



# THE ECONOMIC CONTRIBUTION OF THE UNIVERSITY OF ARIZONA COOPERATIVE EXTENSION SUPPLEMENTAL NUTRITION ASSISTANCE PROGRAM EDUCATION (SNAP-ED) SPENDING TO THE STATE OF ARIZONA

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## Introduction

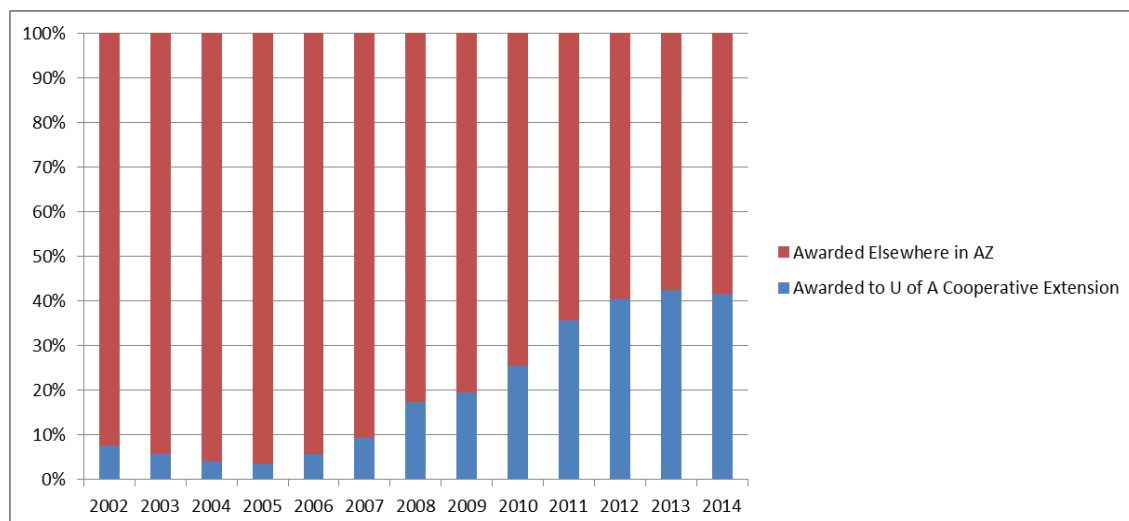
The Supplemental Nutrition Assistance Education program (SNAP-Ed) operates throughout Arizona to encourage healthy eating, increase physical activity, and maintain appropriate calorie balance for healthy body weights for people in low-income households that receive or are eligible for SNAP benefits.

The United States Department of Agriculture’s Food and Nutrition Service allocates SNAP-Ed funding to the Arizona Department of Health Services (AZDHS), bringing money into the state economy. The AZDHS then grants competitive funds to the University of Arizona (UA) Cooperative Extension. Since 2002, the share of total competitive grant funds awarded to the UA has increased significantly, as indicated in Figure 1. Since 2012, the UA Cooperative Extension SNAP-Ed program has managed approximately 40% of Arizona’s allocation of SNAP-Ed funding.

## SNAP-Ed Economic Contributions to Arizona

The funding brought to the state of Arizona through the SNAP-Ed program contributes to the Arizona economy in a variety of ways. The SNAP-Ed program uses the federal funds it obtains for nutrition and physical activity outreach education, policy, and systems development for people and communities receiving or eligible to receive SNAP. Purchases made for conducting this work generate economic activity throughout the state. These purchases include resources such as curricula, teaching materials and supplies, food demonstration equipment and ingredients. The program also contributes to the economy by employing local residents to deliver the program to SNAP and SNAP eligible participants. Yet, the contribution of SNAP-Ed spending to the state economy extends beyond these **direct effects**. Based on the tenet that all industries in the economy are linked together, SNAP-Ed program spending generates a ripple of economic

Figure 1. Proportion of AZ SNAP-Ed Funding Awarded to UA Cooperative Extension, 2002-2014.



Source: University of Arizona Cooperative Extension SNAP-Ed Budget Awarded data from Accountant Principal

activity in other industries of the Arizona economy. Economists call this the **multiplier effect**.

For example, when the SNAP-Ed program purchases materials (like those listed above) from suppliers, the suppliers must then purchase materials to produce these goods (e.g. the printing agency must purchase paper, ink, and other resources and the grocery store must purchase vegetables and fruits from a wholesaler or from the farm directly). Those producers, in turn, must also purchase goods and services from other industries (e.g. the farm purchases seeds, water, and fertilizers, etc.) and so on. These business-to-business transactions are called **indirect effects**.

In addition to increased economic activity between businesses, there is also increased economic activity resulting from the SNAP-Ed program employing local residents. Program employees spend their paychecks within the local economy to pay for goods and services, such as groceries, doctor visits, hobbies, eating out, etc. These household-to-business transactions are called **induced effects**.

While determining the complete economic and social impacts of the SNAP-Ed programming is beyond the scope of this report, the analyses summarized here focus on *estimating the total economic contribution of the UA Cooperative Extension SNAP-Ed program spending to the state of Arizona for the years 2011 and 2012*<sup>1</sup>. Summary results are presented in this report and economic contributions are described through the following metrics:

- Employment – number of full-time equivalent (FTE) jobs
- Labor income – total income earned; it includes employee compensation (wages and benefits) and proprietor income

- Output – total value of production or total economic activity; it is typically measured by gross sales
- Value Added – net gain in economic activity as defined as Output (gross sales) minus the cost of inputs (resources); it includes wages and salaries, profits, and taxes

## Translating SNAP-Ed Spending to its Contribution to the State Economy

The IMPLAN 3.0<sup>2</sup> input-output modeling program was used to estimate the total economic contribution of the UA Cooperative Extension SNAP-Ed program spending to the Arizona economy. This total economic contribution included SNAP-Ed expenditures for program implementation (direct effects) as well as the multiplier effects, or the economic activity generated from resource suppliers (indirect effects) and employee spending (induced effects).

For this analysis, the budget was divided into two primary components: payroll expenses and non-payroll expenses. The payroll expense component included the budget categories Personnel Costs/Salary and Benefits. It also included the budget category Contract Agreements as this was assumed to cover the costs of staff working under subcontract agreements. Non-payroll expenses were comprised of the remaining seven budget categories: Non-Capital Equipment Supplies, Materials, Travel, Building/Space, Maintenance, and Equipment & Other Capital, and Indirect Costs (IDC). Table 1 below provides a summary budget of SNAP-Ed spending for the years of analyses, including a description of the IDC contributions that support UA overhead for facilities and administration costs. These are the direct effects of UA Cooperative Extension SNAP-Ed program spending.

Table 1. The UA Cooperative Extension SNAP-Ed Program Summary Budget, 2011-2012.

Expense Categories (Millions in current dollars)	2011	2012
Payroll Expenses	\$2.2	\$2.4
Non-Payroll Expenses	\$2.5	\$3.3
Supplies, Materials, Equipment, Travel, etc.	\$1.6	\$2.2
Indirect Costs <sup>3</sup>	\$0.9	\$1.1
University of Arizona Sponsored Projects Services	\$0.7	\$0.8
College of Agriculture and Life Sciences	\$0.1	\$0.2
County Units Indirect Costs	\$0.1	\$0.1
<b>Total Program Spending (Millions)</b>	<b>\$4.7</b>	<b>\$5.7</b>

Source: University of Arizona Cooperative Extension SNAP-Ed Expense data from Accountant Principal

<sup>1</sup> Individual reports were completed for 2011 and 2012, the summary of which is presented in this report. The year 2011 was selected as the first year of analysis because it was the first year in which federal dollars were the sole source of funding, whereas in previous years the program's funding had included matching funds.

<sup>2</sup> IMpact analysis for PLANning Version 3.0 (IMPLAN Group, LLC).

<sup>3</sup> Indirect cost (IDC) calculations have changed over the years. The data presented here represents the IDC in 2011 and 2012, respectively, and are summary figures only.

In order to capture the indirect effects (the effects from business-to-business transactions) non-payroll expenses were applied to the model and distributed in a way that represents the typical spending pattern of a public education institution<sup>4</sup>. The induced effects (household-to-business transactions) were captured by applying payroll expenses to labor income earned by UA Cooperative Extension SNAP-Ed program employees, and modeling the resulting economic activity from them spending their paychecks in Arizona<sup>5</sup>. The total economic contributions of SNAP-Ed spending for the years 2011 and 2012 are presented in Table 2 below, with all metrics except employment measured in current dollars.

## 2011

In 2011, the UA Cooperative Extension SNAP-Ed program generated \$4.7 million in direct economic activity (output) through its spending, with \$2.2 million of that amount accounting for the direct labor income earned by the 75 full-time equivalent (FTE) jobs directly supported by the UA SNAP-Ed program. The model estimates that these direct contributions from UA SNAP-Ed spending supported an additional 33 FTE jobs, \$1.9 million in labor income, \$3.0 million in value added, and \$5.0 million in output in other Arizona industries through the indirect and induced effects. Thus, the total economic contribution of UA Cooperative Extension SNAP-Ed program spending in 2011, including multiplier effects, was 108 FTE jobs<sup>6</sup>, \$4.1 million in labor income, \$5.2 million in value added, and \$9.7 million in total output.

## 2012

In 2012, the UA Cooperative Extension SNAP-Ed program generated \$5.7 million in direct economic activity (output) through its spending, with \$2.4 million of that amount accounting for the direct labor income earned by the 62 full-time equivalent (FTE) jobs directly supported by the UA SNAP-Ed program. The model estimates that these direct contributions from UA SNAP-Ed spending supported an additional 39 FTE jobs, \$2.3 million in labor income, \$3.6 million in value added, and \$6.1 million in output in other Arizona industries through the indirect and induced effects. Thus, the total economic contribution of UA SNAP-Ed spending in 2012, including multiplier effects, was 101 FTE jobs, \$4.7 million in labor income, \$6.1 million in value added, and \$11.8 million in total output.

As demonstrated in Table 2 below, the total economic contribution (including multiplier effects) of UA Cooperative Extension SNAP-Ed program spending to the state economy can vary substantially from year to year, depending on the amount of the grant awarded to the program and the economic activity of the program (or the amount expended for program operations). The total economic contribution from the UA Cooperative Extension SNAP-Ed program in 2012 was higher than 2011 due to an increase in total spending of approximately 1 million dollars.

Table 2. Total Economic Contribution of UA SNAP-Ed Spending, 2011 and 2012.

	2011	2012
<b>Total Employment (FTE)</b>	<b>108</b>	<b>101</b>
Direct Employment	75	62
Indirect and Induced Employment	33	39
<b>Total Labor Income (millions in current dollars)</b>	<b>\$4.1</b>	<b>\$4.7</b>
Direct Labor Income	\$2.2	\$2.4
Indirect and Induced Labor Income	\$1.9	\$2.3
<b>Total Value Added (millions in current dollars)</b>	<b>\$5.2</b>	<b>\$6.1</b>
Direct Value Added	\$2.2	\$2.4
Indirect and Induced Value Added	\$3.0	\$3.6
<b>Total Output (millions in current dollars)</b>	<b>\$9.7</b>	<b>\$11.8</b>
Direct Output	\$4.7	\$5.7
Indirect and Induced Output	\$5.0	\$6.1

Source: Author's calculations; University of Arizona Cooperative Extension SNAP-Ed Expense data from Accountant Principal, 2011 and 2012; IMPLAN Group, LLC, 2011.

<sup>4</sup> The public education (state/local government) institution spending pattern was derived from the U.S. national average, available from IMPLAN. Local purchase percentages, or the proportion of sales represented by local production, were set to the SAM model value.

<sup>5</sup> Payroll effects were modeled using a Labor Income Change.

<sup>6</sup> Direct FTE employment was available from SNAP-Ed data. Indirect and induced FTE employment effects were estimated using the conversion rate for Sector 438-Employment in state and local government education.

## References

IMPLAN Group, LLC. (2011). IMPLAN System (data and software). 16740 Birkdale Commons Parkway, Suite 206, Huntersville, NC 28078, [www.IMPLAN.com](http://www.IMPLAN.com).

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