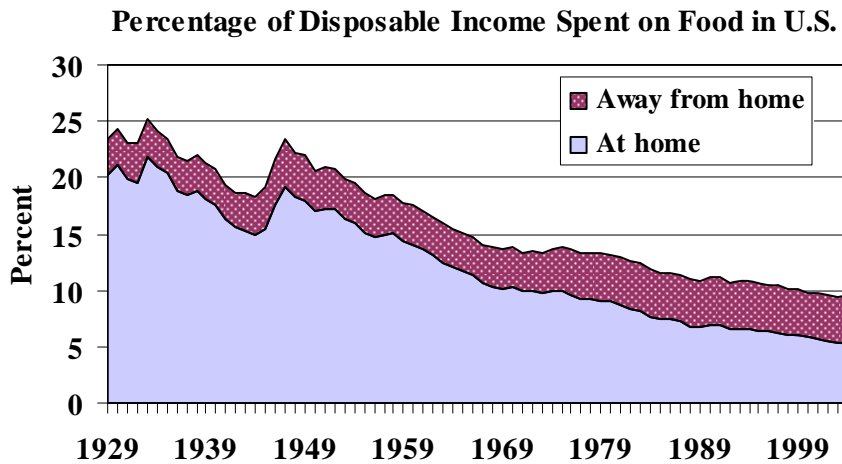
Because rural residence and intermediate family farms are dependent on nonfarm income (table 2), Browne, et al. suggest in *Sacred Cows and Hot Potatoes* (p. 35) that rural communities may be better served by “programs which facilitate the development of rural

nonfarm economies.” In other words, if the goal is to strengthen the economic viability of rural communities in the U.S., that goal may be more efficiently accomplished by devoting resources to nonfarm endeavors than continuing to rely on commodity programs to drive economic activity in rural communities.

Cheap Food Supply

One of the most popular justifications farm subsidy advocates offer for the need to continue to subsidize agriculture is that U.S. consumers spend less on food than any other nation. Since peaking at a high of 25.2% in 1933, figure 4 shows the percentage of disposable personal income spent on food in the U.S. has steadily dropped to 9.5% in 2004 (USDA-ERS, 2006b). Over that period of time, real disposable personal income has experienced a 14.3 fold increase while the amount of money spent on food has increased only 4.7 times. When compared to other countries in terms of the amount of money spent on food as a percentage of all household expenditures, U.S. consumers easily spend the lowest amount (table 5). Although U.S. consumers spend a smaller share of all household expenditures on food, it must be noted that total household expenditures are significantly higher in the U.S. than the other countries listed in table 5.

Figure 4



Are farm subsidies responsible for the fact that U.S. consumers spend relatively less on food than other countries? Two recent papers address that question. Miller and Coble evaluated the impact that U.S. farm subsidies had on the proportion of disposable income spent on food. The study concluded that from 1960-1999, government payments to farmers were not statistically significant in determining the percentage of disposable income spent on food. Rather, disposable income, productivity, and the farm-to-retail spread of food commodities had a statistically significant impact on the proportion of disposable income spent on food.

Table 5. Share of Household Final Consumption Expenditures Spent on Food by Selected Countries, 2002.

Country	Food Share of Household Expenditures (%)	Household Consumption Expenditures	
		Total (\$)	Food (\$)
United States	6.9	25,590	1,775
United Kingdom	9.1	16,867	1,543
Canada	9.9	12,715	1,264
Germany	11.9	13,663	1,624
Japan	14.4	17,456	2,517
France	14.8	13,106	1,939
Mexico	24.5	4,394	1,075
India	39.7	313	124
Philippines	47.5	667	317

Source: USDA-ERS, 2005.

A recent article by Babcock looks at the issue in a different manner, but reaches the same conclusion. Babcock focuses on the price spread of a raw commodity (corn) and a finished retail product (pork). Using values from the article, corn accounts for approximately 10.64% of the retail price of pork. Thus, if commodity prices would increase by 5% if government payments were eliminated, the price of pork would increase by only 0.53%. Since the cost of the raw ingredient is generally a small share of the price of a finished food product, the price of the raw ingredient would have to increase significantly in order for the price of retail food to increase appreciably.

Based on these two points, the argument that farm subsidies provide a cheap food supply to U.S. consumers does not withstand scrutiny. The argument is especially misplaced with commodities such as milk and sugar that are beneficiaries of price supports and supply controls that keep the prices U.S. consumers pay above world equilibrium prices. Such policies are especially burdensome on the poor, who spend a higher portion of their disposable income on food.

Although the cheap food supply argument has little to no merit, it does refute an argument that has been made recently: that the cheap food resulting from farm subsidies are one of the causes of obesity in the U.S. If farm subsidies do not result in a cheap food supply as demonstrated above, then the subsidies cannot be a root cause of obesity.

Food Security

An increasingly popular argument among supporters of farm subsidies in the post 9/11 world is that subsidies maintain U.S. food security. While there are many aspects to food security, the primary argument expressed is that if subsidies are eliminated, the U.S. will become dependent on other nations for its food. In other words, U.S. farmers will not be able to compete with the cheap and/or subsidized production of farmers from other nations if subsidies are eliminated. U.S. farms will go out of business, land will be idled or used for other purposes, and U.S. food production will greatly diminish, forcing us to import food.

This argument is deeply flawed as it depends on many assumptions that are deeply flawed. First, it assumes U.S. farmers cannot compete with farmers of other nations if subsidies are reduced or eliminated. Although U.S. average cost of production may be higher for some commodities, U.S. farmers have many advantages that farmers of other nations may not have, such as productive cropland, new technologies, and superior infrastructure. Also, there likely are low cost farmers in the U.S. who can compete with other nations. Moreover, if subsidies are reduced, land values may fall as well, reducing one of the cost-of-production disadvantages U.S. farmers face. Given the current dependence of U.S. agriculture on exports for many commodities, it is highly unlikely the U.S. will become food dependent. Second, it assumes that all U.S. farmers are dependent on subsidies. As previously noted, only 39% of U.S. farms receive subsidies, and if subsidies are eliminated, there will still be farms that remain profitable. Without question, farm consolidation would accelerate if subsidies were eliminated, but farms will remain.

Maintain the Environment

Another popular justification for farm programs in general is that they help farmers maintain the environment. The argument made by farm program supporters is that in agricultural production, there are costs in terms of environmental degradation that are not covered by the market. Consequently, government policies are needed to compensate farmers for environmental practices that are not supported by the market. Environmental degradation in agricultural production can take place in two forms. The first type is environmental loss that occurs exclusively on the land being farmed. An example of this form of loss would be cropland that diminishes in productivity due to soil erosion. In such a situation, the relevant question is, Do the costs of maintaining the soil outweigh the benefits to the farmer? If the costs are higher than the benefits, then the argument could be made that society may be well served by implementing policies that would encourage soil conservation practices (through subsidies, incentives, and/or regulations). However, even in this case, as long as land is transferable, there is a market incentive for the farmer to maintain the soil. If the market benefits from soil conservation outweigh the costs, then there are sufficient incentives for farmers to adopt conservation practices, without government intervention.

The second form of environmental loss is externalities that affect not the farmer, but others. Examples of externalities from agricultural production include soil sediments in rivers and other bodies of water, contamination of groundwater from chemicals and fertilizers, blowing dust, and odors from confined livestock operations. Unlike environmental losses exclusive to the farmer, the market may not address these external costs. Once again, if that is the case, then society may benefit from government intervention.

If government intervention is deemed appropriate for reducing externalities in agriculture, the next logical question is, What type of program(s) is best suited to accomplish that goal? Supporters of income support programs may argue that these programs would help provide market incentives for conservation practices. Certainly, income support programs may provide increased income, but they also result in higher

costs in terms of land rents. Therefore, whether income support programs provide sufficient incentives for farmers to implement conservation practices is debatable.

There is little debate, however, that income support programs can result in some unintended environmental consequences. Notably, income supports such as marketing loans, counter-cyclical payments, and direct payments provide incentives for farmers to produce crops on environmentally sensitive (and likely less profitable) land that otherwise may not be cropped. Likewise, these programs encourage the use of fertilizers and chemicals above market equilibrium levels. Excessive use of fertilizers and chemicals can have significant negative environment consequences. Based on these consequences, it is questionable whether income support programs provide a net benefit to the agricultural environment.

Because income support programs may not aid environmental goals—perhaps even work against them, the U.S. uses four other approaches to address environmental issues in agriculture: education and technical assistance, economic incentive payments, conservation compliance, and regulatory requirements (USDA, 2006a). In 2005, USDA spent \$2.8 billion on conservation programs. Of those payments, \$1.8 billion was allocated to the Conservation Reserve Program (CRP). The CRP removes environmentally sensitive cropland from production, instead planting grass or trees for a period of 10 to 15 years. Other prominent conservation programs include working lands programs such as the Environmental Quality Incentives Program (EQIP) and the Conservation Security Program (CSP). In 2005, approximately \$444 and \$206 million were spent on these two programs, respectively. EQIP “provides financial and technical assistance to help participants install or implement conservation practices on eligible agricultural land.” CSP “rewards producers for ongoing environmental stewardship on working lands” and “provides financial incentives for producers to adopt additional conservation practices on their farming operations.”

Contrary to income support programs, conservation payments are more evenly distributed across farms. In 2004, rural residence farms comprised 59% of those farms that received conservation payments. These farms received 49% of all conservation payments. On the other hand, commercial farms received 20% of all conservation payments while comprising 15% of farms that received conservation payments. CRP is mostly responsible for this distribution of payments. According to USDA data, rural residence farms receive almost 60% of CRP payments. CRP is popular with retirement and residential/lifestyle farms as it provides a steady source of income while these operators pursue other interests.

How successful are these programs? Certainly, conservation or environmental programs have many objectives in agriculture. These objectives include but are not limited to the reduction of soil erosion, preservation of wetlands, enhanced wildlife habitat, and improved air and water quality. While the overall effectiveness of some of these programs in meeting these objectives may be difficult to measure, there are some examples that point to the apparent effectiveness of conservation programs. For instance, according to USDA, between 1982 and 2003, soil erosion on cropland in the U.S. declined 43%, from 3.06 to 1.75 billion tons per year. About one-fourth of this reduction

has been attributed to conservation compliance requirements, one-fifth to the CRP program, and the balance to technological changes and other programs. Although this is just one example, it demonstrates two things. First, conservation programs appear to provide a superior means to achieve conservation goals than income support programs. In fact, income support programs may facilitate the need for some conservation programs. Second, it can be argued that conservation programs as a whole distribute payments across farm types more equitably than income support programs. As a result of these conservation program attributes, conservation advocates are lobbying for an expansion of these types of program in the 2007 Farm Bill in place of traditional income support programs.

Compete with Subsidizing Countries and Large Agribusinesses

A final justification offered for farm subsidies relates to the ability of U.S. farmers to compete with large domestic agribusinesses and subsidized foreign farmers. In terms of the domestic agribusiness justification, the basic argument is that given the market structure of general commodity production, farmers are pinched between a few large input suppliers and a few large commodity purchasers. In other words, large input suppliers have the advantage of market power on the cost side of farming while large grain and livestock processing companies have the advantage of market power on the revenue side of farming. Consequently, the “typical” farmer has little to no market power.

Another reason given for the need for farm subsidies is to compete with other countries that subsidize their producers. Ultimately these subsidies would reduce world prices, causing the prices U.S. farmers receive to drop as well. Subsidies are then needed in the U.S. to make up for the lower prices farmers are receiving. Another reason given for U.S. subsidies is that U.S. producers are priced out of foreign markets by export subsidies, price support programs, and/or import restrictions enacted by other countries.

Agribusiness Competition

Coinciding with the Jeffersonian democracy philosophy, large agribusinesses are often viewed with suspicion or even contempt. Much, if not all, of the negative attitude toward large agribusinesses revolves around the issue of market power. As previously mentioned, large agribusinesses are frequently accused of exercising market power to the detriment of small farmers. Given this accusation, two relevant questions come to mind. First, is there evidence that large agribusinesses routinely exercise market power at the expense of small farmers? Second, if market power is exercised, does it warrant subsidies to U.S. farmers.

A number of economic studies have been conducted over the last couple of decades to determine whether large agribusinesses systematically exert market power against U.S. farmers. Most of these studies involved the livestock industry, which has experienced greater concentration in recent decades, and has been subject to more accusations of market manipulation. A summary of these studies is discussed in Tweeten and Thompson (p. 128-138). The general conclusion that can be drawn from these studies is that agribusiness markets “are imperfectly competitive, but cost efficiencies resulting from

greater concentration exceed losses from market power distortions” (p.142). More specifically, U.S. farmers are not hurt by the application of market power of agribusinesses, and consumers gain from lower costs brought forth from economies of scale. Actually, the concentration of agribusinesses on the input supply side of farming may benefit farmers through gains in research and development and production efficiencies that would not be possible if production were diffused among more numerous, smaller companies. Likewise, farmers may also benefit from advertising campaigns used by large processing and retail agribusinesses that increase the demand for food.

Although large agribusinesses are a seemingly enticing target, the evidence, although not abundant, does not support the assertion that agribusinesses routinely take advantage of U.S. farmers. Similarly, even less data exists regarding the extent to which farmers may benefit from the concentration of agribusinesses. Therefore, the strongest conclusion that may be drawn from this discussion is that justifying farm programs on the basis of competition with large agribusinesses is, at best, a weak argument.

Foreign Subsidies and Trade Barriers

Trade between countries occurs when it is mutually beneficial to the buyer (importer) and seller (exporter). After instituting protectionist trade policies in the 1930s, U.S. agricultural exports did not recover their share of farm marketings until the late 1970s (Pasour p. 160). In recent years, exports have been crucial to many agricultural commodities. Table 6 shows the export shares of U.S. agricultural production for selected commodity groups.

Table 6. Export Shares of U.S. Agricultural Production by Volume*.

	Average			
	1980-84	1990-94	1999	2002
		Percent		
Aggregate share	29.2	23.1	22.8	21.9
Livestock	2.7	5.4	10.1	10.3
Red meat	1.3	4.1	8.0	8.6
Poultry meat	3.9	7.4	14.3	14.4
Dairy products	8.3	5.0	5.5	3.3
Crops	30.8	24.2	23.8	22.8
Food grains	61.1	51.0	47.1	46.7
Feed crops	27.4	21.2	21.2	21.3
Oilseeds/meat/oil	32.9	25.4	27.2	24.0
Fruits and nuts	8.7	12.2	13.3	13.9
Vegetables	5.1	5.7	6.5	6.5
Cotton/tobacco	49.0	40.7	39.3	57.6

* Source: USDA, *Amber Waves*, Nov. 2003.

Compared to the high level of agricultural exports in the early 1980s, exports as a share of production have risen for some commodities and fallen for others. Whether exports as a share of production have risen or fallen over the last two decades, they are very important for many commodities in the U.S. For example, nearly 47% of food grains and 57% of cotton/tobacco were exported in 2002. Obviously, exports are critical to U.S. agriculture. So policies, both domestic and foreign, that are conducive to trade are generally beneficial to U.S. farmers. However, global trade is extremely complex as it is influenced by many factors outside the control of the interested participants. These factors include macroeconomic issues such as exchange and interest rates, other trade policies, such as trade barriers on other products or commodities, and foreign policy actions. Because of the impact that these factors may have on U.S. farms, producers call for farm subsidies.

The relevant question then becomes: Do farm subsidies benefit U.S. farmers in light of other countries' subsidies and protectionism? Because trade is complex, the answer to the posed question is complex. Certainly, farmers in the U.S. are affected by the farm and trade policies of other countries. A typical result of those actions is to lower the price that U.S. farmers receive for their goods—whether those actions are by subsidies or trade barriers. A typical response in the U.S. is to institute subsidies or trade barriers. That response has economic implications as well.

If the U.S. implements price supports or import restrictions, U.S. producers will likely experience higher prices. But those higher prices will have implications beyond what the producer will receive. First, higher U.S. prices cost U.S. consumers of those products—a fact that is often overlooked and contrary to the “cheap food supply” justification of farm subsidies. That additional cost will also reduce the quantity demanded by U.S. consumers, putting downward pressure on U.S. domestic prices. Second, U.S. actions will affect our ability to export. To the extent that the U.S. institutes price support or pseudo price support (i.e. marketing loan) programs that ultimately result in increased production and reduced market prices, it can be expected that exporting countries affected U.S. actions will respond with subsidies or protectionist measures of their own. An excellent example of how subsidies and protectionism can escalate into large trade disputes can be demonstrated with steel a few years ago (Dumler, 2004).

In March, 2002 President Bush imposed tariffs of up to 30% on about a third of U.S. steel imports as a response to complaints that cheap, subsidized steel was dumped in the U.S. market. Although praised by the domestic steel industry, the tariffs resulted in severe criticism from foreign exporting countries and domestic steel importers and users. Relief was sought by foreign steel exporting countries through the World Trade Organization (WTO). The WTO dispute panel ruled in May 2003 that the steel tariffs imposed by the United States were illegal. The subsequent WTO ruling opened the door for the European Union to impose \$2.2 billion in retaliatory duties on U.S. exports. In response to the unfavorable WTO ruling and complaints from domestic steel consumers, on December 4, 2003, the Bush Administration lifted the tariffs. Overall, the tariffs had a minimal impact on U.S. prices (estimated 0.9 to 5.0% increase), but had a negative impact on domestic consumers and threatened to escalate a trade war that would have harmed other domestic industries.

Although it may be known that subsidies or trade barriers may be harmful to the overall economy, it may not be politically expedient to stand by while a domestic industry suffers because of the actions of another country. For example, if it was demonstrated that the U.S. steel industry was hurt by the dumping of cheap, (below the cost of production) subsidized foreign steel in the U.S., it is likely that U.S. politicians will not stand by while the industry suffers from subsequent financial hardships, even though they realize other Americans may suffer from their response. This is why trade negotiations are so difficult. A recent report from the Organization for Economic Cooperation and Development (OECD) estimated that \$44 billion in welfare gains would be generated if subsidies and trade barriers throughout the world were halved. Another study by the International Food Policy Research Institute (IFPRI) estimates that there would be \$200 billion in income gains in the global economy if trade was fully liberalized (Bouet, et al.). Those who had the highest support and protection would gain the most from the reforms. However, local political interests often outweigh larger economic benefits, (as evidenced by the recent suspended WTO trade negotiations) making reductions in subsidies and trade barriers difficult to achieve.

Summary

This paper discusses five of the most common economic justifications for farm subsidies. When analyzed in depth, those justifications are not always as valid as they may seem at first. Certainly, there are challenges facing U.S. farmers. Problems of variability of income are real to many farmers and rural communities. From the 1930s onward, the reaction of the U.S. government to these challenges has been to subsidize selected farm commodities. Those subsidies, however, often have unintended consequences that mitigate their intended purposes. Likewise, as time goes by, programs can become outdated and ineffective. So while the goal of farm subsidies may be noble, their actual effect may be limited. Therefore, the question rising out of this discussion may not be, Should we eliminate farm subsidies? Rather, the question may be, Are there farm policy options that would better serve U.S. agriculture, taxpayers, and consumers?

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