

THE UNIVERSITY OF ARIZONA

TECH PARKS ARIZONA



Economic Impacts of the UA Tech Park 2015



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OF ARIZONA

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Executive Summary

Prepared by

VP Research & Consulting, LLC

Tucson, AZ

June 14, 2016

Economic Impacts of the UA Tech Park in 2015

Executive Summary

Introduction

Economic impacts of an organization, industry, or a cluster of economic activities such as a university research park are commonly measured in terms of jobs, wages, and total output that these economic entities generate in local and regional economies.

Direct jobs (and associated direct wages and direct output) of the UA Tech Park reflect the actual size and volumes of production of goods and services of all tenants. This is also referred to as the “direct contribution” to the regional economy.

Indirect and induced impacts (jobs, wages, and output) are generated through relationships with other sectors in the local economy by way of purchasing goods and services for business operations and household needs. These impacts depend not only on the changes in direct jobs, wages, and outcome at the UA Tech Park, but primarily reflect changes in the complex inter-industry relationships in the entire economy of Pima County and the rest of Arizona.

Impacting Pima County: Direct jobs, wages, and output

In 2015, the UA Tech Park had 38 tenants representing more than 15 different industries, such as guided missiles; semiconductor manufacturing; surgical appliance and supplies manufacturing; search, detection, and navigation instruments manufacturing; scientific research and development services; data processing, and business support services. In addition, a number of tenants provided maintenance services and support to Park’s employees, such as food services.

The total number of persons employed in 2015 was 5,128 which included both regular and contract employees. The direct contribution to the Pima County economy was \$425.0 million in labor income. The total direct output (including labor income) was \$956.2 million. (Exhibit 1)

Exhibit 1

UA Tech Park: Direct impact in Pima County 2015	
Number of employees	5,128
Payroll	\$425.0 million
Output (including payroll)	\$956.2 million

Source: Annual tenant survey; IMPLAN model of Pima County

Indirect and induced impacts

The local inputs into daily operations at the UA Tech Park together with employees' spending in the local economy generated an additional 3,843 jobs in Pima County. The indirect and induced dollar impact (output) was \$538.7 million, of which \$182.2 million was in labor income. (Exhibit 2)

Exhibit 2

UA Tech Park: Indirect & induced impacts in Pima County 2015	
Number of jobs	3,843
Wages.....	\$182.2 million
Output (including wages).....	\$538.7 million
Source: IMPLAN model of Pima County	

Total impact on Pima County's economy

In 2015, the total number of jobs in Pima County's economy associated with the activities at the UA Tech Park was 9,023. The Park contributed a total of \$609.5 million in wages, and an overall contribution to the County's output in the amount of \$ 1,502.7 million. Included in these figures are impacts of construction activity which generated \$7.8 million in output, including \$2.3 million in wages from 52 jobs in Pima County. (Exhibit 3)

Exhibit 3

UA Tech Park: Total economic impacts in Pima County 2015 (including construction-related)	
Jobs	9,023
Wages.....	\$ 609.5 million
Total output	\$ 1,502.7 million (including wages)
Source: IMPLAN model of Pima County	

Multipliers

The overall economic impact of the UA Tech Park on the economy of Pima County in 2015 is expressed in terms of multipliers. (Exhibit 4)

Exhibit 4

UA Tech Park: Composite multipliers 2015 (including construction-related activities)	
Job multiplier.....	1.760
Wage multiplier.....	1.434
Output multiplier	1.572

Source: IMPLAN model of Pima County

The multipliers suggest that every job at the UA Tech Park generated 0.7 (or 76 per every 100) additional jobs in Pima County; every one dollar in wages generated an additional 43 cents in wages, while every dollar in the Park’s output generated an additional 57 cents elsewhere in Pima County.

Impacts on Arizona’s economy

The economic impacts of the UA Tech Park are felt throughout the entire state of Arizona. The total number of jobs in Arizona that depended on the activity of the UA Tech Park was 10,155 in 2015. This figure includes direct jobs on the UA Tech Park premises and all indirect and induced jobs generated through purchases of industrial inputs and consumer spending in Pima County and the rest of Arizona. Statewide, the UA Tech Park activities generated a total of \$1,738.7 million in output, of which \$691.4 million were wages. (Exhibit 5)

Exhibit 5

UA Tech Park: Total impacts on Arizona’s economy in 2015 (including construction-related activity)	
Jobs	10,155
Wages	\$ 691.4 million
Total output	\$1,738.7 million (including wages)

Source: IMPLAN model of Arizona

Contributions to state and local tax revenues

In 2015 in Pima County, the UA Tech Park’s activities generated an estimated \$37.9 million in tax revenues to local and state governments. Through additional spending outside Pima County, the total tax revenue impact was \$50.0 million. (Exhibit 6)

Exhibit 6

UA Tech Park: State and local tax revenues 2015	
Generated in:	
Pima County.....	\$37.9 million
Arizona (including Pima County)	\$50.0 million
Source: IMPLAN model of Pima County and Arizona	

Place of residence of UA Tech Park employees

Less than 10 percent of UA Tech Park employees reside within 5-mi radius. About 28 percent are within 5 to 10-mi radius, and approximately the same number (or 27%) resides within 10 and 15 mi radius. Close to 13 percent reside between 15 and 20 mi radius, and another 10 percent, or every tenth employee, resides between 20 and 25 mi. Less than 8 percent commute from distances beyond 25 miles. For the remaining 5 percent of employees the data were not provided (Exhibit 7).

Exhibit 7

UA Tech Park 2013: Employees by zip code (85xxx) (average distance)	
Less than 5 mi	9.5% (85747)
Between 5 and 10 mi	28.5% (85730, 706,708,710,714,748,711)
Between 10 and 15 mi.....	27.5% (85715,712,713,716,701,641,749,719,746,705)
Between 15 and 20 mi	12.8% (85718, 750, 757, 745,704)
Between 20 and 25 mi	9.6% (85741, 737,743,742)
More than 25 mi.....	7.3% (8539, 755,735, 629,653,614,736,658, 602, 637, 731, 744, 751, 756, 80504, 91320)
Other & N/A	4.9%
Source: Annual tenant survey	

Data and Methodology

This analysis is based on data for calendar year 2015. Data was gathered through the annual tenant survey conducted in spring 2016 in combination with information extracted from the IMPLANⁱ models of Pima County and Arizona. Indirect and induced jobs, associated wages and output in Pima County and Arizona were estimated using the input-output methodology incorporated in the IMPLAN models. The IMPLAN county and state models also provided estimates of aggregated state and local tax revenues.

ⁱ IMPLAN modeling is widely used in academic and applied research of economic impacts associated with industry changes. Originally developed by the University of Minnesota research team, it is now operated and maintained by the MIG, Inc. of Hudson, Wisconsin.

Economic Impacts of the UA Tech Park 2015

Appendix: Tables for Pima County and Arizona

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List of Tables

1. Direct Jobs, Wages, and Output, 2015 Pima County
2. Indirect and Induced Jobs, 2015 Pima County and Arizona
3. Indirect and Induced Wages, 2015 Pima County and Arizona
4. Indirect and Induced Output, 2015 Pima County and Arizona
5. Summary of Operations-Related Impacts, 2015 Pima County
6. Summary of Operations-Related Impacts, 2015 Arizona
7. Construction-Related Impacts, 2015 Pima County
8. Construction-Related Impacts, 2015 Arizona
9. Summary of Operations- and Construction-Related Impacts, 2015 Pima County
10. Summary of Operations- and Construction-Related Impacts, 2015 Arizona
11. Operations-Related Tax Revenues, 2015 Pima County and Arizona
12. Construction-Related Tax Revenues, 2015 Pima County and Arizona
13. Summary of Operations- and Construction-Related Tax Revenues, 2015 Pima Co. and Arizona
14. Summary of UA Tech Park's Economic Impacts in Pima County, 2015
15. Summary of UA Tech Park's Economic Impacts in Arizona, 2015
16. Comparison of 2015 Pima County Impacts with Previous Studies
17. Comparison of 2015 Pima County Impacts with Previous Studies (% Change)
18. Place of Residence of Tenants' Employees by Zip Code, 2015 and 2013

List of Charts

1. Total Job Impact in Pima County 1997-2015
2. Total Wage Impact in Pima County 1997-2015
3. Total Output Impact in Pima County 1997-2015

ECONOMIC IMPACTS 2015

A. OPERATIONS-RELATED ECONOMIC IMPACTS

Table 1. Direct Jobs, Wages, and Output, 2015 Pima County

Operations-related	Jobs	Wages \$ mil	Output* \$ mil
Direct impact	5,128	425.0	956.2

Source: UA Tech Park Tenant Survey; Pima County IMPLAN® Model.
*Includes wages.

Table 2. Indirect and Induced Jobs, 2015 Pima County and Arizona

Operations-related	Pima County	Rest of Arizona	Arizona Total
Indirect jobs	1,275	345	1,620
Induced jobs	2,568	778	3,346
Total	3,843	1,123	4,966

Source: UA Tech Park Tenant Survey; Pima County and Arizona IMPLAN® models.

Table 3. Indirect and Induced Wages, 2015 Pima County and Arizona

Operations-Related	Pima County \$ mil	Rest of Arizona \$ mil	Arizona Total \$ mil
Indirect wages	71.9	29.0	100.9
Induced wages	110.3	52.1	162.4
Total	182.2	81.1	263.3

Source: UA Tech Park Tenant Survey; Pima County and Arizona IMPLAN® models.

Table 4. Indirect and Induced Output,* 2015 Pima County and Arizona

Operations-related	Pima County \$ mil	Rest of Arizona \$ mil	Arizona Total \$ mil
Indirect output	191.9	84.2	276.1
Induced output	346.8	150.1	496.9
Total	538.7	234.3	773.0

Source: UA Tech Park Tenant Survey; Pima County and Arizona IMPLAN® Models.
* Output includes wages.

Table 5. Summary of Operation-Related Impacts, 2015 Pima County

Operations-related	Jobs	Wages \$ mil	Output* \$ mil
Direct	5,128	425.0	956.2
Indirect & induced	3,843	182.2	538.7
Total	8,971	607.2	1,494.9
Composite multiplier	1.749	1.429	1.563

Source: UA Tech Park Tenant Survey; Pima County IMPLAN® model.
*Includes wages.

Table 6. Summary of Operations-Related Impacts, 2015 Arizona**

Operations-related	Jobs	Wages \$ mil	Output* \$ mil
Direct	5,128	425.0	956.2
Indirect & induced	4,966	263.3	773.0
Total	10,094	688.3	1,729.2
Composite multiplier	1.968	1.620	1.808

Source: UA Tech Park Tenant Survey; Arizona IMPLAN® model.
* Output includes wages; **Includes impacts in Pima County.

B. ONE-TIME ECONOMIC IMPACTS FROM CONSTRUCTION ACTIVITY

Table 7. Construction-Related Impacts, 2015 Pima County

Construction-related	Jobs	Wages \$ mil	Output* \$ mil
Direct	29	1.5	5.2
Indirect & induced	23	0.8	2.6
Total	52	2.3	7.8
Composite multiplier	1.793	1.533	1.500

Source: UA Tech Park Tenant Survey; Pima County IMPLAN Model.®
*Output includes wages.

Table 8. Construction-Related Impacts, 2015 Arizona**

Construction-related	Jobs	Wages \$ mil	Output* \$ mil
Direct	29	1.7	5.2
Indirect & induced	32	1.4	4.3
Total	61	3.1	9.5
Composite multiplier	2.103	1.835	1.817

Source: UA Tech Park Tenant Survey; Arizona IMPLAN® model.

*Output includes wages. **Includes impacts in Pima County.

C. TOTAL ECONOMIC IMPACTS: OPERATIONS AND CONSTRUCTION

Table 9. Summary of Operations- and Construction-Related Impacts, 2015 Pima County

Pima County	Jobs	Wages \$ mil	Output* \$ mil
Operations	8,971	607.2	1,494.9
Construction	52	2.3	7.8
Total	9,023	609.5	1,502.7

Source: UA Tech Park Tenant Survey; Pima County IMPLAN® Model.

*Output includes wages.

Table 10. Summary of Operations- and Construction-Related Impacts, 2015 Arizona**

Arizona	Jobs	Wages \$ mil	Output* \$ mil
Operations	10,094	688.3	1,729.2
Construction	61	3.1	9.5
Total	10,155	691.4	1,738.7

Source: UA Tech Park Tenant Survey; Arizona IMPLAN® Model.

*Output includes wages; **Arizona impacts include Pima County.

D. TAX REVENUE IMPACTS

OPERATIONS-RELATED TAX REVENUE IMPACTS

Table 11. Operations-Related Tax Revenues, 2015

Operations-related	Pima County \$ mil	Arizona* \$ mil
Direct	11.1	12.7
Indirect	5.4	8.4
Induced	21.0	28.6
Total	37.5	49.6

Source: Pima and Arizona IMPLAN® models.
*Includes Pima County impacts.

CONSTRUCTION-RELATED TAX REVENUE IMPACTS

Table 12. Construction-Related Tax Revenues, 2015

Construction-related	Pima County \$ mil	Arizona* \$ mil
Direct	0.12	0.1
Indirect	0.13	0.2
Induced	0.09	0.1
Total	0.34	0.4

Source: Pima and Arizona IMPLAN® models.
*Includes Pima County impacts.

TOTAL TAX REVENUE IMPACTS: OPERATIONS AND CONSTRUCTION

Table 13. Summary of Operations- and Construction-Related Tax Revenues, 2015

Source	Pima County \$ mil	Arizona* \$ mil
Operations	37.5	49.6
Construction	0.3	0.4
Total	37.9	50.0

Source: Pima and Arizona IMPLAN® models.
*Includes Pima County impacts.

E. SUMMARY OF ECONOMIC IMPACTS, 2015

Table 14. Summary of UA Tech Park's Economic Impacts in Pima County, 2015

Pima County	Operations	Construction	Total
Jobs	8,971	52	9,023
Wages (mil)	\$607.2	\$2.3	\$609.5
Tax revenues (mil)	\$37.5	\$0.3	\$37.9
Other value added* (mil)	\$850.2	\$5.2	\$855.3
Total output (mil)	\$1,494.9	\$7.8	\$1,502.7

Source: Pima County IMPLAN® model;

*"Other value added" includes value added other than wages and tax revenues. The IMPLAN model does not specify other value added; instead, figures are derived from the output estimate minus wages and tax revenues.

Table 15. Summary of UA Tech Park's Economic Impacts in Arizona, 2015**

Arizona	Operations	Construction	Total
Jobs	10,094	61	10,155
Wages (mil)	\$688.3	\$3.1	\$691.4
Tax revenues (mil)	\$49.6	\$0.4	\$50.0
Other value added* (mil)	\$991.3	\$5.9	\$997.2
Total output (mil)	\$1,729.2	\$9.5	\$1,738.7

Source: UA Tech Park Tenant Survey; Arizona IMPLAN® model.

*"Other value added" includes value added other than wages and tax revenues. The IMPLAN model does not specify other value added; instead, figures are derived from the output estimate minus wages and tax revenues; **Arizona impacts include Pima County.

Table 18. Place of Residence of Tenants' Employees by Zip Code, 2015 and 2013

ZIP	Average distance from UA Tech Park (miles)	Number of employees 2015	% Distribution by Zip 2015	% Distribution by Zip 2013	% Change 2015/2013
85747	3.0	381	9.5	7.6	24.7
Sum <5 mi		381	9.5	7.6	24.7
85730	6.3	284	7.1	6.4	10.9
85706	6.8	219	5.4	5.6	-2.7
85708	7.0	3	0.1	0.2	-62.7
85710	8.2	294	7.3	8.1	-9.7
85714	9.0	25	0.6	0.9	-30.9
85748	9.1	191	4.8	3.6	31.9
85711	9.2	129	3.2	3.1	3.5
Sum 5 to <10		1,145	28.5	27.9	2.2
85715	10.0	106	2.6	2	31.8
85712	11.0	75	1.9	2.3	-18.9
85713	11.2	129	3.2	2.8	14.6
85716	11.7	77	1.9	2	-4.3
85701	12.0	22	0.5	0.4	36.8
85641	12.1	303	7.5	6.4	17.7
85749	12.4	153	3.8	3	26.8
85719	12.5	37	0.9	1.3	-29.2
85746	13.6	148	3.7	4.7	-21.7
85705	14.8	57	1.4	1.8	-21.2
Sum 10 to <15		1,107	27.5	26.7	3.1
85718	15.4	85	2.1	1.9	11.3
85750	15.7	134	3.3	3	11.1
85757	15.9	76	1.9	1.5	26.0
85745	16.3	141	3.5	3.7	-5.2
85704	18.3	78	1.9	2.3	-15.7
Sum 15 to <20 mi		514	12.8	12.4	3.1
85741	20.5	82	2.0	2.7	-24.5
85737	22.3	95	2.4	2.6	-9.1
85743	23.0	118	2.9	3.1	-5.3
85742	23.6	90	2.2	2.6	-13.9
Sum 20 to <25 mi		385	9.6	11.0	-13.0
85739	25.2	17	0.4	0.3	40.9

85755	25.6	45	1.1	1.2	-6.7
85735	28.8	26	0.6	0.8	-19.2
Sum 25 to <30 mi		88	2.2	2.3	-4.8
85629	31.0	117	2.9	4.5	-35.3
Sum 30 to <40 mi		117	2.9	4.5	-35.3
85653	40.6	28	0.7	0.8	-13.0
85614	40.7	22	0.5	0.9	-39.2
85736	44.1	8	0.2	0.3	-33.7
85658	47.2	30	0.7	0.9	-17.1
Sum >40 mi		88	2.2	2.9	-24.5
85602		1	0.0	0	
85637		3	0.1	0	
85731		1	0.0	0	
85744		1	0.0	0	
85751		2	0.0	0	
85756		17	0.4	0.1	322.8
80504		1	0.0	0	
91320		1	0.0	0	
N/A		169	4.2	4.4	-4.5
Sum other & N/A		196	4.9	4.5	8.3
Total		4,021	100.0	100.0	

Source: UA Tech Park Tenant Survey 2015; 2013.

COMPARISON WITH PREVIOUS STUDIES

Table 16. Comparison of 2015 Pima County Impacts with Previous Studies (wages, taxes, and output in \$ millions)*

	1997-98	1999	2000-01	2003-04	2007	2008	2009	2010	2013	2015
Number of tenants	17	21	31	31	32	40	40	45	47	38
Direct jobs	4,173	5,309	5,949	6,226	6,175	6,938	6,494	5,961	6,226	5,128
Total jobs (operations)	8,491	10,866	12,150	12,985	13,027	14,787	11,835	12,662	14,321	8,971
Total jobs (construction)	144	1,673	345	320	220	16	33	77	38	52
Total job impact	8,635	12,539	12,495	13,305	13,247	14,803	11,868	12,739.0	4,359	9,023
Wage impact (operations)	358.9	437.8	595.7	607.6	678.9	900.4	610.1	652.2	845.9	609.5
Wage impact (construction)	3.5	40.2	8.3	24.0	9.2	0.7	1.3	3.0	1.7	2.3
Total wage impact	362.4	478.0	604.0	631.6	688.1	901.1	611.4	655.2	847.6	609.5
Tax revenues (operations)	28.7	34.8	48.7	43.1	63.0	77.8	41.0	42.2	51.3	37.5
Tax revenues (construction)	0.1	4.0	0.3	0.6	0.9	0.1	0.2	0.3	0.1	0.3
Total tax revenue impact	28.8	38.8	49.0	43.7	63.9	77.9	41.2	42.5	51.4	37.9
Dollar impact (operations)	,127.3	1,361.8	1,850.4	1,896.9	2,417.6	,019.5	2,163.9	2,297.7	2,332.0	1,494.9
Dollar impact (construction)	7.2	83.5	17.2	27.4	35.9	1.4	5.2	8.1	5.2	7.8
Total dollar impact	1,134.5	1,445.3	1,867.6	1,924.3	2,453.5	3,020.9	2,169.1	2,305.8	2,337.2	1,502.7

Source: Source: *Impact Studies 1997-1998, 1999, 2000-2001, 2003-2004, 2007, 2008, 2009 2010, 2013, and 2015.*

*Impacts 2013 and 2015 do not include visitors' impacts. In previous studies visitors' impacts are reported together with construction-related impacts.

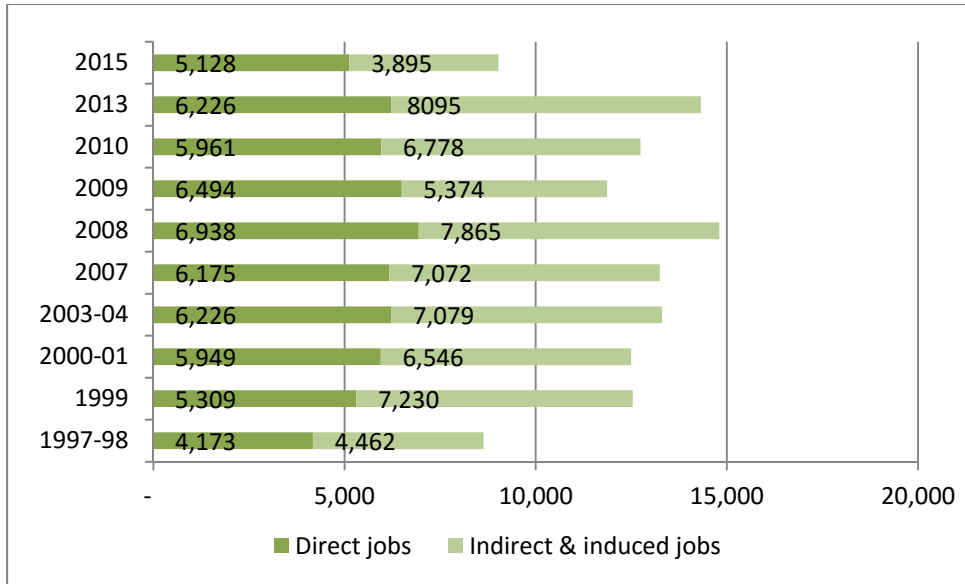
Table 17. Comparison of 2015 Pima County Impacts with Previous Studies (% change)*

	2015/ 1997	2015/ 1999	2015/ 2000	2015/ 2003	2015/ 2007	2015/ 2008	2015/ 2009	2015/ 2010	2015/ 2013
Number of tenants	123.5	81.0	22.6	22.6	18.8	(5.0)	(5.0)	(15.6)	(19.1)
Direct jobs	22.9	(3.4)	(13.8)	(17.6)	(17.0)	(26.1)	(21.0)	(14.0)	(17.6)
Total jobs (operations)	5.7	(17.4)	(26.2)	(30.9)	(31.1)	(39.3)	(24.2)	(29.2)	(37.4)
Total jobs (construction)	-63.9	(96.9)	(84.9)	(83.8)	(76.4)	225.0	57.6	(32.5)	36.8
Total job impact	4.5	(28.0)	(27.8)	(32.2)	(31.9)	(39.0)	(24.0)	(29.2)	(37.2)
Wage impact (operations)	69.8	39.2	2.3	0.3	(10.2)	(32.3)	(0.1)	(6.5)	(27.9)
Wage impact (construction)	-34.3	(94.3)	(72.3)	(90.4)	(75.0)	228.6	76.9	(23.3)	35.3
Total wage impact	68.2	27.5	0.9	(3.5)	(11.4)	(32.4)	(0.3)	(7.0)	(28.1)
Tax revenues (operations)	30.7	7.8	(23.0)	(13.0)	(40.5)	(51.8)	(8.5)	(11.1)	(26.9)
Tax revenues (construction)	200.0	(92.5)	-	(50.0)	(66.7)	200.0	50.0	3.4	200.0
Total tax revenue impact	31.6	(2.3)	(22.7)	(13.3)	(40.7)	(51.3)	(8.0)	(10.8)	(26.3)
Dollar impact (operations)	32.6	9.8	(19.2)	(21.2)	(38.2)	(50.5)	(30.9)	(34.9)	(35.9)
Dollar impact (construction)	8.3	(90.7)	(54.7)	(71.5)	(78.3)	457.1	50.0	(3.7)	50.0
Total dollar impact	32.5	4.0	(19.5)	(21.9)	(38.8)	(50.3)	(30.7)	(34.8)	(35.7)

* Impacts 2013 and 2015 do not include visitors' impacts. In previous studies visitors' impacts are reported together with construction-related impacts.

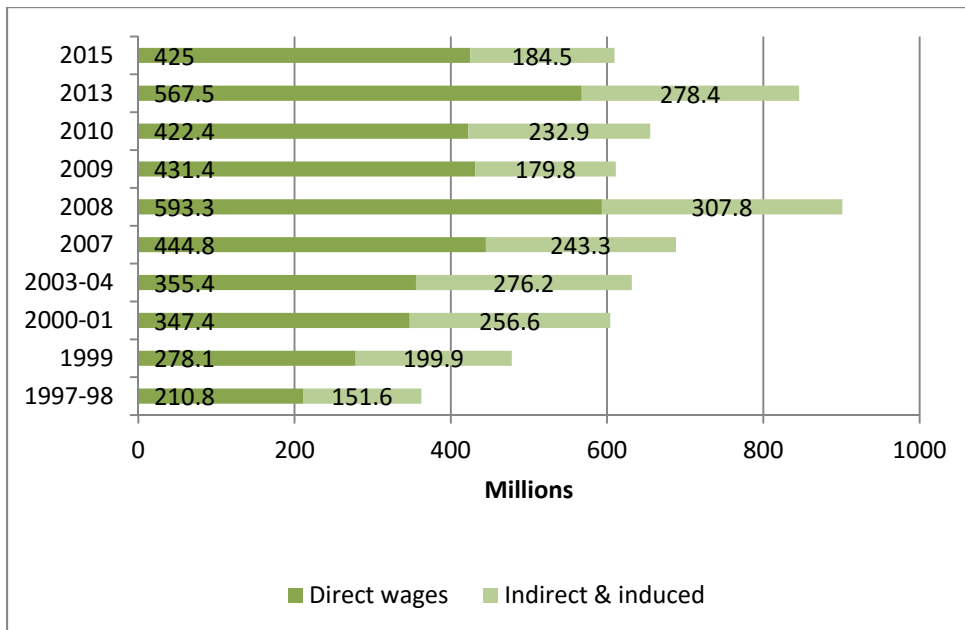
Source: Impact Studies 1997-1998, 1999, 2000-2001, 2003-2004, 2007, 2008, 2009 2010, 2013, and 2015.

Chart 1. Total Job Impact in Pima County 1997-2015



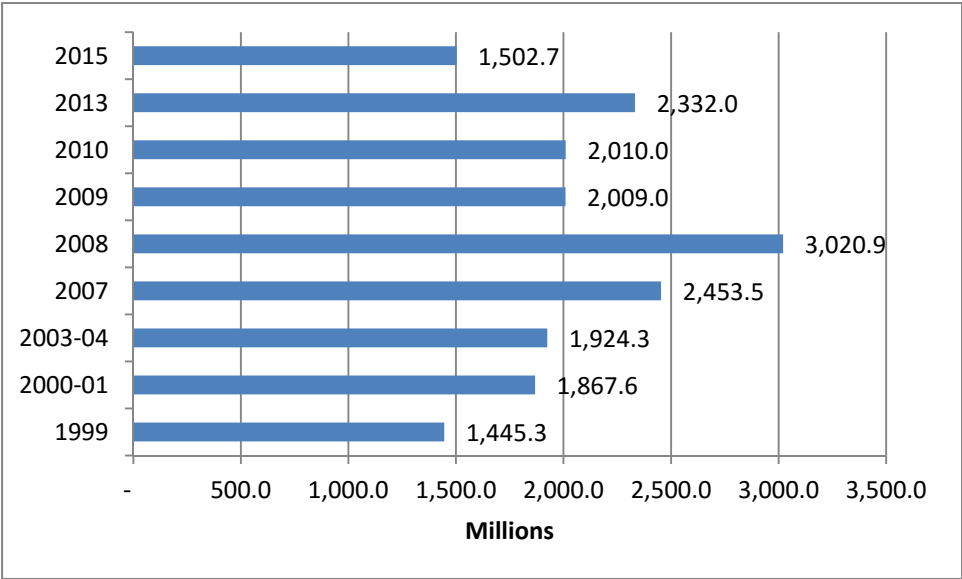
Source: Impact Studies 1997-1998, 1999, 2000-2001, 2003-2004, 2007, 2008, 2009, 2010, 2013, and 2015.

Chart 2. Total Wage Impact in Pima County 1997-2015



Source: Impact Studies 1997-1998, 1999, 2000-2001, 2003-2004, 2007, 2008, 2009, 2010, 2013, and 2015.

Chart 3. Total Dollar Impact in Pima County 1997-2015



Source: Impact Studies 1997-1998, 1999, 2000-2001, 2003-2004, 2007, 2008, 2009, 2010, 2013, and 2015.

Referenced studies:

VP Research & Consulting, LLC, *Economic Impacts of the UA Tech Park 2013*. Prepared for the University of Arizona Tech Parks Arizona, 2014.

Lim, J., *The University of Arizona Science and Technology Park: Economic Impact 2009*. The University of Arizona Office of University Research Parks, 2012.

Pavlakovich-Kochi, V. *The UA Tech Park: Economic Impact 2010*. The University of Arizona Eller College of Management, 2013.

Pavlakovich-Kochi, V. and A.H. Charney. *Impact of the University of Arizona Science and Technology Park on the Economy of Tucson and Pima County. An Economic and Tax Revenue Impact Analysis for FY 2003-2004*. The University of Arizona Office of Economic and Policy Analysis, 2005.

Pavlakovich-Kochi, V. and A.H. Charney. *Impact of the University of Arizona Science and Technology Park on the Economy of Tucson and Pima County. An Economic and Tax Revenue Impact Analysis for FY 2000-2001*. The University of Arizona Office of Economic Development, 2002.

Pavlakovich-Kochi, V. and A.H. Charney. *Impact of the University of Arizona Science and Technology Park on the Economy of Tucson and Pima County: An Economic and Revenue Impact Analysis 1999*. The University of Arizona Office of Economic Development, 2000.

Pavlakovich, V.K., A.H. Charney and A. Weister-Burns. *The University of Arizona Science and Technology Park: An Economic and Revenue Impact Analysis for Fiscal Year 1997-98*. The University of Arizona Office of Economic Development, 1999.

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VP Research & Consulting LLC (VP standing for “Very Professional”) was founded and managed by Dr. Vera Pavlakovich-Kochi in Tucson, Arizona. During more than 25 years at the University of Arizona as senior regional scientist and affiliate faculty, Dr. Pavlakovich-Kochi authored and co-authored numerous studies, including impact assessment of various agents on local and regional economies, such as universities and science and research parks; Mexican maquiladora sector; fresh produce industry; Mexican visitors to Arizona, and transborder region-building. Articles on Arizona's economy and U.S.-Mexican border have been published in *Arizona's Economy*, *Arizona's Review*, *Journal of Borderlands Studies*, *Revista de El Colegio de Sonora*, *Estudios Sociales*, *Studies in Regional Science*, as book chapters, the Arizona Town Hall reports, and online at <https://azmex.eller.arizona.edu>. Dr. Pavlakovich-Kochi holds B.A. and M.A. degrees from the University of Zagreb, Croatia, and a Ph.D. degree in Geography and Regional Development from Kent State University. Dr. Pavlakovich-Kochi is a Fulbright scholar (Austria 1997).



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