ABSTRACT

The Ripple Effect: The Economic Impact of Arizona Supervised Agricultural Experiences

The purpose of this study was to describe the economic impact of entrepreneurial and placement Supervised Agricultural Experiences on the Arizona economy. The study's research design was quantitative and descriptive. High school agricultural education students who kept records in the Agricultural Experience Tracker (AET) during 2012-2013 became the study's population. The unit of measurement was defined as the state of Arizona. Analysis of the 1,721 qualifying project records took the form of descriptive statistical calculations and economic modeling in IMPLAN, an economic input-output examination tool. Modeling in IMPLAN for entrepreneurial and placement SAEs involved manipulating the data set, aligning assigned AET codes to North American Industry Classification System (NAICS) codes, and aggregating the resulting sectors into IMPLAN sectors. Three scenarios of placement income, entrepreneurial spending, and entrepreneurial profit were used to shock the defined regional economy of Arizona. In the end, the total study output effect from these three scenarios was summed and Type II multipliers were extracted to describe the ripple effect of student investments on the Arizona economy.

The study provided documentation to support the experiential learning mission of agricultural education. The real-world learning opportunities that occur through SAE participation are applications of Dewey's experiential learning theory. Input-output modeling in IMPLAN analyzed the monetary changes and tracked the flow of spending on products and services fueled by student spending and income. As a result of the $1,442,870 of entrepreneurial gross income, $721,566 of entrepreneurial project spending, and $353,108 in placement wages, an estimated total economic output effect for the study equaled $22,249,135. It is important to
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Note that the majority of the study's impact came from the employment effect of a placement income impact run and the assumptions made about student-worker productivity.

The placement project Type II employment multiplier was 1.53 and revealed that for every eight placement projects, an additional job was created annually in Arizona. Entrepreneurial project spending revealed a 1.79 Type II output multiplier that meant for every new dollar spent by students, $0.79 of additional monetary impact was created. The findings are consistent with related economic impact research and demonstrate that SAEs do have an economic impact on a region's economy.

Implications suggest a need for increased support of SAEs and other work-based learning programs within Career and Technical Education (CTE). A number of practices, including stronger emphasis on building economic and business acumen of teachers and greater accuracy of recordkeeping through matching AET codes with NAICS industry sectors, could be instituted. Recommendations for further research included examination of student-worker productivity and discovery of additional CTE areas that could benefit from economic input-output modeling through IMPLAN analysis. Following study recommendations could result in increased student participation in work-based learning, additional economic impact for a regional economy, and propel students who possess 21st century skills into the workforce ready to meet the food and fiber demands of a growing global economy.