



# The Economic Impact

of New Mexico State University in 2010



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**The Economic Impact of New Mexico State University in 2010**

Prepared by

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### Executive Summary

New Mexico State University (NMSU) is an important part of the New Mexico economy. NMSU is a comprehensive land-grant institution of higher learning with five campuses (in addition to the main campus in Las Cruces, NMSU has campuses in Alamogordo, Carlsbad, Grants and a separate Las Cruces campus for Doña Ana Community College). In addition, NMSU operates a satellite learning center in Albuquerque, extension offices in all 33 New Mexico counties and 13 science and research centers located throughout the state.

NMSU's Arrowhead Center produced this report at the request of the President of New Mexico State University, Barbara Couture. The purpose of the report is to estimate the economic impacts of NMSU on the economy of the State of New Mexico for the calendar year 2010. Since the focus of the study is on the state economy, in-state sources of funding such as state appropriations and the spending of resident students have been excluded from the analysis.

The economic impacts of institutions of higher education arise from several sources including: (1) the purchases goods and services made by the university; (2) expenditures of the university on construction; (3) the expenditures of students; (4) the expenditures of university faculty and staff; (5) the expenditures of visitors from out-of-state to the university campuses; (6) the additional earnings of university graduates who remain in the state after graduation; (7) in-state travel expenditures; (8) and the economic development activities of the university.

Major findings of the analysis indicate that NMSU operations in calendar year 2010 resulted in:

- Jobs (full and part-time): 9,558
- Gross Domestic Product: \$902.4 million
- Total Personal Income: \$809.8 million
- Disposable Personal Income: \$731.5 million
- State Tax Revenue: \$65.8 million

The estimated impacts reflect only the contributions to the state economy associated with out-of-state funding — estimated to be 37.7 percent of total NMSU funding.

The full NMSU economic impact report is available on the web at:  
<http://www.nmsu.edu/president/>

### Section 1: Introduction

New Mexico State University (NMSU), with operations in each of New Mexico's 33 counties, generates important economic impacts in the state. NMSU is a comprehensive land-grant institution of higher learning with five campuses (in addition to the main campus in Las Cruces, NMSU has campuses in Alamogordo, Carlsbad, Grants and a separate Las Cruces campus for Doña Ana Community College). In addition, NMSU operates a satellite learning center in Albuquerque, extension offices in all 33 New Mexico counties and 13 science and research centers located throughout the state. Map 1.1 shows the presence of NMSU throughout the state.

NMSU is a Hispanic Serving Institution (HSI) under Title III and Title V programs administered by the Office of Postsecondary Education of the U.S. Department of Education. The Carnegie Foundation ranks NMSU as a Research University with high research activity (RU/H).

NMSU's Arrowhead Center produced this report at the request of the President of New Mexico State University, Barbara Couture. The purpose of the report is to estimate the economic impact of NMSU on the economy of the State of New Mexico for the calendar year 2010. The economic impacts have been calculated using a 169 sector REMI PI+ model of the New Mexico economy. The model is described in more detail in a later section.

Economic impact analysis is an effort to estimate the **net** changes in economic activity that result from a new event or activity. Obviously, NMSU and its operations are not "new." The impacts presented in the report should be interpreted as losses to the state economy if NMSU did not exist. Since the focus of the study is on the state economy, in-state sources of funding such as state appropriations and the spending of resident students have been excluded. More information on these issues appears in the methods section.

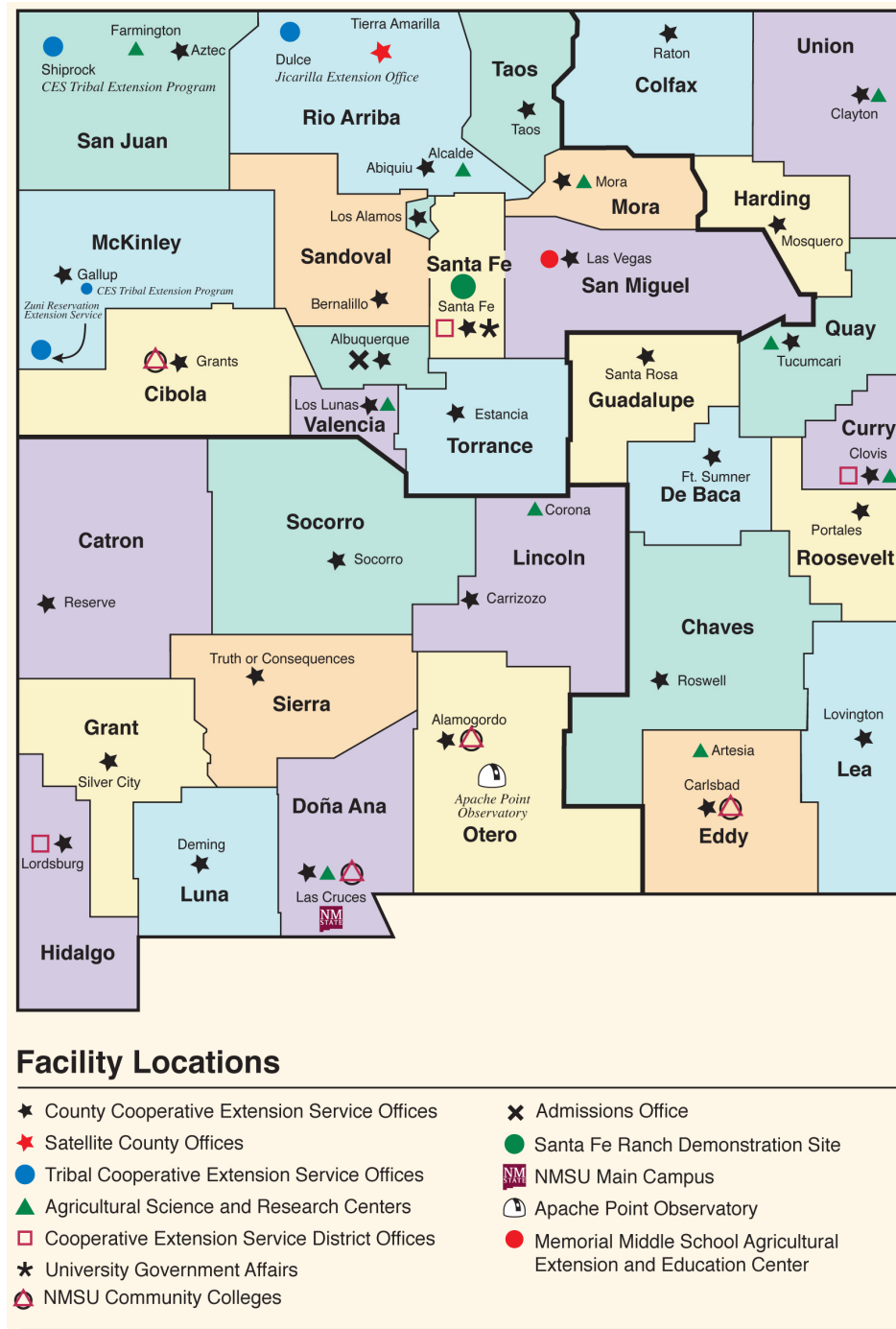
The economic impacts of institutions of higher education arise from several sources including: (1) the purchases goods and services made by the university; (2) expenditures of the university on construction; (3) the expenditures of students; (4) the expenditures of university faculty and staff; (5) the expenditures of visitors to the university campus; (6) the additional earnings of university graduates who remain in the region after graduation; (7) and the economic development activities of the university, including spin-off firms.

This report is not comparable to earlier reports on the impact of NMSU (1992 and 2004). The focus of the earlier reports was on the impact of NMSU and Doña Ana Community College on Doña Ana County, while this report examines the impact of all NMSU operations on the entire state. This report also is not comparable to most other economic impact studies (University of New Mexico 2004, University of New Mexico 2011, or Montana State University 2010). Indeed, very few economic impact studies of institutions of higher education can be compared in any meaningful sense. Time periods differ, items included differ, the economic models used differ, and as a general rule each study contains different assumptions. In short, the best course of action when tempted to compare university impact studies is to resist the temptation to do so.





Map 1.1 New Mexico State University Locations



Source: New Mexico State University College of Agriculture, Consumer, and Environmental Sciences, Cooperative Extension Service, <http://aces.nmsu.edu/county/docs/ces%20map.pdf>.

During the fall of 2010, nearly 36,000 faculty, staff or students were active on one of NMSU's campuses. The vast majority (30,121 or 84.1 percent) were students. Table 1.1 provides an unduplicated headcount by campus for fall 2010.

**Table 1.1**
**Fall 2010 Unduplicated Headcounts**
**New Mexico State University, All Campuses**

	Las Cruces	Dona Ana	Alamogordo	Carlsbad	Grants	Totals
Faculty	1,172	512	144	92	69	1,989
Staff	3,181	300	138	110	47	3,776
Students	17,801	8,079	2,100	1,317	743	30,121
Unduplicated Total	22,154	8,891	2,382	1,519	859	35,805

Source: Office of Institutional Analysis.

Notes: Faculty and staff headcounts are based on the IPEDS Cube as of November 1, 2010; student headcounts are based on ODS Fall 2010 Census. Graduate students and undergraduate employees are excluded from the faculty and staff headcounts. Student headcounts are based on the campus associated with the student's primary major regardless of where the student is enrolled. Faculty and staff who are taking courses have been excluded from the student head counts. The total number of students (30,121) includes 81 students who are on co-op or student exchange.

The five campuses spent \$648 million on average during Fiscal Years 2010 and 2011. The majority of that amount, \$542 million, was spent on the main campus in Las Cruces. For all campuses, 36.8 percent of expenditures were on Instructional and General. Another 31.3 percent was spent on research and public service. The university system awarded student aid, grants and stipends totaling 13.7 percent of expenditures. Another 14.9 percent was spent on auxiliary enterprises, independent operations, capital outlay, renewal and replacement, and internal and external debt. The remainder was spent on intercollegiate athletics (2.3 percent). Table 1.2 displays expenditure data by campus for the average of the two-year period.

**Table 1.2**
**Expenditures for All Campuses**
**Average for Fiscal Years 2009-2010 and 2010-2011**

	Las Cruces	Dona Ana	Alamogordo	Carlsbad	Grants	All Campuses	
Expenditures	Value	Value	Value	Value	Value	Grand Total	Percent of Total
Instructional and General	\$179,294,010	\$35,018,934	\$11,464,805	\$8,214,143	\$4,839,406	\$238,831,297	36.8
Student Soc & Cultural Dev Activities	\$3,621,784	\$221,899	\$31,732	\$52,455	\$17,977	\$3,945,846	0.6
Research	\$138,805,277	\$0	\$0	\$0	\$0	\$138,805,277	21.4
Public Service	\$63,579,679	\$576,012	\$324,085	\$1,498,401	\$214,858	\$66,193,034	10.2
Internal Service Depts	\$1,058,664	\$54,514	\$0	\$12,329	\$19,323	\$1,106,184	0.2
Student Aid Grants & Stipends	\$57,765,146	\$20,855,163	\$5,190,919	\$2,723,480	\$2,236,486	\$88,771,193	13.7
Auxiliary Enterprises	\$23,883,242	\$644,051	\$41,271	\$92,474	\$38,735	\$24,699,772	3.8
Intercollegiate Athletics	\$15,204,325	\$0	\$0	\$0	\$0	\$15,204,325	2.3
Independent Operations	\$16,396,236	\$0	\$0	\$0	\$0	\$16,396,236	2.5
Capital Outlay	\$18,724,006	\$5,361,231	\$2,094,478	\$2,978,152	\$714,095	\$29,871,962	4.6
Renewal and Replacement	\$8,989,052	\$354,275	\$119,339	\$33,514	\$335,627	\$9,831,806	1.5
Debt Service	\$15,113,079	\$0	\$0	\$0	\$0	\$15,113,079	2.3
Total	\$542,434,496	\$63,086,077	\$19,266,628	\$15,604,948	\$8,377,860	\$648,770,008	100.0

Source: Report of Actuals 2009-2010, for each campus, Higher Education Department, State of New Mexico and Report of Budgets, FY2011.

Table 1.3 provides the yearly average funding sources of the NMSU system for fiscal years 2010 and 2011. Approximately 37.7 percent of NMSU's total funding originated from out-of-state sources including the non-resident portion of tuition and fees, federal government appropriations and federal government grants and contracts. Parts of other spending categories (e.g., Sales and Services, Private Gifts and Contracts, and Endowment, Land and Permanent Fund Revenue) are likely to originate in other states, but have not been included in the estimate of the percent of out-of-state funding.

State and local government appropriations, tuition and fees paid by non-resident students, grants, and contracts combined accounted for 37.7 percent of total NMSU funding during the two Fiscal Years. Tuition and fees from resident students and other sources accounted for the remainder of NMSU funding.

Table 1.3

**Sources of Funding All Campuses**
**Average for Fiscal Years 2009-2010 and 2010-2011**

	Las Cruces	Dona Ana	Alamogordo	Carlsbad	Grants	All Campuses	
Sources of Funding	Value	Value	Value	Value	Value	Value	Percent of Total
Tuition and Fees Income	\$84,560,143.00	\$9,388,948	\$4,095,035	\$1,383,038	\$1,454,516	\$100,881,679	16.1
Fed Govt Appropriations	\$6,057,577.00	\$0	\$0	\$0	\$0	\$6,057,577	1.0
State Govt Appropriations	\$160,899,079	\$19,963,495	\$7,103,312	\$4,756,730	\$3,266,028	\$195,988,643	31.4
Local Govt Appropriations	\$2,538,257	\$3,627,125	\$534,410	\$3,977,426	\$230,513	\$10,907,730	1.7
Fed Govt Grants and Contracts	\$162,942,678	\$21,043,884	\$5,125,616	\$3,739,127	\$2,509,270	\$195,360,575	31.3
State Govt Grants and Contracts	\$21,981,416	\$3,331,343	\$922,846	\$730,046	\$533,726	\$27,499,376	4.4
Local Govt Grants and Contracts	\$158,392	\$0	\$0	\$0	\$0	\$158,392	0.0
Private Gifts, Grants and Contracts	\$15,153,685	\$237,972	\$82,302	\$37,022	\$48,084	\$15,559,063	2.5
Income	\$5,030,176	\$22,673	\$12,276	\$5,259	\$5,982	\$5,076,364	0.8
Sales and Services	\$30,758,389	\$857,020	\$69,709	\$50,655	\$1,303	\$31,737,075	5.1
Other Sources	\$35,278,359	\$149,555	\$97,796	\$74,410	\$32,671	\$35,632,790	5.7
Total	\$525,358,149	\$58,622,013	\$18,043,301	\$14,753,710	\$8,082,090	\$624,859,262	100.0

Source: Report of Actuals 2009-2010, for each campus, Higher Education Department, State of New Mexico

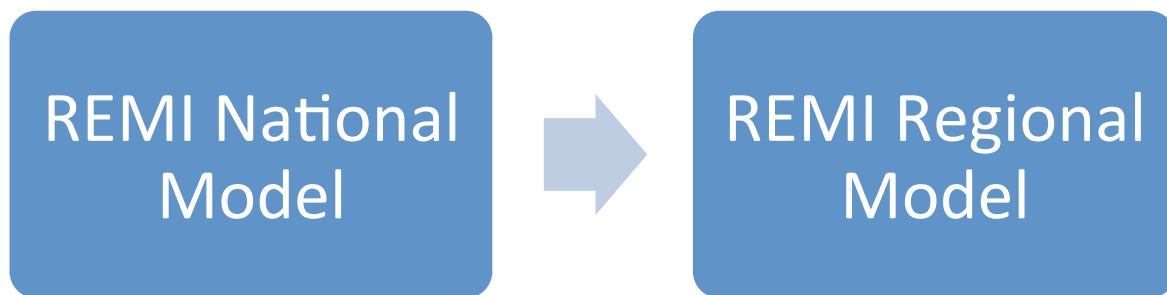
The remainder of the report is organized as follows. Section 2 contains a discussion of the economic model used to estimate the impacts (REMI PI+) and describes key assumptions of the analysis. Section 3 presents an analysis of the economic impact of NMSU graduates on the state economy. Section 4 contains an analysis of the impact of non-resident student spending. Section 5 provides estimates of the impact of NMSU faculty and staff supported by out-of-state funds. Section 6 contains an analysis of NMSU in-state purchases other than capital expenditures, while Section 7 provides estimates of the impacts of capital expenditures. Sections 8 and 9 address in-state travel expenditures and visitor spending. Section 10 provides estimates of tax revenue to the State of New Mexico based on the impacts discussed in earlier sections. Finally, Section 11 is a brief summary of NMSU's impacts on the state economy.

## Section 2: The REMI Model and Key Assumptions

The models used to estimate the economic impacts of New Mexico State University on the state of New Mexico are produced by REMI, Inc. ([www.remi.com](http://www.remi.com)). REMI models have been used in many university economic impact studies. Recent examples include impact studies of Montana State University, the higher education system in Oklahoma (2008), and the impact of public higher education in the State of Virginia (2010).

The characteristics of the REMI models are well known (Rickman and Schewer 1995; Treyz, Rickman, and Shao 1991). The REMI models are long run, dynamic models. The simulation period currently runs to 2050 and historical data on most variables are available from 1990. The models are based on annual data. The REMI national model interacts directly with one or more regional models as shown in the following diagram.

**Figure 2.1 Diagram of the REMI National and State Models**



The regional models can contain any combination of counties or county equivalents. The regional model used in this analysis is for the State of New Mexico (issued February 2011).

A key driver of the models (national and state) is an input-output (Leontief model) derived from the national I-O model produced by the Bureau of Economic Analysis. The models used here are based on 169 sectors, while the national I-O model contains more than 450 sectors.

The REMI models contain more than a static I-O model. The models also incorporate Computable General Equilibrium (CGE) techniques, single year of age cohort-component population projection models, and equations based on the New Economic Geography (Krugman 1998).

### Key Modeling Assumptions

Spending from in-state sources including state appropriations and tuition paid by resident students was not included as inputs to the model.

The impact estimates reported here are presented as differences from the REMI baseline projection of the New Mexico economy.

The estimated impacts should be interpreted as losses to the New Mexico economy if NMSU did not exist.

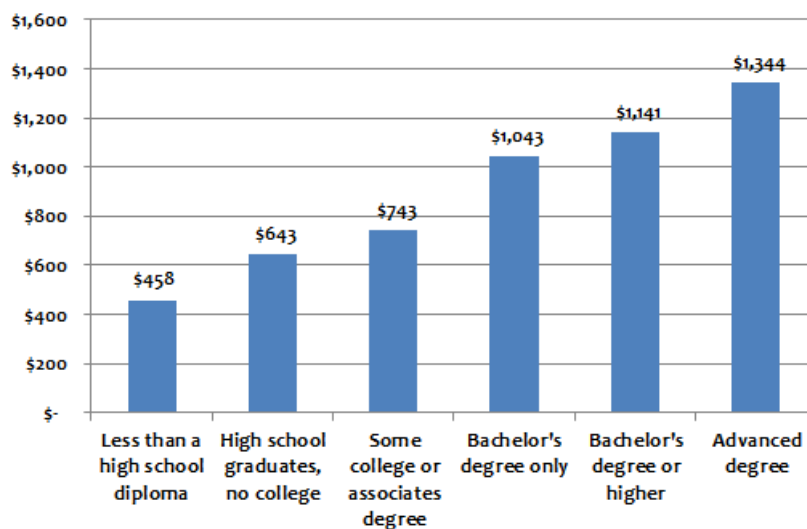
### Section 3: The Impact of NMSU Graduates:

In general, university graduates have two major economic impacts. First, graduates earn and spend more than those who have less education. Second, university graduates contribute to economic growth by enhancing productivity (output per worker). Graduate earnings and higher productivity are closely related. Basic economic theory suggests that higher productivity frequently leads to higher earnings. Assessing the economic impact of both higher earnings and higher productivity simultaneously creates a problem of double counting. The approach taken here is to assess only the impact of the higher earnings of NMSU graduates who remain in New Mexico compared to the earnings of a typical high school graduate.

The relationship between earnings and educational attainment is very strong and has been documented frequently. The Bureau of Labor Statistics (BLS) regularly publishes a national report titled “Usual Weekly Earnings” (BLS 2011). The most recent weekly earnings data by educational attainment are shown in Figure 3.1. During the second quarter of 2011, full-time workers with a bachelor’s degree or higher had median weekly earnings of \$1,141 or 56.4 percent higher than the median weekly earnings of high school graduates (\$643).

Figure 3.1

Usual Median Weekly Earnings by Educational Attainment: 2011 (Quarter 2)  
Population 25 years old and older

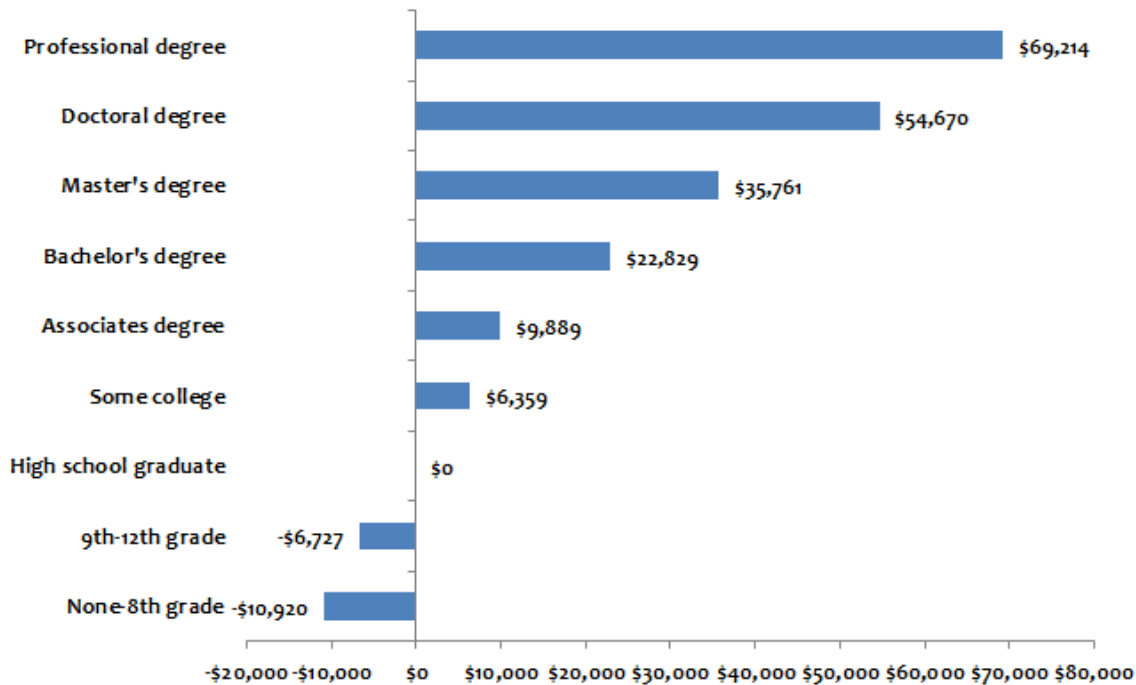


Source: Bureau of Labor Statistics, U.S. Department of Labor, News Release: “Usual Weekly Earnings, Second Quarter 2011” USDL-11-1082, July 19, 2011. Table 5.  
<http://www.bls.gov/news.release/wkyeng.nro.htm>

The Census Bureau also reports earnings differentials by educational attainment (Julian and Komiski, 2011) based on American Community Survey data from 2006 to 2008. Figure 3.2 displays annual earnings differentials in 2008 inflation-adjusted dollars. During the course of a 40-year working career, a person with a bachelor’s degree would earn \$2.3 million or over \$900 thousand more than a high school graduate.

Figure 3.2

Estimated Annual Earnings Differentials by Educational Attainment  
Full-time, year round workers ages 25 to 64



Source: Tiffany A. Julian and Robert. A. Komiski. 2011. "Education and Synthetic Lifetime Earnings Estimates." American Community Survey Reports, ACS-14. U.S. Census Bureau: <http://www.census.gov/prod/2011pubs/acs-14.pdf>

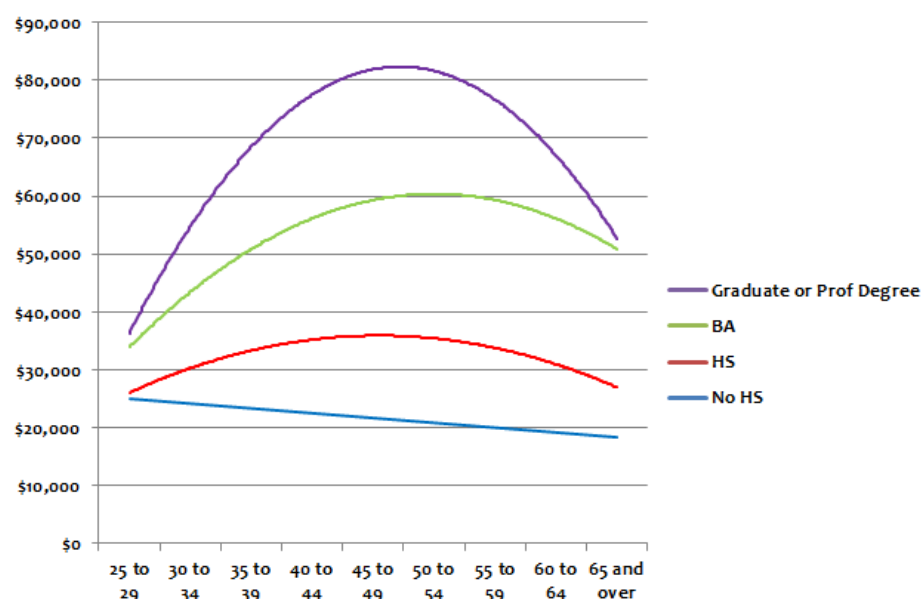
The earnings-education relationship is also apparent in New Mexico. Figure 3.3 is an age-earnings profile of New Mexicans ages 25 years old and older based on data from the 2009 American Community Survey. The patterns shown in Figure 3.3 reflect typical age-earnings profiles found almost anywhere. That is, those with higher educational attainment have higher earnings. Table 3.1 displays additional New Mexico earnings data by educational attainment. In 2009, a person with a bachelor's degree in New Mexico earned \$52,139 compared to the average high school graduate who earned \$32,433. The difference between a college graduate with a bachelor's degree and a high school graduate, nearly \$20,000, provides an initial indication of the contribution of college graduates' impact on the state economy.

**Figure 3.3**

Earnings by Educational Attainment in New Mexico: 2009

Employed persons ages 25 years old and older

(Original data smoothed with second degree polynomial).



Source: Arrowhead Center Calculations from 2009 American Community Survey data.

**Table 3.1**

Earnings by Educational Attainment in New Mexico: 2009

Employed persons aged 25 years old and older

	Both Sexes	Male	Female
Less than HS Diploma	\$ 22,253	\$ 27,017	\$ 14,405
HS Diploma or GED	\$ 32,433	\$ 37,949	\$ 25,681
Some College	\$ 37,323	\$ 44,995	\$ 30,015
BA	\$ 52,139	\$ 63,806	\$ 41,067
Grad or Professional Degree	\$ 70,071	\$ 85,082	\$ 56,244

Source: Arrowhead Center Calculations from 2009 American Community Survey data.

Table 3.2 displays lifetime earnings differentials by educational attainment in New Mexico in 2009 based on a 40-year working life (ages 25 to 64). A typical New Mexico resident with a bachelor's degree or higher is estimated to earn about \$2.4 million or over \$1.0 million more than the average high school graduate. These figures are similar to those reported by the Census Bureau for the nation (Julian and Komiski, 2011).



Table 3.2

**New Mexico Estimated Lifetime Earnings Differentials by Educational Attainment (2009)**  
(Based on Employed persons ages 25 to 64)

Degree	Lifetime Earnings	Difference from HS/GED Graduate
Less than High School Diploma	\$910,551	(\$401,582)
High School Diploma or GED	\$1,312,133	\$0
Some College No Degree	\$1,460,559	\$148,426
Associates Degree	\$1,585,018	\$272,885
BA Degree	\$2,080,761	\$768,628
MA Degree	\$2,766,942	\$1,454,809
Phd	\$3,473,896	\$2,161,763
BA or Higher Degree	\$2,392,031	\$1,079,898

Source: Arrowhead Center calculations from 2009 American Community Survey data.

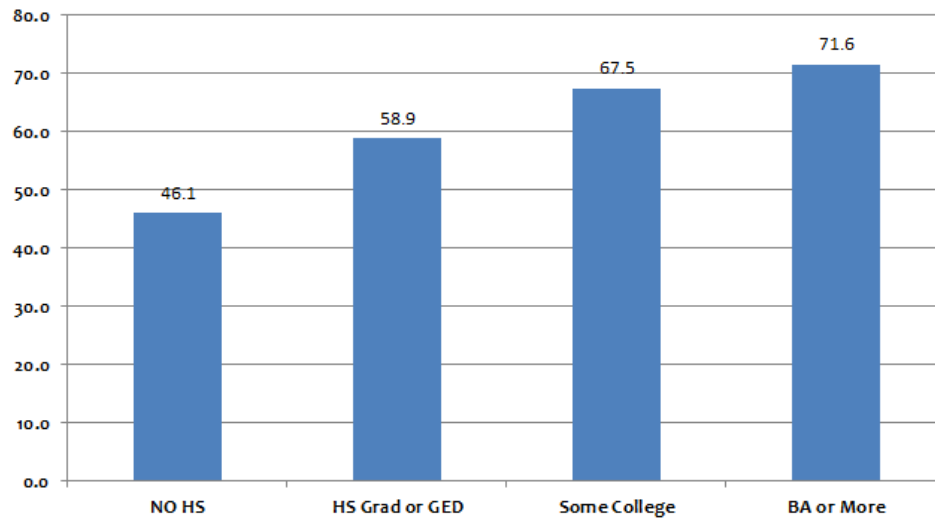
College graduates are also more likely to participate in the labor force than high school graduates or those who did not graduate from high school. Labor Force Participation Rates (LFPRs) represent the percent of the civilian non-institutionalized population 16 years old and older who are either employed or unemployed. In recent years, the national LFPR has been just below two-thirds. In 2009, New Mexico's LFPR for those 16 years old and older was 61.7 percent, and 62.5 percent for those ages 25 years old and older (Census, ACS Economic Profile 2009).

Figure 3.4 displays LFPRs by educational attainment in New Mexico in 2009 for the population 25 years old and older. As can be seen in Figure 3.4, labor force participation increases with increased educational attainment. On average, a college graduate (BA or more) in New Mexico in 2009 had a 71.6 percent chance of being in the labor force, while the average high school graduate had a 58.9 percent chance of being in the labor force.



Figure 3.4

Labor Force Participation Rates of the Civilian Population Ages 25 and Older in New Mexico 2009

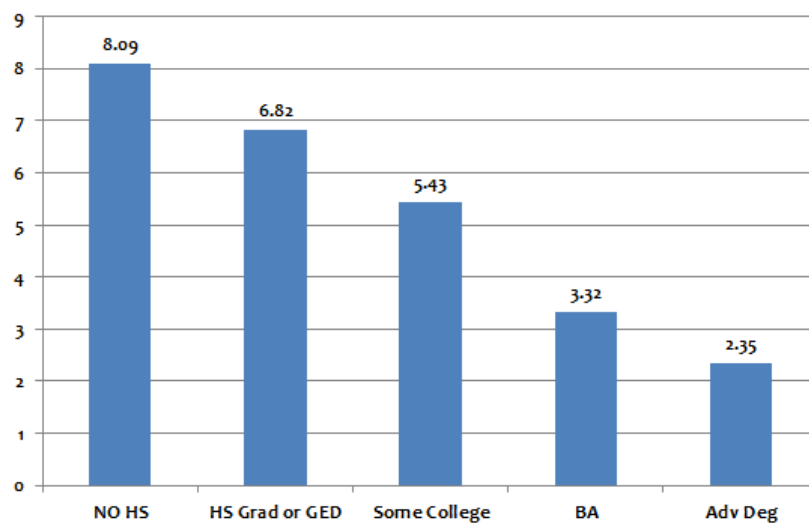


Source: Arrowhead Center From American Community Survey 2009 PUMS data.

College graduates in New Mexico are also much less likely to be unemployed than those without a college education. Figure 3.5 below displays unemployment rates by educational attainment in New Mexico in 2009. High school graduates in New Mexico in 2009 had an unemployment rate (6.82 percent) that was more than double the unemployment rate of those with a bachelor's degree (3.32 percent), while those with an advanced degree had an unemployment rate of only 2.35 percent.

Figure 3.5

Unemployment Rates of the Civilian Population Ages 25 and Older in New Mexico 2009 by Educational Attainment (Percent)



Source: Arrowhead Center From American Community Survey 2009 PUMS data.

The first step in estimating the economic impact of NMSU graduates on the state economy was to obtain data on the number of NMSU graduates who are living in New Mexico. The NMSU Alumni Association has a database of living NMSU graduates that is approximately 98 percent complete (Widger 2011). A sub-set of this data base containing 53,545 NMSU alumni living in New Mexico with degree type, sex and “preferred” graduation year was provided to Arrowhead Center after names and other identifying information was removed.

After eliminating those who graduated before 1961, those who did not receive a degree, those who received an honorary degree, and those who received a certificate, there were 49,269 NMSU alumni living in the state (Table 3.3) as of December 31, 2010.

Education specific labor force participation rates were then applied to obtain an estimate of the number of NMSU alumni living in New Mexico who were likely to be in the labor force (35,783). Unemployment rates by educational attainment were then applied to obtain an estimate of 34,179 NMSU alumni who were likely to be working in the state (Table 3.3).

**Table 3.3**

**NMSU Alumni Living in New Mexico in 2010  
with Known Degree**

Degree Type	Number	In Labor		Annual	Total Earnings
		Force	Employed	Earnings Differential per Graduate*	
Associates	13,954	10,392	9,764	\$6,724	\$65,653,892
BA	30,818	22,195	21,290	\$19,706	\$419,532,120
Masters	4,114	2,924	2,863	\$35,078	\$100,422,082
Doctoral	383	272	262	\$52,992	\$13,883,904
Totals	49,269	35,783	34,179		\$599,491,998

\* Annual earnings differential compared to high school graduate (2009).

Source: Author calculations from NMSU Alumni data.

Earnings differentials between college graduates and high school graduates were then used to estimate a total earnings differential (\$599.5 million) of NMSU alumni versus those with a high school diploma or GED. The total earnings differential of NMSU alumni living and working in New Mexico is a direct estimate of the impact of NMSU graduates on the state economy. Additional impacts of NMSU graduates on the state economy occur because the increased earnings are spent.

The additional impacts that occur because the increased earnings of graduates are spent were estimated using the REMI economic model described earlier. Based on the ratio of New Mexico Personal Consumption Expenditures (PCE) to personal income, \$535.3 million of the \$599.5 million in increased earnings were allocated to the individual consumption sectors (172 sectors including government).

The results of the simulation are summarized in Table 3.4. The results are shown as positive numbers, but a proper interpretation is that these are losses that the New Mexico economy would have suffered in the absence of the increased earnings of NMSU alumni living and working in the state. In particular, the New Mexico economy would have had 4,402 fewer total jobs in 2010 without the increased earnings and spending of NMSU graduates. In a similar fashion, New Mexico personal income would have been \$659 million smaller and disposable personal income would have been \$598 million smaller in 2010 without the increased earnings and spending of NMSU graduates. Further, the state would have lost 937 people due to out-migration. The tax implications will be assessed in a later section.

**Table 3.4**

**NMSU Graduate Earnings Impacts in 2010**

**Differences from REMI Baseline Projections**

Total Employment	Jobs	4,402
Private Non-Farm Employment	Jobs	3,910
Gross Domestic Product	Millions of 2010 Dollars	\$696
Total Personal Income	Millions of 2010 Dollars	\$659
Disposable Personal Income	Millions of 2010 Dollars	\$598
Population Change	Persons	937

Source: Arrowhead Center simulation using REMI PI + version 1.2.6

# Section 4: The Impact of Non-Resident Student Expenditures

The expenditures of non-resident students represent a major impact of NMSU and its branch campuses on the state economy. Expenditures of resident students are not included in the impacts because the likely source of funding for these expenditures is from within the state. If NMSU did not exist, the money spent by resident students would probably be spent elsewhere in the state, resulting in no net economic impact.

A survey of students (Appendix I) was conducted to estimate student expenditures. The survey was conducted electronically on all NMSU campuses. The total number of responses to the survey was 1,513. On and off-campus student expenditures in 11 categories are shown in Table 4.1 The survey data indicate that total monthly living expenses are higher for off-campus students (\$1,602) than on-campus students (\$1,365). The apparently higher cost of housing on campus than off-campus disappears if the cost of utilities is included as a housing cost for off-campus residents. Spending for books and supplies, clothing, and food are similar for the two groups, while off-campus students paid more for automotive expenses, insurance and communications than their on-campus counterparts.

**Table 4.1**  
**NMSU Students Typical Expenditures (Excluding Tuition and Fees) in 2010**

	Off-campus		On Campus	
	Per Month	Per Semester	Per Month	Per Semester
Rent or mortgage (1, 2)	\$546	\$2,458	\$629	\$2,833
Food (2)	\$291	\$1,308	\$264	\$1,186
Automotive	\$161	\$723	\$131	\$591
BooksandSupplies	\$127	\$571	\$129	\$581
Utilities	\$113	\$507	\$0	\$0
Communications	\$100	\$448	\$46	\$206
Insurance	\$90	\$405	\$36	\$160
Misc	\$68	\$304	\$49	\$222
Clothing	\$60	\$268	\$54	\$243
Healthcare	\$28	\$124	\$17	\$78
Charity	\$21	\$93	\$9	\$41
Total	\$1,602	\$7,209	\$1,365	\$6,142
Other				
Months Living in same place	10.78		8.22	
Vehicles	0.96		0.52	

Sources: NMSU Arrowhead Center Student Survey, except as noted below.

(1) Rent or mortgage for off-campus students is a weighted average of reported rent and mortgage payments reported in the Student Expenditure Survey. Approximately 1/8 of NMSU off campus students reported mortgage payments.

(2) Rent or mortgage for on campus students provided by NMSU office of Financial aid.

The student expenditure survey data are generally consistent with other data sources. The College Board (<http://professionals.collegeboard.com/data-reports-research/trends/living-expense>) estimates the cost of living for college students across the country. Data from the Consumer Expenditure Survey (CES) and the indexes of Comparative Costs from the Bureau of Labor Statistics of the U.S. Department of Labor are used to estimate regional cost-of-living data. The low base national budgets for 2010-2011 were \$12,100 for nine months and \$16,130 for 12 months. For 2011-2012, they reported a moderate base budget for nine months as \$17,820 for the United States. The low-based budget was estimated as \$11,940. The survey results of NMSU system students indicate a nine-month budget of \$14,418.

From the survey results, a weighted average of expenses of students living on and off campus appears in Table 4.2. An estimate of the total non-resident student expenditures was calculated by multiplying the weighted average by the average number of months (10.39) respondents indicated that they lived in the same county.

**Table 4.2**

**Weighted Average of On-Campus and Off-Campus Student Expenditures**

Category	Monthly per Student	Monthly All	Annual*
		Non-Resident Students	
Rent or mortgage(1)	\$559	\$3,092,928	\$32,135,521
Food	\$286	\$1,584,649	\$16,464,503
Automotive	\$156	\$863,559	\$8,972,375
BooksandSupplies	\$127	\$704,456	\$7,319,294
Utilities	\$95	\$527,522	\$5,480,956
Communications	\$91	\$504,858	\$5,245,471
Insurance	\$82	\$451,776	\$4,693,948
Misc	\$65	\$358,025	\$3,719,880
Clothing	\$59	\$324,964	\$3,376,378
Healthcare	\$26	\$143,682	\$1,492,856
Charity	\$19	\$104,856	\$1,089,453
Total	\$1,565	\$8,661,256	\$89,990,448

Source: See Table 4.1

\*Annual is based on 10.39 months of residence

The unduplicated count of NMSU students from all campuses (as of Fall 2010) was 30,121. The survey data indicated that 81.6 percent of students were residents of New Mexico. The NMSU Fact-Book indicated 81.7 percent of NMSU students were residents of New Mexico. The survey estimate (81.6 percent) of the proportion of students living off-campus and the total unduplicated student count were used to estimate an unduplicated count of 5,533 NMSU non-resident students. Total non-resident student expenditures in 2010 were estimated to be \$89,990,448. This total was used as an input in the REMI simulation model.

The results of the REMI simulation are shown in Table 4.3. The \$89.9 million spent by non-resident students results in 773 more jobs, \$30.52 million more in personal income, and \$45.28 million more in value added (or GDP as used elsewhere) than the base line projections of the REMI Model. The retail

trade sector was the sector with the largest impact (181 jobs). As in other sections of this report, the impacts just described represent the losses that would occur in the New Mexico economy if NMSU did not exist.

**Table 4.3**  
**Estimated Impacts of Non-resident Student Spending**

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Category	Unit of Measurement	Impact
Total Employment	Jobs	773
Private Non Farm Employment	Jobs	681
Gross Domestic Product	Millions of 2010 Dollars	\$45.28
Personal Income	Millions of 2010 Dollars	\$30.52
Disposable Personal Income	Millions of 2010 Dollars	\$25.50
Population	Persons	181

Source: REMI PI+ Version 1.2.6 Simulation

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## Section 5: NMSU Faculty and Staff Economic Impacts

NMSU faculty and staff contribute to the New Mexico economy in several ways. Faculty and staff employment adds stability to the state economy. The contributions of graduates to the state economy through increased productivity and earnings are, in part, a result of faculty and staff efforts. Research activities attract out-of-state funding and contribute to the economic development of the state economy. The earnings of faculty and staff are spent and this spending creates additional economic activity.

In this report, only the employment and earnings of faculty and staff supported by out-of-state funding are included in the analysis. In November 2010, NMSU had 2,989 faculty and 3,776 staff members or a total of 5,765 employees (Table 1.1). Based on out-of-state funding as a percent (37.7) of total NMSU funding, 2,173 employees were supported by out-of-state funds.

The earnings of NMSU faculty and staff are significant. During calendar year 2010, NMSU's payroll for in-state employees was \$229.2 million, plus \$45.4 million for employee benefits (NMSU Human Resources Department 2011). The payroll figures do not include pay received by graduate assistants or undergraduate student employees. Spending by students has already been accounted for in the impacts (see the section titled: Non-resident student spending). NMSU payroll supported by out-of-state funding is estimated to be \$86.5 million.

An employee expenditure survey (Appendix II) completed by 1,031 NMSU employees provides an important indicator of employee expenditures in New Mexico (Table 5.1).

**Table 5.1**

**NMSU Monthly Employee Expenditure Data**

Category	Faculty	Exempt	Non-Exempt	Other	Weighted Average
Rent or Mortgage	\$1,412	\$1,194	\$905	\$921	\$1,163
Food	\$610	\$483	\$461	\$401	\$505
Insurance	\$424	\$399	\$304	\$327	\$378
Auto	\$347	\$282	\$246	\$253	\$289
Misc	\$357	\$247	\$199	\$107	\$253
Communications	\$250	\$221	\$215	\$184	\$224
Charity	\$259	\$156	\$93	\$258	\$179
Health	\$181	\$125	\$149	\$217	\$154
Clothing	\$129	\$102	\$80	\$73	\$102
Entertainment	\$110	\$79	\$70	\$56	\$83
Child Care	\$91	\$80	\$65	\$65	\$78
Totals	\$4,171	\$3,368	\$2,787	\$2,862	\$3,408

Source: NMSU Employee Survey.

Note: 75.2 percent of faculty and staff reported mortgage payments.

The results of REMI simulations of NMSU employment and spending supported by out-of-state funding are reported in Table 5.2. Total employment in New Mexico was 2,911 jobs greater than would have been the case without the employment of NMSU employees supported by out-of-state funding. The total employment figure includes the 2,173 NMSU jobs directly supported by out-of-state funding.

In addition, NMSU employment and earnings supported by out-of-state funding contributed \$84.9 million to state GDP, \$73.3 million in personal income, and \$65.6 million in disposable personal income. New Mexico's population would have been 583 persons smaller without these contributions.

**Table 5.2**

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**Estimated Impacts of Faculty and Staff Supported by Out-of-State Funding**

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<b>Category</b>	<b>Unit of Measurement</b>	<b>Impact</b>
Total Employment	Jobs	2,911
Private Non Farm Employment	Jobs	2,736
Gross Domestic Product	Millions of 2010 Dollars	\$84.39
Personal Income	Millions of 2010 Dollars	\$73.30
Disposable Personal Income	Millions of 2010 Dollars	\$65.55
Population	Persons	583

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Source: REMI PI+ Version 1.2.6 Simulation

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## Section 6: The Impacts of NMSU Purchases of Goods and Services within New Mexico

Universities purchase large quantities of goods and services from private firms located both in state and out-of-state. These purchases generate additional economic activity beyond the initial direct expenditures. In this section, the impacts of NMSU purchases within New Mexico that were not paid for by state-provided funds (Instructional and General or Building Renewal and Replacement) funds are analyzed. The purchases considered in this section do not include capital expenditures that are considered in Section 7 or in-state travel expenditures funded by out-of-state sources that are considered in Section 8.

NMSU purchases within New Mexico using out-of-state funds during calendar year 2010 are displayed in Table 6.1. The purchasing data are from all NMSU locations. The largest expenditure categories include wholesale and retail trade (\$18.8 million), Professional Services (\$17.4 million), and Food Services and Drinking Places (\$6.5 million). The three largest categories accounted for 86.4 percent of all in-state purchases paid for by out-of-state funds.

**Table 6.1**

### **NMSU In-state Purchases from Out-of-State Funds**

<b>Category</b>	<b>Amount</b>
Electric power generation, transmission and distribution	\$42,259
Water, sewage and other systems	\$1,821,322
Architectural, engineering and related services	\$198,052
Wholesale and retail trade	\$18,799,230
Food services and drinking places	\$6,490,424
Professional services, other	\$17,409,644
Advertising and related services	\$958,772
Employment services	\$3,768
Other purchases	\$3,672,241
<b>Total</b>	
<b>Source: NMSU Business and Finance Special Tabulation.</b>	<b>\$49,395,712</b>

NMSU's in-state purchases paid for with out-of-state funds were treated as a change in exogenous demand in the corresponding sector of the REMI PI+ model. The economic impacts of these purchases measured as changes from the REMI baseline projection appear in Table 6.2. NMSU's purchases in 2010 resulted in a net change of 723 jobs, \$35.6 million in GDP, \$21.3 million in personal income, and a net change in population of 176 persons. As in other sections of the report, the impact figures should be interpreted as losses to the New Mexico economy if these purchases had not been made.

**Table 6.2**

**Estimated Impacts of NMSU In-State Purchases from Out-of State Funds**

<b>Category</b>	<b>Unit of Measurement</b>	<b>Impact</b>
Total Employment	Jobs	723
Private Non Farm Employment	Jobs	650
Gross Domestic Product	Millions of 2010 Dollars	\$36
Personal Income	Millions of 2010 Dollars	\$21
Disposable Personal Income	Millions of 2010 Dollars	\$19
Population	Persons	176

Source: REMI PI+ Version 1.2.6 Simulation

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### Section 7: The Impact of NMSU Capital Expenditures

Assessing the economic impact of capital expenditures by NMSU and its branch campuses presents a number of challenges. Since the goal of this study is to assess the economic impact of NMSU and its branch campuses on the New Mexico economy, the source of funding of capital expenditures is particularly important. Capital projects funded by in-state sources should be excluded from the estimated impacts. Nearly all capital expenditures on major projects are funded from bonds (revenue bonds, general obligation bonds or severance tax bonds) sold in a national market. Consequently, the immediate source of funding for capital projects is likely to be external to New Mexico. In this study, the economic impacts of NMSU capital projects funded from bonds have been included.

Capital expenditures during calendar year 2010 on all NMSU campuses totaled \$39.957 million. Only the portion of spending occurring in 2010 of each project listed in Table 7.1 was included. Some projects span multiple years and have far larger total costs than listed in Table 7.1. For example, the total cost of construction of the Early College High School in Arrowhead Research Park was \$18.0 million, while only \$7.4 million were allocated to 2010 expenditures. Funding directly from the State of New Mexico such as Building Renewal and Replacement (BRR) funds were not included in the projects or the analysis.

The Arrowhead Research Park capital expenditures (Early College High School and an office building at 4611 Research Park Drive) were financed externally to the university and do not appear in NMSU budget documents. However, these projects were constructed on NMSU land and would not have occurred if NMSU did not exist.

Table 7.1

**NMSU Calendar Year 2010 Capital Expenditures**

<b>NMSU Main Campus</b>	<b>Expenditures</b>	<b>Totals</b>
Chamisa Village	\$1,356,848	
Book Store	\$2,560,831	
Chilled Water Satellite Plant	\$768,187	
Arrowhead Phase I	\$1,198,229	
Aggie Memorial Stadium Improvements Phase 2	\$1,039,741	
Arts Complex	\$3,661,659	
Campus Health Center	\$204,839	
Gardiner Hall Renovation	\$3,385,189	
NMSU-Las Cruces Agricultural Center	\$81,221	
Soccer Field	\$20,618	
SW Ctr Rangeland and IT	\$516,543	
Coca Cola Addition	\$22,318	
HSS Addition/Memorial Wall	\$1,776,659	
Native American Cultural Center	\$2,530,714	
Pan Am Video Message Board	\$164,608	\$19,288,204
<b>Dona Ana Community College</b>		
East Mesa Expansions	\$3,632,578	
Chaparral Center	\$321,327	
Gadsden Center	\$1,197,823	
Hatch Center	\$156,044	
Trades Building	\$687,356	\$5,995,128
<b>Alamogordo Campus</b>		
Health Sciences Building	\$194,630	
Adv Bus Tech Ctr (Trades) Phase 1	\$2,348,939	
Classroom Bldg Reno (262G)	\$511,836	\$3,055,405
<b>Carlsbad Campus</b>		
Drainage Improvements	\$18,237	
Re-Roofing Main Bldg	\$276,362	
CEMRC - Re-Roofing	\$41,220	
Allied Health Facility	\$1,950,403	\$2,286,222
<b>Grants Campus</b>		
McClure Hall Remodeling	\$4,552	
McClure Hall Exterior	\$45,097	
Campus Library Renovation	\$90,589	
Martinez Hall Solar System Repair	\$14,703	
Fidel Hall Exterior Reno	\$2,177	\$157,118
<b>Arrowhead Research Park</b>		
Early College High School	\$7,411,765	
4611 Research Park Cir (ADC)	\$1,763,400	
Sub-Total		\$9,175,165
Grand Total		\$39,957,244

Sources: NMSU Office of Facilities and Services, and Arrowhead Center

NMSU's capital outlays were treated as a change in exogenous demand in the construction sector of the REMI PI+ model. The economic impacts of the capital expenditures measured as changes from the REMI baseline projection appear in Table 7.2. NMSU's capital expenditures in 2010 resulted in a net change of 542 jobs, \$31.5 million in GDP, \$20.5 million in personal income, and a net change in population of 136 persons. As in other sections of the report, the impact figures should be interpreted as losses to the New Mexico economy if the capital expenditures had not been made.

**Table 7.2**

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**Estimated Impacts of NMSU Capital Expenditures 2010**

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Category	Unit of Measurement	Impact
Total Employment	Jobs	542
Private Non Farm Employme	Jobs	479
Gross Domestic Product	Millions of 2010 Dollars	\$31.49
Personal Income	Millions of 2010 Dollars	\$20.48
Disposable Personal Income	Millions of 2010 Dollars	\$18.43
Population	Persons	136

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Source: REMI PI+ Version 1.2.6 Simulation

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## Section 8: The Impact of NMSU In-state Travel Expenditures

In 2010, NMSU spent a total of \$12.6 million on travel. Only the in-state travel financed from out-of-state funds was included in the analysis. Most of the spending (\$10 million) was financed from non-state funds. Of that amount, \$4.2 million was spent on in-state travel. Table 8.1 reports the distribution of travel spending (out-of-state funded) in three broad categories.

**Table 8.1**

**NMSU Travel Expenditures in 2010**  
(Funded from Out-of-State Sources)

Category	Amount
Transportation	\$4,076,752
Accommodations	\$107,739
Other	\$27,668
Total	\$4,212,159

Source: NMSU Business and Finance Special Tabulation

NMSU's travel outlays were treated as exogenous demand changes in the appropriate sectors of the REMI PI+ model. The impacts of this spending expressed as changes from the REMI baseline projection appear in Table 8.2. NMSU's travel expenditures in 2010 resulted in a net change of 50 jobs, \$3.5 million in GDP, \$1.6 million in personal income, and a net change in population of 11 persons. These impact figures should be interpreted (as in other parts of this report) as losses to the New Mexico economy if the travel expenditures had not been made.

**Table 8.2**

**Estimated Impacts of NMSU in-State Travel Paid for by Out-of-State Sources**

Category	Unit of Measurement	Impact
Total Employment	Jobs	50
Private Non Farm Employment	Jobs	43
Gross Domestic Product	Millions of 2010 Dollars	\$3.5
Personal Income	Millions of 2010 Dollars	\$1.6
Disposable Personal Income	Millions of 2010 Dollars	\$1.5
Population	Persons	11

Source: REMI PI+ Version 1.2.6 Simulation

## Section 9: The impact of Visitor Spending

Visitors are attracted to universities for many reasons. Prospective students often visit campuses before making a final enrollment decision. Friends and families of students and faculty and staff are common. Others visit universities to attend academic, athletic and cultural events. Spending by visitors generates additional economic activity in the state. Only visitor spending that can be attributed to out-of-state visitors is included in the impact analysis. The discussion below indicates that the economic impacts of visitor spending have been underestimated in this report.

During 2010, more than 250,000 people attended NMSU main campus athletic events (Arrowhead Center tabulations from <http://www.aggiesports.com>). A very small percentage of NMSU athletic tickets are sold to fans with out-of-state credit card addresses. No data are available to indicate the number of out-of-state visitor days or visitor spending associated with athletic events.

The Pan American Center (main campus) hosts a number of special events each year. In 2010, these events included performances by Jeff Dunham, Brooks & Dunn, the Zac Brown Band, and others. Ticket sales for these events exceeded \$1.0 million. A small portion of the ticket sales came from buyers with out-of-state credit cards. Again, no data are available to estimate out-of-state visitor spending associated with these events.

NMSU sponsors several conferences each year. Examples include an annual Public Policy conference sponsored by the Domenici Institute and an annual energy conference called Re-energize the Americas. Both conferences attract several hundred participants but, as with many events, the data to estimate out-of-state visitors and visitor spending from conferences do not exist — with one exception described below.

NMSU's Center for Public Utilities (CPU) sponsors several training conferences on regulatory economics each year. The CPU "provides training programs and current policy issues conferences to meet the needs of professionals employed at federal and state commissions, utility companies, and other stakeholders in the electricity, natural gas distribution, interstate pipeline, telecommunications and water utility industries. The CPU is one of only three university centers with programs endorsed by the National Association of Regulatory Utility Commissioners. CPU conference attendees come from all 50 states and a number of foreign countries." (NMSU Center for Public Utilities, [www.cpu.nmsu.edu](http://www.cpu.nmsu.edu)).

The CPU sponsored four conferences during calendar year 2010, with 345 out-of-state participants who stayed a total of 1,742 days. Visitor spending on food and accommodations from the CPU conferences have been included in the impact analysis.

Spending on accommodations and food from out-of-state visitors to faculty, staff and students are also included. The NMSU employee and student spending surveys included questions on the number of out-of-state visitors, the number of visitor days, and where the visitors stayed. The spending estimates reflect only those out-of-state visitors who stayed in hotels, motels, RV parks and other commercial lodging establishments.

Table 9.1 contains a summary of the visitor spending data included in the impact estimates. Faculty and staff reported a higher percentage (72.9) of out-of-state visitors than students (56.3 percent). Faculty and staff also reported a higher average number of visitors (6.3) than students (3.5). Visitors

to faculty and staff also were more likely to stay in hotels and other commercial lodgings (31.0 percent) than visitors to students (19.4 percent). The total number of visitor days to students (46,017), however, was larger than for faculty and staff (29,913).

The spending estimates have been calculated by applying Federal Government travel allowances of \$135 per day for hotels and \$56 per day for food. A hotel-room occupancy rate of 1.5 persons per room also was assumed. No spending for miscellaneous retail or other purchases is included in the estimated spending (Table 9.1).

**Table 9.1**

**NMSU Out-of-State Visitors**

	Faculty and Staff	Students	CPU Conferences	Totals
Number	5,765	31,121		36,886
Percent with Visitors	72.9	56.3		64.6
Number with visitors	4,204	17,521		21,726
Percent in Hotels	31.0	19.4		
Number with visitors who stayed in hotels(1)	1,303	3,396		4,699
Mean Number of visitors	6.34	3.52		4.62
Total Visitors	8,263	11,952	395	20,611
Days per visit	3.62	3.85	4.41	3.77
Total Visitor Days	29,913	46,017	1,742	77,672
Food Expenditures	\$1,675,148	\$2,576,957	\$102,830	\$4,354,934
Accommodations(2)	\$2,692,201.47	\$4,141,537.65	\$248,925	\$7,082,664
Total	\$4,367,349	\$6,718,494	\$351,755	\$11,437,598

Source: Arrowhead Center, surveys and Center for Public Utilities

(1) Includes hotels, motels, RV Parks and other commercial lodging.

(2) Assumes 1.5 persons per hotel room.

The spending totals for food (\$4.4 million) and accommodations (\$7.1 million) were treated as increases in exogenous demand in REMI model simulations. The results of the simulations are reported in Table 9.2 as differences from the REMI baseline forecast. During calendar year 2010, NMSU out-of-state visitor spending contributed 157 jobs, \$6.1 million in GDP and \$3.7 million in personal income to the state economy. As in other sections of the report, the impacts should be interpreted as avoided losses to the New Mexico economy.



**Table 9.2**

**Estimated Impacts from Visitor Spending**

Category	Unit of Measurement	Impact
Total Employment	Jobs	157
Private Non Farm Employment	Jobs	144
Gross Domestic Product	Millions of 2010 Dollars	\$6.09
Personal Income	Millions of 2010 Dollars	\$3.68
Disposable Personal Income	Millions of 2010 Dollars	\$3.29
Population	Persons	36

Source: REMI PI+ Version 1.2.6 Simulation

## Section 10: NMSU Tax Impacts

NMSU's economic impact on the state economy generates substantial state tax revenue. The tax revenue estimates reported here are based on effective tax rates averaged over the 2001 to 2009 period. The main reason for using effective tax rates instead of statutory rates is to avoid the nearly impossible task of estimating deductions and exemptions. Table 10.1 displays New Mexico effective tax rates in four main categories: 1) Gross Receipts Taxes (GRT), 2) Personal Income Taxes (PIT), 3) Corporate Income Taxes (CIT), 4) and Other Taxes. Combined, GRT, PIT and CIT accounted for 77 percent of all New Mexico Tax revenue between 2001 through 2009. Severance taxes, which are unlikely to be generated from NMSU activities, are not included in the effective tax rates.

The effective tax rates represent the proportion of personal income paid by New Mexicans on average between 2001 and 2009. For the purpose of estimating tax revenue, an important issue is the stability of the effective tax rates from year to year. Personal income based effective tax rates satisfy this criterion. The variability of the effective tax rates as measured by the standard deviation of each rate (Table 10.1) is low.

**Table 10.1**

**Effective Tax Rates ( proportion of personal income)**

Year	GRT	PIT	CIT	All Other	Total
2001	0.0460	0.0183	0.0042	0.0198	0.0883
2002	0.0393	0.0212	0.0027	0.0151	0.0783
2003	0.0389	0.0192	0.0021	0.0147	0.0749
2004	0.0395	0.0195	0.0027	0.0159	0.0776
2005	0.0392	0.0196	0.0044	0.0177	0.0809
2006	0.0403	0.0190	0.0064	0.0206	0.0862
2007	0.0420	0.0187	0.0073	0.0197	0.0877
2008	0.0395	0.0180	0.0053	0.0210	0.0838
2009	0.0378	0.0141	0.0031	0.0185	0.0735
Mean	0.0403	0.0186	0.0042	0.0181	0.0813
Std. Dev.	0.0023	0.0018	0.0017	0.0023	0.0052

Effective Tax Rates=specified tax divided by personal income

Source: New Mexico tax data from U.S. Bureau of the Census,  
State Government Tax Revenue <http://www.census.gov/govs/state/>

The estimated state tax revenues are presented in Table 10.2.

**Table 10.2**

**Estimated State Tax Revenue from NMSU Impacts  
(Millions of Dollars)**

	<b>GRT</b>	<b>PIT</b>	<b>CIT</b>	<b>All Other</b>	<b>Total</b>
Graduate Earnings	\$26.55	\$12.27	\$2.79	\$11.94	\$53.54
Capital Expenditures	\$0.82	\$0.38	\$0.09	\$0.37	\$1.66
Non-Resident Student Spending	\$1.23	\$0.57	\$0.13	\$0.55	\$2.48
Faculty and Staff Employment and Spending	\$2.95	\$1.37	\$0.31	\$1.33	\$5.96
Purchases of Goods and Services	\$0.86	\$0.40	\$0.09	\$0.39	\$1.73
Travel	\$0.06	\$0.03	\$0.01	\$0.03	\$0.13
Visitor Spending	\$0.15	\$0.07	\$0.02	\$0.07	\$0.30
<b>Totals</b>	<b>\$32.62</b>	<b>\$15.08</b>	<b>\$3.43</b>	<b>\$14.67</b>	<b>\$65.80</b>

Source: See Text

## Section 11: Summary and Concluding Remarks

The economic impacts of the NMSU system arise from several sources including: (1) the purchases goods and services made by the university; (2) expenditures of the university on construction; (3) the expenditures of students; (4) the expenditures of university faculty and staff; (5) the expenditures of visitors to the university campuses; (6) the additional earnings of university graduates who remain in the state after graduation; (7) in-state travel expenditures; (8) and the economic development activities of the university.

This study has taken a conservative approach in estimating the size of the economic impact. Only those expenditures made from out-of-state funds were used in the estimating procedure. And those out-of-state expenditures were always estimated in a conservative manner.

Spending by the NMSU system from out-of-state revenue sources generate, in the state, 9,558 jobs, \$809.8 million in personal income, an additional 1,897 individuals living in the state, and state tax (GRT, PIT, CIT and other) and local tax (GRT) revenues totaling \$65.8 million (see Table 11.1).

The largest economic impacts result from the differential in earnings that NMSU graduates who remain in New Mexico receive compared to what they would have earned if they only had a high school diploma or GED. While this is a genuinely important finding concerning short-run (2010) economic impacts, the contributions of NMSU graduates to New Mexico in both economic and non-economic terms are almost certainly understated.

Table 11.1

Summary Table: Estimated NMSU Impacts 2010

Source of Impact	Jobs	NM GDP	Personal Income	Disposable Personal Income	Population	State Tax Revenue
Graduate Earnings	4,402	\$696.0	\$659.0	\$598.0	937	\$53.54
Non-Resident Student Spending	773	\$45.3	\$30.5	\$25.6	18	\$1.66
Faculty and Staff Employment and Spending	2,911	\$84.4	\$73.3	\$65.6	583	\$5.96
Purchases of Goods and Services	723	\$35.6	\$21.3	\$19.1	176	\$1.73
Capital Expenditures	542	\$31.5	\$20.5	\$18.4	136	\$2.48
Travel	50	\$3.5	\$1.6	\$1.5	11	\$0.13
Visitor Spending	157	\$6.1	\$3.7	\$3.3	36	\$0.30
<b>Totals</b>	<b>9,558</b>	<b>\$902.4</b>	<b>\$809.8</b>	<b>\$731.5</b>	<b>1,897</b>	<b>\$65.80</b>

Dollar Figures in millions of 2010 dollars. Jobs refers to full and part-time jobs.

This study was limited to the quantifiable short-term economic impacts of the NMSU system. The long-run dynamic impacts of NMSU on the New Mexico economy cannot be captured by any single-year approach. In many respects, the long-run dynamic impacts of a university simply cannot be quantified. The dollar impact of a university is only one measure of the impact of the university.

The presence of a major land-grant university is an important factor in the location decisions of retirees and businesses. The cultural activities of the university enrich the lives of nearby residents and add vitality to the communities in which these activities occur. The volunteer activities of faculty, staff and students are not reflected in economic impact studies. University research and technology transfer to businesses are important contributions to the quality of life of those living in the New Mexico.

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## Glossary

Direct effects are the immediate (or first-round) consequences of a change in economic activity or policy. For example, if a firm spends \$1 million on construction of a new building, the direct effect on output (sales) in the construction sector is \$1 million. If eight workers are employed on the construction of the building, then those eight workers are also a direct effect.

Earnings are defined as the sum of wage or salary income and net income from self-employment. “Earnings” represent the amount of income received regularly for people 16 years old and over before deductions for personal income taxes, Social Security, bond purchases, union dues, Medicare deductions, etc. An individual with earnings is one who has either wage/salary income or self-employment income, or both. Respondents who “break even” in self-employment income and therefore have zero self-employment earnings also are considered “individuals with earnings.”

Employment refers to full and part-time jobs.

Final demand refers to the demand of ultimate consumers for goods and services. Final demand includes the demand of households, governments, inventory accumulation and exports. See also, intermediate demand.

Gross Domestic Product (GDP) is defined as the market value of the final goods and services produced by labor and property located in the United States. Conceptually, this measure can be arrived at by three separate means: as the sum of goods and services sold to final users, as the sum of income payments and other costs incurred in the production of goods and services, and as the sum of the value added at each stage of production (chart 2.1). (Bureau of Economic Analysis, Concepts and methods of the National Income and Product Accounts, page 2-7.) <http://www.bea.gov/national/pdf/NIPAhandbookch1-4.pdf>

Indirect effects occur because industries purchase inputs from other industries. If a construction project requires steel beams, there will be indirect effects on iron mining and coke producing industries.

Induced effects result from households spending the wage and salary income received by those employed directly or indirectly on the new activity.

Input-output model refers to a type of economic model designed to capture relationships among industries and ultimate consumers.

Intermediate demand refers to the demand of industry for the goods and services produced by other industries that will be used in the production process.

Labor income consists of employee compensation (including benefits), supplements to wages and salaries (such as employer contributions to pension funds), and proprietor’s income.

Output refers to gross industry sales or expenditures depending on the context.

Total effects refer to the sum of direct, indirect and induced effects.



Total Personal Income is the income that is received by all persons from all sources. It is calculated as the sum of wage and salary disbursements, supplements to wages and salaries, proprietors' income with inventory valuation and capital consumption adjustments, rental income of persons with capital consumption adjustment, personal dividend income, personal interest income, and personal current transfer receipts, less contributions for government social insurance. The personal income of an area is the income that is received by, or on behalf of, all the individuals who live in the area; therefore, the estimates of personal income are presented by the place of residence of the income recipients. (Bureau of Economic Analysis, [http://www.bea.gov/regional/definitions/nextpage.cfm?key=Total personal Income](http://www.bea.gov/regional/definitions/nextpage.cfm?key=Total%20personal%20Income))

Value added refers to the change in value of a good or service during each stage of production. Gross Domestic Product is a value added concept.

## Appendix I: The Student Expenditure Survey Questionnaire

NMSU's Arrowhead Center is conducting a study of the economic impact of the university (all campuses) on the New Mexico economy. An important part of this study is to estimate the impact of student spending on the economy. The purpose of this survey is to obtain the data needed to estimate the impact of student spending.

You are not required to complete this survey, but we would appreciate your taking a few minutes to complete this web-based survey. It is important to obtain your responses to the survey to obtain the best estimates possible. The questionnaire will take between 5 and 10 minutes to complete.

The survey is being conducted under the guidelines of NMSU's Institutional Review Board (IRB). Information about the guidelines and IRB can be found at:  
<http://research.nmsu.edu/compliance/IRB/IRB.html>.

Your responses will be kept completely confidential and will not be sold, traded, given away, or used for any purpose other than estimating New Mexico State University's economic impact on the New Mexico economy. If you complete the survey, you will have the opportunity to enter a random drawing for an IPAD-2.

### Section I: Permission

1. Do you give us permission to use the information you provide in this questionnaire for the purposes intended by this research under the condition that your answers will be kept confidential by New Mexico State University?  
Yes  
No (Exit Survey)

### Section II: About You

2. What is your student status?
  - a. Full-time Undergraduate student
  - b. Part-time Undergraduate student
  - c. Full-time Graduate Student
  - d. Part-time Graduate Student
3. On which NMSU campus are you enrolled? (If you are taking classes at more than one NMSU campus, select the campus that best describes your main enrollment)
  - a. Las Cruces, main Campus
  - b. Alamogordo
  - c. Carlsbad
  - d. Dona Ana Community College
  - e. Grants
4. Please enter the county in which you currently live.

Dropdown list of 33 NM counties plus outside of NM and don't know county name.

5. How many months during the last 12 months, have you lived in the county named in question 4?

6. In what type of accommodation do you live?

- a. Dormitory on Campus
- b. Rent apartment or home off campus
- c. Parents' or relatives home
- d. Own home off campus

7. Gender

- a. Male
- b. Female

8. What is your age?

9. Marital Status?

- a. Single
- b. Married

10. How many motor vehicles do you own that are registered in New Mexico?

11. For tuition purposes, were you admitted to NMSU as a?

- a. Resident of New Mexico
- b. Resident of another state
- c. International student

### Section III: Employment

12. Are you currently employed by a company or organization (other than New Mexico State University) in New Mexico? (If your answer is NO, please skip to Question 15.)

Y

N

13. On average, how many hours per week do you work?

14. What is your approximate hourly wage (including tips)?

### Section IV. Personal Spending

15. During the current semester, how much did you spend on books and supplies for classes in New Mexico (Please exclude out-of-state purchases including internet and mail order purchases)?

Questions 16 through 28 are about your average monthly expenditures in New Mexico. Please exclude out-of-state expenditures including out-of-state travel, internet, and mail order purchases.

16. Food, beverages, and tobacco?

17. Gas, oil, maintenance, other automobile spending.

18. Rent.

19. Utilities (including electricity, water, and gas). If utilities are included in rent, please enter zero.

20. Home ownership expenses including mortgage payment, maintenance, and repairs.

21. Phone, cell phone, Internet, and television service.

22. Music, movies, games, and other entertainment.

23. Clothing, shoes, etc.

24. Insurance (home, health, auto, life).

25. Out-of-pocket healthcare spending.

26. Charitable giving.

27. Miscellaneous spending (not covered by any other category).

28. Please estimate your total monthly expenditures in the New Mexico economy (excluding tuition and fees, and any out-of-state purchases)?

### Section V: Visitor Spending

29. During the past two semesters, how many people from out-of-state came to visit you?

30. On average, how many days did your visitors spend per visit?

31. Where did your visitors stay?

- a. Local hotel or motel
- b. Dorm room
- c. My apartment or home
- d. A relative's apartment or home

- e. Other (please explain)
32. If you would like to receive a copy of the report including the summarized results of this survey, please enter your email address.
- Your email address \_\_\_\_\_
33. If you would like to be entered in a random drawing for an IPAD-2, please enter your email address (e-mail address must be provided in question 32).
- a. Yes \_\_\_\_
  - b. No \_\_\_\_

Thank you for taking the time to complete the New Mexico State University student expenditure survey. Please review your responses for errors and fill in any questions you have left blank. Your timely response is very valuable to us in calculating the economic impact of New Mexico State University students have on the New Mexico economy.

## Appendix II: The Employee Survey Questionnaire

Arrowhead Center researchers are conducting a study to estimate the economic impact of New Mexico State University (all campuses) on the state economy. As a critical part of the study, we are surveying faculty and staff concerning earnings expenditure patterns.

Participation in the survey is voluntary. You are not required to respond, but we would appreciate your taking a few minutes to complete this web-based survey. It is very important that we receive your response so that we can obtain the best estimates possible.

The survey can be completed in about five minutes. All personal information will be held in complete confidence and will not be disclosed under any circumstances. This study is being conducted under the guidelines of the NMSU Institutional Review Board (IRB). Information about the guidelines and IRB can be found at: <http://research.nmsu.edu/compliance/IRB/IRB.html>.

1. Do you agree to allow us to use the information you provide in this questionnaire for the purposes intended by this research, under the condition that your answers will be kept strictly confidential by New Mexico State University?

Yes, I agree (please proceed to survey questions)

No, I do not agree (please close the survey window)

2. Please check the box that best describes your employment classification.

Faculty Professor

Faculty Associate Professor

Faculty Assistant Professor

College Faculty

Full-Time Exempt Staff

Full Time Nonexempt Staff

Ad-Hoc Instructional Staff

Limited Term Employee

Other Part-Time Staff (please explain)

3. At which campus are you employed?

a. Alamogordo

b. Carlsbad

c. Dona Ana Community College

d. Grants

e. Las Cruces main campus

4. Is your usual work assignment located within New Mexico?

a. Yes

b. No

5. If your usual place of residence is located in New Mexico, please select your county of residence from the drop-down list.

\_\_\_\_\_

6. If your usual place of residence is outside of New Mexico, please enter the state and county or city and country of your usual residence.

#### Average Monthly Expenditures

In questions 7-18, please estimate how much money you spend on average per MONTH in the following categories in the State of New Mexico. Please exclude all out-of-state expenditures including travel, internet, and mail order purchases.

7. Food, beverage, and tobacco spending.

8. Gas, oil, maintenance, and other automobile spending

9. Rent (including utilities).

10. Home ownership expenses including mortgage payment, maintenance, and repairs.

11. Phone, cell phone, internet, and television service.

12. Music, movies, concerts, games, and other entertainment.

13. Clothing, shoes, etc.

14. Insurance (home, health, auto, life).

15. Child care services.

16. Healthcare (out of pocket spending only).

17. Charitable giving.

18. Miscellaneous spending not covered by another category.

#### About Your Out-of-Town Visitors

19. During the previous 12 months, how many out-of-state visitors came to see you?

20. On average, how many days did your visitors spend per visit?

21. Where did your visitors stay when they came to visit you? ( Please check all choices that apply)

Local hotel, motel, or RV-park ☐

My apartment or home ☐

A relative's apartment or home \_\_\_\_  
Other (please explain) \_\_\_\_\_

Please tell us about yourself

22. What is your gender?

Male

Female

23. Are you married?

Yes

No

24. What is your age?

25. How long have you worked at New Mexico State University?

26. If you would like to receive a copy of the report including the summarized results of this survey, please enter your email address. Your email address will only be used to send you a copy of the report.

a. No

b. Yes (please enter your email address)

\_\_\_\_\_

Thank you for taking the time and trouble to answer this questionnaire. Before you submit this form, please re-check your calculations for accuracy, and enter your best estimates for any required questions you may have left blank.

Submit Survey