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***South Carolina's Agriculture and Forestry
Industry's Evolution and the State's
Commitment to its Assistance***



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Executive Summary

- South Carolina's Agricultural and Forestry Industry has expanded, in nominal terms, from 1.5 billion dollars in firm level receipts in 1980 to nearly 3 billion in 2003.
- When considering the multiplicative impact of the base industry receipts, there was a combined projected impact to the state's economy of over 5.7 billion dollars in 2003.
- After adjusting for inflation, the data indicate that the industry has been a steady economic contributor to the State's economy in the five to six billion dollar range (in 2003 dollars) over the 1980 to 2003 time period. These income streams are what one would typically expect of a mature, solid contributing industry.
- Clemson PSA's nominal budget has generally increased until the year 2000. Since 2000, the nominal level has plummeted.
- From 1980 through 2001, real (inflation adjusted) PSA funding levels averaged 55.9 million dollars with a high of \$65.68 million in 1989. Subsequent funding has declined to \$44 million, \$38 million and the proposed \$22.8 million dollars in 2002, 2003, and 2004 respectively.
- Using the 1980-2001 period average (\$55.9 million), the real PSA funding reductions are 30.5 percent and 59 percent respectively for the 2003 and executive proposed 2004 years.
- For the period 1980 through 2001 the state funded PSA at an average level of 1.04 percent of the industry's economic impact. Subsequent funding has declined to 0.87 percent, 0.67 percent and the executive proposed 0.40 percent in 2002, 2003, and 2004 respectively.

South Carolina's Agriculture and Forestry Industry's Evolution and the State's Commitment to its Assistance

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There are many ways to characterize the transition of any industry through time. Has the number of involved firms changed? Has the industry "evolved" through the appropriate adoption of emerging technologies? Has the mix of products produced and sold changed as customer demand has changed? As the demand base (customers) for the industry's products requests use and safety information, to whom do they look for relevant, unbiased information?

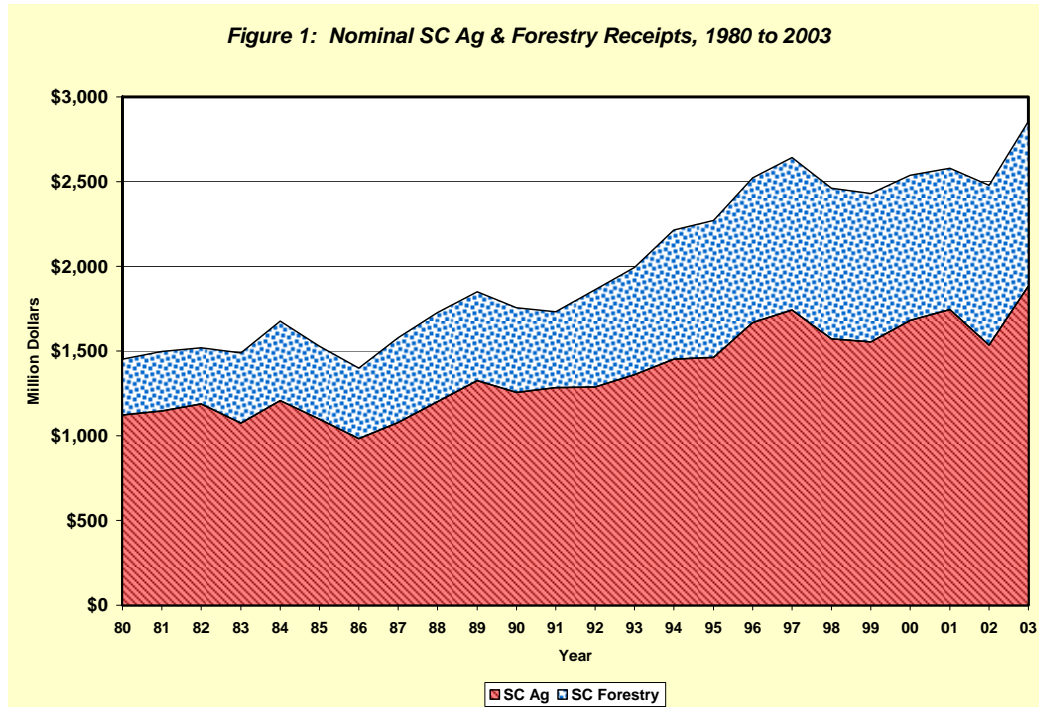
Clearly these measures may be insufficient in describing the contribution of any given industry to a region's economy. For example, the last thirty years has seen dramatic change in retailing. Shifts from the "mom & pop," downtown family-owned store to the mall and "Walmart-type" mega-retailer have occurred. Would one view retailing as less important to the economy now as opposed to the past because the number of firms has consolidated? One would hope not. One should, however, easily comprehend why economic development education is vital in assisting society through these transitions.

South Carolina's Agriculture and Forestry Industry

An appropriate measure of an industry's contribution to a region's economy is the real (inflation adjusted) value of base products produced and sold and to further account for the multiplier effects of the money generated as it

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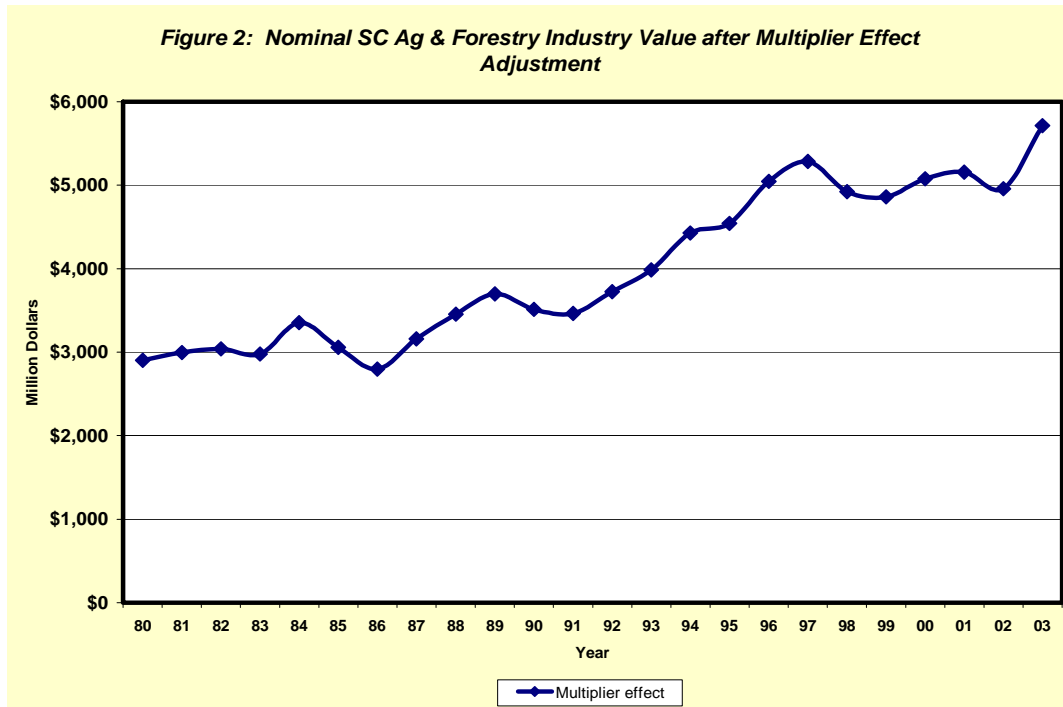
moves through the broader economy. Figure 1 shows South Carolina's Agricultural and Forestry industry base receipts in nominal (not adjusted for inflation) dollars for the period 1980 to 2003 projected.



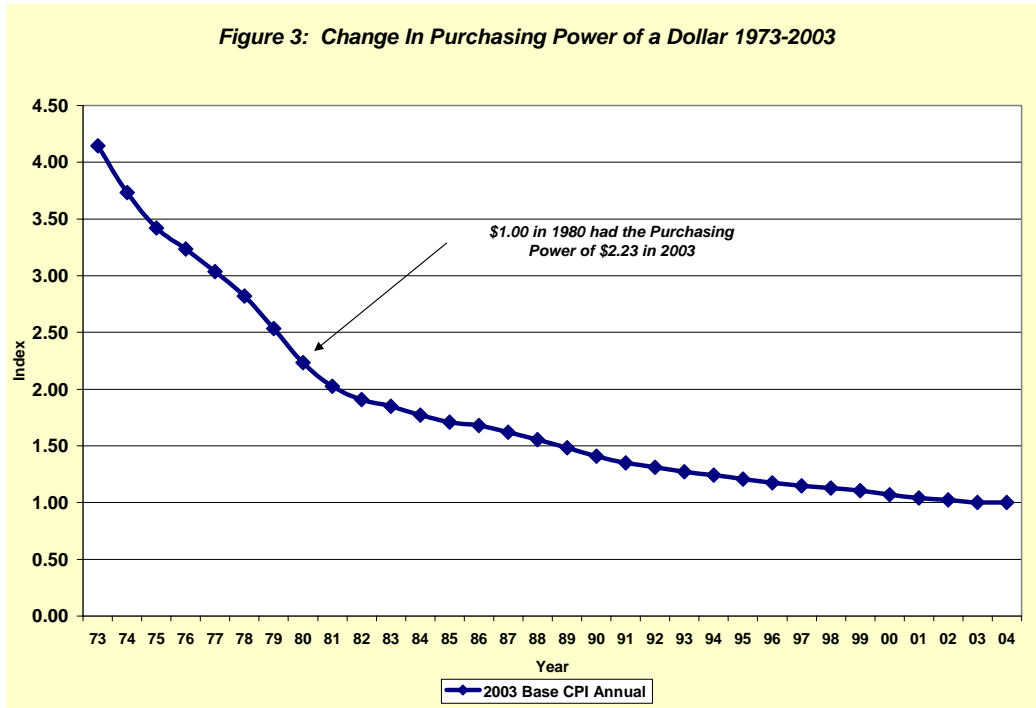
The industry in nominal terms has expanded from 1.5 billion dollars in firm level receipts in 1980 to nearly 3 billion in 2003. When considering the multiplicative impact of the base industry receipts a conservative multiplier of times two is widely used. (Different products have different multipliers e.g. wheat contributes greater than two due to the milling activities.) That is, for every dollar an industry receives, an additional dollar is generated as other firms provide the industry with purchased inputs and services. Figure 2 shows the resultant economic activity assigned to South Carolina's agricultural and forest industry since 1980.

It is important to note that the biological nature of this industry can be seen in the year-to-year volatility in the data. For example, 1998 through 2002 were

years of drought, production difficulties and low prices. However, the general trend of increased nominal contribution is apparent. There was a combined projected impact to the state's economy of over 5.7 billion dollars in 2003.



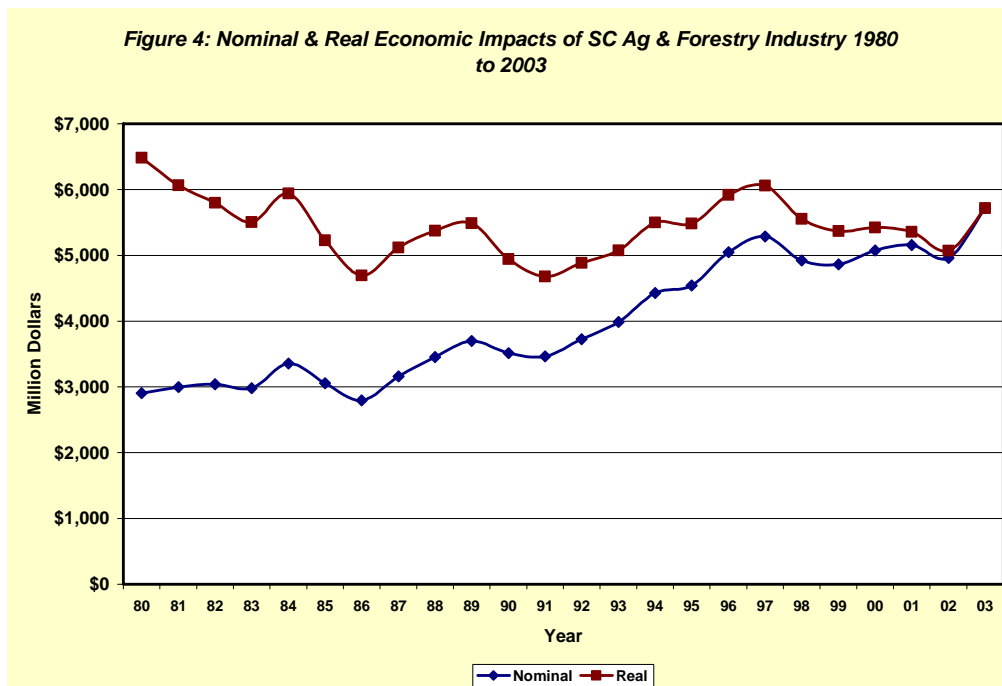
To paint the most accurate picture of impact through time, the data should be converted to the real purchasing power inherent in the income streams. Adjusting for inflation is important because the purchasing power of one dollar is not the same today as it was in 1980. Figure 3 shows the purchasing power of a dollar in 2003 inflation adjusted dollars.



For example one dollar held in 1980 had the purchasing power of 2.23 dollars in 2003. Put in other terms, \$10,000 dollars in 1980 had the real purchasing power of \$22,300. The adjustment for inflation helps place comparisons on even terms. For example, if a firm’s nominal receipts increased 70 percent since 1980 (from \$10,000 in 1980 to \$17,000 in 2003) its nominal receipts are up but its effective purchasing power is diminished (from \$22,300) by approximately 24 percent. Simply put, a dollar in your pocket in 1980 bought a lot more than a dollar does today.

Figure 4 shows the inflation adjusted economic impact of the industry on the State’s economy. Figure 4 indicates that the industry has been a steady economic contributor in the five to six billion dollar range (in 2003 dollars) over the time period. Oscillations again relate, in part, to the biological nature of the

industry. These income streams are what one would typically expect of a mature, solid industry. The state's total economy may have grown such that this industry is less of the total economy now than in decades past. However, that is best viewed as a healthy transition. Economies dependent on one (or too few) industries are more precarious. History abounds with the downfall and difficulties of "monoculture" economies. A diverse, robust economy with multiple industries is preferred.



To restate some of the questions above in reference to SC's agricultural sector, they were:

1. **Has the number of involved firms changed?** Most assuredly, as technologies emerge and individual products (crops, livestock) become more or less profitable, firm numbers and sizes will evolve. As in retailing, agriculture has changed. But, it has not diminished in economic impact.

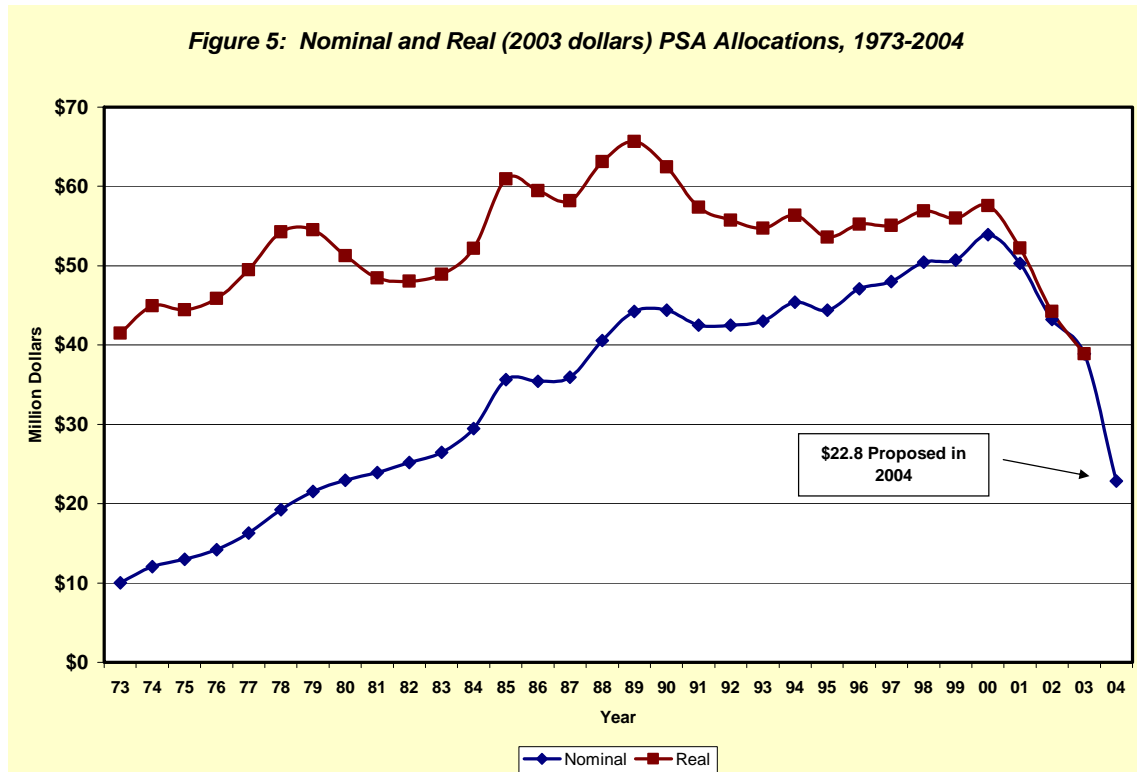
2. ***Has the industry “evolved” through the appropriate adoption of emerging technologies?*** A key word is “appropriate” adoption. One function of the land grant mission is to explore emerging technologies and see if they make sense for the state’s industry. Another important function is to educate about inappropriate technologies to diminish the risk of adoption on society at large.
3. ***Has the mix of products produced and sold changed as customer demand has changed?*** Yes, consumers demand a higher standard of safety and quality in their products today as well as greater form and place utility.
4. ***As the demand base (customers) for the industry’s transitioning products requests use and safety information, to whom do they look for relevant, unbiased information?*** Industry demands assistance from unbiased sources regarding the appropriate use and safety of their products. Land grant universities such as Clemson University are relied upon as an unbiased source of education for this very reason. Simply put, if the industry says a product is safe it may be perceived as self-interested. If unbiased science says it’s safe and can show consumers how to appropriately keep it safe (and environmentally friendly) then the industry and society benefits.

In sum the SC agriculture & forestry industry has not shrunk. It has remained a steady, mature contributor to the state’s economy over the past decades.

The State’s Commitment through Clemson PSA

Figure 5 shows the nominal and real Clemson PSA budget from 1973 through 2003 with the Executive Budget request for 2004 included. Clemson PSA’s nominal budget has generally increased until the year 2000. Since 2000,

the nominal level has plummeted. However, the more telling picture is real purchasing power of the state's commitment. From 1980 through 2001, real PSA funding levels averaged 55.9 million dollars with a high of \$65.68 million in 1989. Subsequent funding has declined to \$44 million, \$38 million and the proposed \$22.8 million dollars in 2002, 2003, and 2004 respectively.

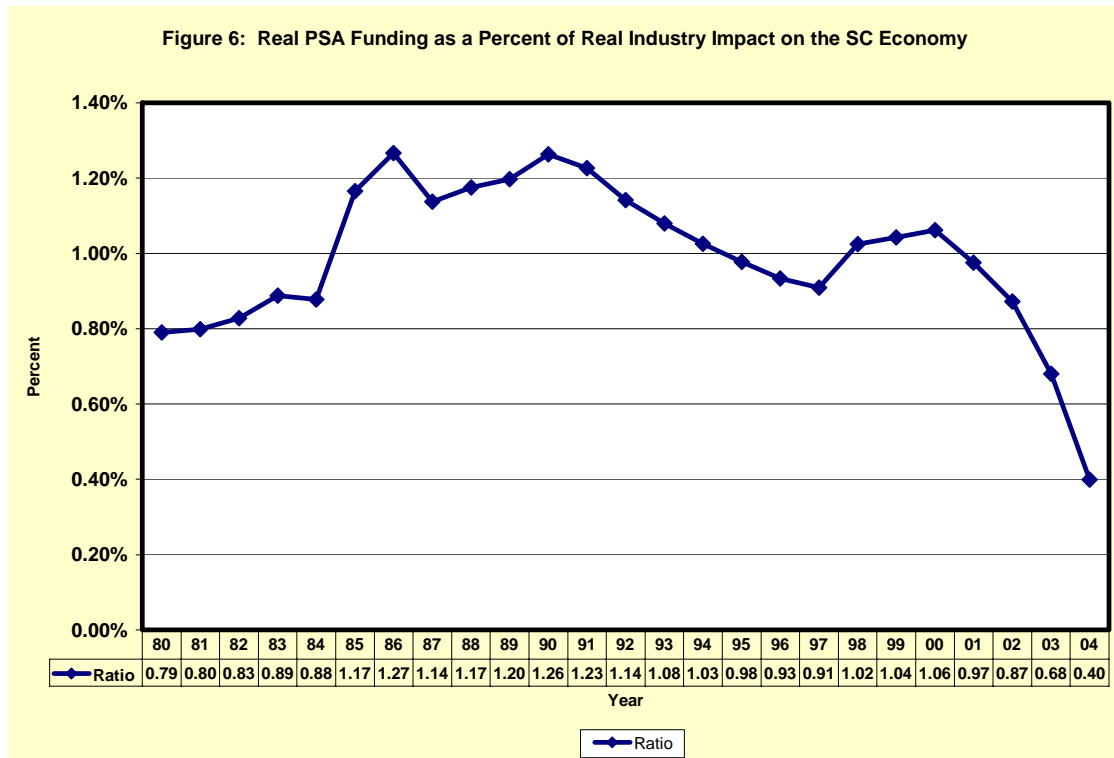


It has been stated that Clemson PSA has received a 70 percent increase in funds since 1980. Clearly this is a nominal value. When the income streams are adjusted for inflation the real change from 1980 (\$51.28 million) to 2003 (\$38.87 million) is a real reduction of 24.2 percent. The executive proposed 2004 funding level of \$22.8 million is a real reduction of 55 percent.

It is also important to point out that the choice of 1980 as the base year from which to compare is well below the average real funding of \$55.9 million for

the 1980 to 2001 period and certainly well below the zenith of \$65.68 million in 1989. Using the period average (\$55.9 million), the real reductions are 30.5 percent and 59 percent respectively for the 2003 and executive proposed 2004 years.

One might want to ask the question “Has there been a real reduction in PSA funding relative to the economic impact of the agricultural industry on the State’s economy?” Figure 6 illustrates the traditional and proposed support of the industry through funding Clemson PSA.



It should be noted that this presumes that all PSA funding goes in support of SC’s agriculture & forestry industry. Some have criticized that mission drift has occurred. It is not the purpose of this paper to address the mission drift issue. But it is important to point out that the federal government and the state’s diverse populations demand more of PSA than only serving the production

agricultural industry. For the period 1980 through 2001 the state funded PSA at an average level of 1.04 percent of the industry's economic impact. Subsequent funding has declined to 0.87 percent, 0.67 percent and the executive proposed 0.40 percent in 2002, 2003, and 2004 respectively.

Another reasonable question is "How much does the industry's economic activity contribute to state receipts (in taxes, fees, etc.)?" This information is not available to the author at this writing. But, let's assume that a seemingly conservative estimate of four percent is realistic. If this were true, the state revenue inflow would be \$228 million on a base of 2003's \$5.7 billion in economic impact. This would make the mature industry of agriculture a large source of revenue for the state coffers.

Is, then, the proposed 2004 allocation for Clemson PSA a "fair" allocation? The question of what is "fair" has as many answers as there are people to address the question. This is a matter for public discourse and dialog. But, it is clear from this review that there has been a real commitment reduction.