2013-2014 UNM Economics PhD Program Assessment Report

Academic year: **2013-2014**
Department/Program: Economics/Graduate Program
Degree program(s):   PhD
Date submitted:

1. **List the student learning outcomes (SLOs) that were assessed during the academic year, including those for which data were gathered as well as those for which developmental work was done, such as the creation or piloting of assessment measures.**

The following five SLO's were adopted by the faculty in Spring 2008.

A1. Students explain and manipulate complex economic models.

B1. Students use appropriate econometrics to explore economic issues and test hypotheses.

B2. Students undertake original economic analysis.

C1. Students effectively present their work to peers and PhD economists.

C2. Students effectively present their work and economics ideas to interdisciplinary and general audiences, including undergraduate students.

2. **For each learning outcome, describe a) the measures used (at least one-half of the measures used are to be direct measures, and at least one direct measure must be used for each SLO), b) the sample of students from whom data were collected, c) the timetable, and d) the setting in which the measures were administered.**

SLO	Description
A1	a) Measure: Comprehensive Exam in Micro and Macro Theory [DIRECT]. Exam questions cover core theory in microeconomics and macroeconomics. The faculty committee blind-evaluates and scores the exams. b) Sample: 70 exams by PhD students c) Timetable: August 2009- August 2014 d) Setting: Two seven-hour exams in the Departmental Conference Room.
A1, B1, B2, C1	a) Measure: Doctoral Dissertation [DIRECT]. Thesis and Dissertation committees evaluate student work according to professional standards. b) Sample: 22 PhD students c) Timetable: 2008-09 to 2013-14 d) Setting: Dissertation or thesis defense scheduled in the Departmental Conference Room individually for each student when their committee has determined the research adequate to fulfill the requirements.
B1	a) Measure: Exam in Econometrics [DIRECT]. Exam covers material from three courses. b) Sample: 42 exams by PhD students c) Timetable: January 2009-14 and August 2009-14 d) Setting: Eight to eight and a half hour exam administered in the Departmental Conference Room.
A1, B1, B2, C1	a) Measure: Research Paper Requirement [DIRECT]. Committee on Studies mentors the student work. When the committee deems the research paper ready, the student submits the paper to a peer reviewed journal and schedules a departmental seminar. All faculty members attending the presentation complete an evaluation form of the research and the presentation. b) Sample: 14 PhD students c) Timetable: 2010-2014 d) Setting: Presentation in Departmental Conference Room, assessment by Committee on Studies, and assessment by journal editor.
B2, C1	a) Measure: Student paper submissions and publications [DIRECT] b) Sample: Current and former PhD students c) Timetable: 2009-2014 d) Setting: Assessment by external reviewers
C1	a) Measure: Job placements [INDIRECT] b) Sample: PhD graduates c) Timetable: 2003-2014 d) Setting: Assessment by external job market
C1	a) Measure: Completion of degree and time to degree [INDIRECT] b) Sample: PhD students c) Timetable: 2005-14 d) Setting: Outcomes of those entering the program

C2	a) Measure: Students teaching in undergraduate courses [DIRECT] b) Sample: 11 courses taught by PhD students c) Timetable: Fall 2013, Spring 2014 d) Setting: UNM classrooms

3. **Describe the results of the assessment. (What do they tell you about student learning? What did you learn about strengths and weaknesses of your program?) If specific results are not available, describe the progress that has been made on the initiatives included in the approved assessment plan.**

A1. Students explain and manipulate complex economic models.

Students' ability to explain and manipulate complex economics models was assessed using three instruments:
- Comprehensive exams
- Research requirement
- Dissertations

Assessment via comprehensive exams

The design of the comprehensive exam allows the examination committee to ascertain if the individual student has a complete knowledge of both microeconomics and macroeconomics. Below is a table outlining the results for the comprehensive exams, for both the microeconomics and macroeconomics components for 2009-14. The most recent results and the overall results are highlighted in gray.

SLO A1 (Students explain and manipulate complex economic models): Evidence from passage rates of comprehensive exams: 2009-14							
Macroeconomics component							
	2009	**2010**	**2011**	**2012**	**2013**	**2014**	**2009-14**
Number taking	15	15	9	9	9	13	70
Passed at PhD	8	9	5	5	3	10	
	53%	60%	56%	56%	33%	77%	57%
Passed at MA level	4	4	3	2	3	0	
	27%	27%	33%	22%	33%	0%	23%
Failed at both levels	3	2	1	2	3	3	
	20%	13%	11%	22%	33%	23%	20%

	Microeconomics component						
	2009	**2010**	**2011**	**2012**	**2013**	**2014**	**2009-14**
Number taking	16	15	11	9	12	9	72
Passed at PhD	8	6	7	4	6	7	
	50%	40%	64%	44%	50%	78%	54%
Passed at MA level	1	4	1	3	4	0	
	6%	27%	9%	33%	33%	0%	18%
Failed at both levels	7	5	3	2	2	2	
	44%	33%	27%	22%	17%	22%	28%

The 2014 results reveal that while not all students can explain and manipulate complex economic models, a

sizeable majority can: 77 percent of students passed the macro component at the PhD level and 78 percent passed the micro component at the PhD level. The share of PhD passes is significantly higher than the overall share over the past six years.

Assessment via research requirement

All attending faculty members as well as members of the committee on studies score the research requirement seminar on a number of objectives. In the middle of 2010-11, these objectives were updated to better reflect our SLOs, so data is only available from the middle of 2010-11 onward. Five students presented their research requirement paper to the department in 2013-14; due to multiple changes in Graduate Coordinators, data from one of the presentations is missing.

Objective 1 of the research requirement assessment form specifically asks for an evaluation of how well the student achieves SLO A1. Each objective is scored out of five points, where a five is best (1=inferior, 2=fair, 3=good, 4=very good, 5=excellent).

The average and standard deviation for students holding their seminars in 2013-14 and the average over the entire period of data collection are shown below. The evaluation from attending faculty show that on average, in 2013-14 and from 2010 on, students are doing a very good job of explaining and manipulating complex economic models.

SLO A1 (Students explain and manipulate complex economic models): Evaluation of research requirement									
	2010-11		2011-12		2012-13		2013-14 [a]		2010-14
n	4		2		4		4		14
	Avg	Std Dev	Avg	Std Dev	Avg	Std Dev	Avg	Std Dev	Avg
Student explains and manipulates complex economic models	3.65	0.84	3.34	0.47	3.74	0.69	3.57	0.61	3.61

[a] 1 observation missing

Four students completed a doctoral dissertation in 2013-14. Relevant to this SLO, each member of their committee scores their dissertation on substance, methodology, and an evaluation of the work as a whole. Each objective is scored out of five points, where a five is best (1=inferior, 2=fair, 3=good, 4=very good, 5=excellent). The average and standard deviation for students completing their dissertation in 2013-14 and the average over the entire period of data collection are shown below.

SLO A1 (Students explain and manipulate complex economic models): Evaluation of dissertations

	2008-09		2009-10		2010-11		2011-12		2012-13		2013-14		2008-14
n	4		2		2		6		4		4		22
	Avg	Std Dev	Avg	Std Dev	Avg	Std Dev	Avg	Std Dev	Avg	Std Dev	Avg	Std Dev	Avg
Substance	4.08	1.18	3.125	0.53	4.25	0.35	4.33	0.49	3.67	0.39	4.36	0.33	4.05
Methodology	4.33	1.15	3.5	0.7	4.4	0.53	4.45	0.53	3.83	0.34	4.77	0.16	4.28
Evaluation of Work as a Whole	4.17	1.23	3.1	0.53	4.25	0.35	4.35	0.51	3.5	0.47	4.43	0.51	4.05

The results show that on average, in 2013-14, dissertation committees evaluated the methodology as excellent; the substance and overall work was evaluated as very good. It is worth noting that two of the students passed their dissertation defense with Distinction. The 2013-14 results are comparable to the overall average, although the methodology score for 2013-14 was slightly higher than typical. Overall, we conclude that students who complete the PhD are able to explain and manipulate complex economic models.

B1. Students use appropriate econometrics to explore economic issues and test hypotheses.

Students' ability to use appropriate econometrics to explore economic issues and test hypotheses was assessed using three instruments:

- Econometrics exam
- Research requirement
- Dissertations

Assessment via econometrics exam

The design of the comprehensive exam in econometrics allows the examination committee to ascertain if the individual student has a complete knowledge of the material covered in the three-course sequence in econometrics. These classes emphasize an applied econometric approach. The 2014 results were fairly consistent with previous results, although a little stronger: all PhD students passed the econometrics exam on their first attempt. Over the 12 test periods, 76% of all test-takers passed the econometric exam at the PhD level. This suggests that students have the skills to properly apply econometrics to exploring economic issues and testing hypotheses.

SLO B1 (Students use appropriate econometrics to explore economic issues and test hypotheses): Evidence from passage rate of econometrics exam

	Jan-09	Aug-09	Jan-10	Aug-10	Jan-11	Aug-11	Jan-12	Aug-12	Jan-13	Aug-13	Jan-14	Aug-14	2009-14
Number taking	3	1	10	1	6	1	6	2	4	2	6	0	42
PhD pass	1 / 33%	1 / 100%	9 / 90%	1 / 100%	5 / 83%	0 / 0%	4 / 67%	2 / 100%	3 / 75%	0 / 0%	6 / 100%	0	32 / 76%
MA pass	0 / 0%	0 / 0%	1 / 10%	0 / 0%	0 / 0%	1 / 100%	2 / 33%	0 / 0%	1 / 25%	1 / 50%	0 / 0%	0	6 / 14%
Fail	2 / 67%	0 / 0%	0 / 0%	0 / 0%	1 / 17%	0 / 0%	0 / 0%	0 / 0%	0 / 0%	1 / 50%	0 / 0%	0	4 / 10%

Objective 2 of the research requirement assessment form specifically asks for an evaluation of how well the student achieves SLO B1. Each objective is scored out of five points, where a five is best (1=inferior, 2=fair, 3=good, 4=very good, 5=excellent).

The average and standard deviation for students holding their seminars in 2013-14 and the average over the entire period of data collection are shown below. The evaluation from attending faculty show that on average, in 2013-14 and over the entire time period, students are doing a very good job of using appropriate econometrics to explore economic issues and test hypotheses.

SLO B1 (Students use appropriate econometrics to explore economic issues and test hypotheses):
Evaluation of research requirement

	2010-11		2011-12		2012-13		2013-14 [a]		2010-14
n	3		2		4		3		12
	Avg	Std Dev	Avg	Std Dev	Avg	Std Dev	Avg	Std Dev	Avg
Student uses appropriate econometrics to explore economic issues and test hypotheses	3.97	0.66	3.92	0.59	4.11	0.70	4.42	0.22	4.12

[a] 1 observation missing

Assessment via dissertations

The following table examines the results for dissertations, which typically have a significant econometric component. Relevant to this SLO, each member of their committee scores their dissertation on substance and methodology. Each objective is scored out of 5 points Each objective is scored out of five points, where a five is best (1=inferior, 2=fair, 3=good, 4=very good, 5=excellent).

The average and standard deviation for students completing their dissertation in 2013-14 and the average over the entire period of data collection are shown below. These results show that on average, in 2013-14, students are doing an excellent job of using appropriate econometrics to explore economic issues and test hypotheses. In comparison, over the entire time period, students did a very good job on the same measure.

SLO B1 (Students use appropriate econometrics to explore economic issues and test hypotheses): Evaluation of dissertations

	2008-09		2009-10		2010-11		2011-12		2012-13		2013-14		2008-14
n	4		2		2		6		4		4		22
	Avg	Std Dev	Avg	Std Dev	Avg	Std Dev	Avg	Std Dev	Avg	Std Dev	Avg	Std Dev	Avg
Substance	4.08	1.18	3.13	0.53	4.25	0.35	4.33	0.49	3.67	0.39	4.36	0.33	4.05
Methodology	4.33	1.15	3.5	0.7	4.4	0.53	4.45	0.53	3.83	0.34	4.77	0.16	4.28

B2. Students undertake original economic analysis.

Whether students are undertaking original economic analysis was assessed using three instruments:

- Research requirement
- Dissertation
- Student publications

Assessment via research requirement

Objective 3 in the research requirement assessment form specifically asks for an evaluation of how well the student achieves SLO B2. Each objective is scored out of five points, where a five is best (1=inferior, 2=fair, 3=good, 4=very good, 5=excellent).

The average and standard deviation for students holding their seminars in 2013-14 and the average over the entire period of data collection are shown below. The evaluation from attending faculty show that on average, in 2013-14 and over the entire time period, students are doing a very good job of undertaking original economic analysis.

SLO B2 (Students undertake original economic analysis): Evaluation of research requirement	2010-11		2011-12		2012-13		2013-14 [a]		2010-14
n	3		2		4		4		13
	Avg	Std Dev	Avg	Std Dev	Avg	Std Dev	Avg	Std Dev	Avg
Students undertake original economic analysis	4.12	0.94	3.84	0.23	4.06	0.73	4.18	0.79	4.08

[a] 1 observation missing

<u>Assessment via dissertations</u>

All dissertations are assessed on their originality. Each objective is scored out of five points, where a five is best (1=inferior, 2=fair, 3=good, 4=very good, 5=excellent).

The average and standard deviation for students completing their dissertation in 2013-14 and the average over the entire period of data collection are shown below. These results show that on average, in 2013-14, students are doing an excellent job of conducting original economic analysis. In comparison, over the entire time period, students did a very good job on the same measure.

SLO B2 (Students undertake original economic analysis): Evaluation of dissertations

	2008-09		2009-10		2010-11		2011-12		2012-13		2013-14		2008-14
n	3		2		2		6		4		4		21
	Avg	Std Dev	Avg	Std Dev	Avg	Std Dev	Avg	Std Dev	Avg	Std Dev	Avg	Std Dev	Avg
Originality	4.75	0.075	3.13	0.53	4.13	0.18	4.29	0.62	3.98	0.83	4.71	0.21	4.25

<u>Assessment via student publications</u>

Another indicator of original economic analysis is peer-reviewed student publications. The following table shows publications authored or co-authored with current or former PhD students. The articles are listed in Appendix I.

SLO B2 (Students undertake original economic analysis): Student publications

	2009	2010	2011	2012	2013	2014 (to date)	2009-14
# of publications	8	13	10	4	9	4	48

In improving this criteria for the future, the following issues should be addressed:

- Difficulties in tracking data. Appendix A likely does not capture all articles
- Decisions need to be made about which graduate or graduate student articles should count (e.g., how long after graduation)

C1. Students effectively present their work to peers and PhD economists.

Whether students effectively present their work to peers and PhD economists was assessed using four instruments:

- Research requirement
- Job placements
- Student publications
- Outcomes after entering program

Assessment via research requirement

Objective 4 in the research requirement assessment form specifically asks for an evaluation of how well the student achieves SLO C1. Each objective is scored out of five points, where a five is best (1=inferior, 2=fair, 3=good, 4=very good, 5=excellent).

The average and standard deviation for students holding their seminars in 2013-14 and the average over the entire period of data collection are shown below. The evaluation from attending faculty show that on average, in 2013-14 and over the entire time period, students are doing a very good job of effectively presenting their work to peers and PhD economists.

SLO C1 (Students effectively present their work to peers and PhD economists): Evaluation of research requirement

	2010-11		2011-12		2012-13		2013-14 [a]		2010-14
	Avg	Std Dev	Avg	Std Dev	Avg	Std Dev	Avg	Std Dev	Avg
n	3		2		4		4		13
Students effectively present their work to peers and PhD economists	4.18	0.83	4.17	0.94	3.90	0.75	3.72	0.82	3.95

[a] 1 observation missing

Assessment via student publications

The 48 publications since 2009, by current or former graduate students, are indicators of effective presentation skills (see Appendix A).

Assessment via job placements

Appendix A reports job placements from 2003-14. There was clearly a recessionary impact on job placement. While our students get jobs (and there are all sorts of preferences and constraints affecting job choice), students don't place as well as one might hope. Future study should examine this issue. One observation is that students don't seem to have a good understanding of the job market timetable and are often underprepared to go on the job market in November and then default to going on the secondary market.

Assessment via completion

An issue of interest to the department is completion of desired degree, the time to degree, and the factors affecting success. While this issue seems to fit best under SLO C1, it isn't a perfect fit. The department may want to consider updating SLOs for the future.

The following table shows outcomes by year for all those entering the program from 2005-2014.

SLO C1 (Students effectively present their work to peers and PhD economists): Completion of desired degree

Year entered program	Dropped - ABD	In progress	Leave of absence	PhD	Terminated	Transfer to MA program	Dropped/ Withdrew	Terminal MA - transferred to new PhD program	Terminal MA	Grand Total
2005	1			6			1	1		9
2006		1		4			1		2	8
2007				2	1		4		3	10
2008		5		2	1				3	11
2009		4		1			2		2	9
2010		4			1			1	3	9
2011		3					2		6	11
2012		6	1				1	2		10
2013		8	1			1				10
2014		9								9
Grand Total	**1**	**40**	**2**	**15**	**3**	**1**	**11**	**4**	**19**	**96**

This table shows several things:

- The size of the entering PhD class has varied from 8 to 11.
- From 2005-14, out of 96 PhD students, 15 have graduated with PhDs.
- Not surprisingly, the majority of the remaining students are in progress on their degree.
- Ignoring those receiving a PhD and still actively working on a PhD, there are two significant exit points from the program: Terminal MA degrees (16) and dropping/withdrawing (11). Terminal MAs primarily represent people who were unable to pass the core exam at the PhD level but then went on to earn an MA by either completing a thesis or (in later years) passing the core exam at the MA level. Students who drop/withdraw are primarily students who start the core courses but do poorly in these courses and are unable to progress to the core exam or decide they are uninterested in a PhD.
- Note that all of the dropping/withdrawal is early in the program. If a student makes it to ABD, they almost always complete the PhD (or remain in the program).
- It is worth noting that there is a small group of students who voluntarily leave with a terminal MA after acceptance to a different PhD program. These represent students who either pass the core exam or have a very high likelihood of doing so.
- Together, this data suggests a need for greater screening of students into the PhD program.

To get a better understanding of who we admit, the next table shows GRE score by year entered. There was a change in GRE testing in 2011. To enable better comparisons, old scores have been converted into the new style using the GRE concordance table.

Year entered program	Average of GRE Verbal	Average of GRE Quantitative
2005	158	153
2006	154	156
2007	151	148
2008	152	156
2009	155	156
2010	154	155
2011	154	154
2012	155	156
2013	151	159
2014	152	160
Weighted Avg	153	155

2 missing in 2005; No GRE: 2006=1, 2008=2, 2014=1.

Several things can be learned from the table:
- This year's entering class has the highest average quantitative score, significantly above the weighted average of the entire time period. This is consistent with the graduate committee's attempts to be more discriminating in admissions. For context, a score of 155 means that 60% of test takers had a lower quantitative score; a score of 160 means that 78% of test takers had a lower score.
- Commensurate with this change, the verbal GRE score for this year's class is slightly below the weighted average of the entire period. A score of 152 means 54% scored lower; a score of 153 means 59% scored lower. This likely reflects the larger share of international students in the new cohort.
- Although it is not shown in the table, some of our biggest problem children (students who re-took class after class but were never able to qualify for the core) were those who were admitted without a GRE score.

Now's lets consider those who receive a PhD. The following table shows the time to completion.

SLO C1 (Students effectively present their work to peers and PhD economists): Time to degree

Year Admitted	Number receiving PhD	Time to Degree: Avg	Time to Degree: Min	Time to Degree: Max
2005	6	6.3	4	9
2006	4	6.8	5	8
2007	2	5.5	5	6
2008	2	5.0	5	5
2009	1	5.0	5	5
Grand Total	**15**	**6.1**	**4**	**9**

- We see that the average over the entire time period is 6.1 years with a minimum of 4 and a maximum of 9.
- Not surprisingly, the earlier years have the longest average. This reflects the fact that more individuals in the earlier cohorts have finished their degree.
- In my opinion, the length of time to degree is in large part a function of funding (at least in the past). 20 hour GA funding is really only available for the first two years. Students must then fund themselves through some combination of teaching, fellowships, GA-ships, RA-ships, jobs outside of the department, or personal funds. Historically, students have funded themselves by teaching multiple courses (although this has decreased significantly recently, as the number of teaching positions has decreased and the department has restricted the number of courses taught by a single student.) Those students with the longest time to degree generally are those who have jobs outside of the department.
- Given the placements of our students (Appendix), we need to come up with a strategy for getting students through in five years.
- Additional grant funding is required in order to adequately fund students and recruit the most competitive students.

C2. Students effectively present their work and economics ideas to interdisciplinary and general audiences, including undergraduate students.

Whether students effectively present their work and economics ideas to interdisciplinary and general audiences, including undergraduate students is evaluated via:

- Undergraduate teaching

Assessment via undergraduate teaching

On main campus, eight students served as instructors during Fall 2013 and three during Spring 2014. Average adjusted IDEA scores for "The teacher is excellent" is presented in the table below. The average IDEA score was 4.34.) out of 5. These scores reflect that PhD students are able to effectively convey economic ideas to undergraduates.

SLO B2 (Students effectively present their work and economics ideas to interdisciplinary and general audiences, including undergraduate students):
Evaluation of IDEA scores

	Fall 2013		Spring 2014		2013-14
n	8		3		11
	Avg	StdDev	Avg	StdDev	
Excellent Teacher (adjusted)	4.52	1.67	3.87	0.38	4.34

Future reports should expand the IDEA criteria used and collect data from past years.

In the future, it would be helpful to do a better job tracking awards received by students.

4. **Describe the departmental process by which faculty reviewed the assessment procedures and results and decided on the actions and/or revisions that were indicated by them**

The faculty annually discusses results of the comprehensive exams at meetings in January and September. The Graduate Director gives a graduate report at each faculty meeting; many of the topics discussed in the graduate report connect to assessment issues. A meeting to discuss this report was held on September 12, 2014. Once issues are identified in the assessment report and assessment meeting, they are referred to the Graduate Committee. The Graduate Committee discusses any issues in detail. For any issues that require significant changes, and thus faculty approval, the Graduate Committee makes a recommendation to the faculty, which is then brought to a vote. Smaller administrative issues can be handled without a vote.

5. Describe the actions and/or revisions that were implemented in response to the assessment processes and results.

Over the last several years, a number of actions have been implemented in response to the assessment.

An issue that was identified in previous years' assessment is that graduate students tend to present their research requirement papers later in the program (i.e., in their last year), rather than earlier on. There has been a concern that work on the research requirement is delaying progress on the dissertation. Ideally, the research requirement is supposed to take place early in a student's academic career. We have attempted to address this issue by more clearly articulating to students the expectation that they should complete this requirement by end of the third year, providing an informational handout at the start of the second year that reminds students of the need to create a committee on studies. In addition, this year the graduate director and academic advisor met with each of the different cohorts at the beginning of the academic year and stressed the importance of timely completion of the research requirement. The new graduate student orientation emphasized the importance of forming a committee on studies and completing the research requirement in a timely manner. Finally, when students complete their research requirement during the third year, faculty have made a point of this during their introductions at the presentation. Our qualitative perception is that the newer cohorts of students are completing their research requirement earlier on in their program, as intended. Furthermore, last year the faculty approved changes to the Graduate Handbook specifying that the research requirement should be completed by no later than the end of the third year. The Graduate Committee is currently working on a proposal to require students to present a poster in the Spring of their second year, that identifies the research question and methods that will be used in their research requirement paper. The Graduate Committee is also discussing how to best align funding decisions with completions of certain benchmarks.

Faculty have felt that students may not accurately understand the comprehensive nature of the exams and were not allocating enough time for studying. For the last several years, a panel of graduate students has been convened at the new graduate student orientation to convey the methods by which successful students had studied for the exams and the time required to successfully pass. Individual meetings were held with students who did not pass, to determine a course of action for the upcoming year. Memos have been sent to the students at the start of the summer, clearly delineating the criteria for passing and articulating the typical time commitment required for successfully passing the exam. As noted in the report, passing rates are improving.

There was also a concern among faculty that the timing of the exam (only given once per year in August) was delaying students who did not successfully pass on the first attempt. These students spent the next year studying (often re-taking core theory classes and did not work on their research requirement paper or took fewer field courses). At best, students passed on the second attempt but were slowed down in their dissertation. At worst, students failed and had very little to show for an additional year in the program. Based on results in previous assessment reports examining results for those taking the exam a second time, the faculty voted to offer the exam twice per year (August and January) with the idea that students will make faster progress in the program or not extend their time in the program if they are unable to pass the exams.

There is a need to institutionalize the collection of graduate student data (presentations, job market outcomes, publications, etc) so as to allow better analysis of how our students are truly doing when they complete a PhD. In addition, because of multiple changes in graduate advisors over the past four years, the internal data set is riddled with missing observations. There is a need to formalize how internal data is maintained so as to make assessment easier.

More analysis needs to be conducted on outcomes so that we can do a better job improving our screening of incoming students. As a faculty, we need to devise a system for how to get students through the PhD in a more timely manner. The faculty should consider whether the SLOs should be updated to better represent our goals for the future.

Appendix A: Student Publications

2014: 4 publications

Guemmegne-T, J. Pongou, R. 2014. "A Policy-Based Rationalization for Collective Rules: Dimensionality,Decentralized Houses and Specialized Authority". *Journal of Mathematical Economics* 52: 182-193.

Karki, Menuka and Bohora, Alok 2014. "Evidence of Earnings Inequality Based on Caste in Nepal", *The Developing Economies*, (Submitted August 2013, Accepted April 2014)

Olufolake O. Odufuwa, Robert P. Berrens and R. Burciaga Valdez (2014). "Assessing Racial and Ethnic Disparities in Willingness to Pay for Mortality Risk Reductions: Evidence from the Elderly Population". Accepted for publication in *'Hispanics in the Americas: Planning for an Aging Population in Mexico and the United States'*. Springer New York.

Price, J. and J. Felardo, "Low-Flow Appliances and Household Water Demand: An Evaluation of Demand-Side Management Policy in Albuquerque, New Mexico," *Journal of Environmental Management*, 133 (Jan): 37-44 (2014).

2013: 9 publications

Brand, A., Dixon, M. D., Fetz, T., Stewart, S., Brookshire, D., Stromberg, J., & Thacher, J. (2013). Projecting avian guild responses to restoration scenarios on a large dryland river (middle Rio Grande, New Mexico, USA) 2222. *Journal of Restoration Ecology*, *58*(2), 150-162.

Dealy, B.C., B.P. Horn, T.J. Callahan, and A.D. Bryan. "The Economic Impact of Project MARS (Motivating Adolescents to Reduce Sexual Risk)" Health *Psychology* Special Issue: Health psychology meets behavioral (health) economics.

Fonner, R., and R. Berrens. 2014. "A hedonic Pricing Model of Lift Tickets for U.S. Alpine Ski Areas: Examining the Influence of Crowding". *Tourism Economics*.

Koirala, Bishwa, Alok K. Bohara and Li, Hui, "Effects of Energy-Efficiency Building Codes in the Energy Savings and Emissions of Carbon Dioxide," *Environmental Economics and Policy Studies,* 14(3):271-290, 2013. (Accepted January 2013)

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2010: 13 publications

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Job Placements

<u>2014:</u>
Robby Fonner: Oregon Public Utilities Commission
Jee Hwang, Northern New Mexico College (Assistant Professor)
Naresh Nepal (on market)

<u>2013:</u>
Justin Tevie: University of Maryland (Post-doc)
Michael Morrison: Edinboro University (Asst Prof)
Jeff Felardo: Eckerd College (Asst Prof)
Dennis Barber: Career Management Advisors (Principal)

<u>2012:</u>
Steve Archambault: New Mexico State University (Asst Prof)
Hari Katuwal: University of Montana (Postdoc)
James Price: Univ of British Columbia - Okanagan (Postdoc) followed by Brock University (Postdoc)
Dave Dixon: Eckerd College (Visiting Assistant Professor) followed by UNM (Lecturer)

<u>2011:</u>
German Muchnik Izon: Eastern Washington Univ (Visiting Asst Prof followed by Asst Prof)

<u>2010:</u>
Bishwa Koirola: St Loius University (Visiting Asst Prof) followed by Univ of North Carolina - Penmbroke (Asst Prof)

<u>2009:</u>
Craig Broadbent: Illinois Wesleyan University (Asst Prof)
Jason Hansen: Naval Postgraduate School (Asst Prof) followed by Idaho National Labs
Michael Milligan: Pusan Natl University (Asst Prof) followed by United Nations
Rohnn Sanderson: Brescia University (Asst Prof)

<u>2008:</u>
Gwen Aldrich: NM Tax and Rev (Sr Economist) followed by BBER
Tyler Prante: Central Washington University (Asst Prof)
Nejm Raheem: Emerson College (Asst Prof)
Jose Saloio: Sandia Natl Labs

<u>2007:</u>
Michael Hand: USDA Economic Research Service (Economist)
Mani Nepal: Tribuhuvan University (Assoc Prof)
William Vasquez: Fairfield Univ (Asst Prof)

<u>2006:</u>
Luis Arregoces: PNM (Economic Analyst)
Pallab Mozzumunder: Florida International University (Asst Prof)

2005:
Mary Ewers: Los Alamos Natl Lab
Joseph Little: Univ of Alaska-Fairbanks (Asst Prof)
Manuel Vlanezuela: President's Office of Mexico

2004:
Teena Archuleta: NM Dept of Health (Economist)
Kevin Balsam: Queens College of NY (Adjunct Prof)
Pao Ze Her: NM Dept of Health and Human Services (Analyst)
Kristin Hutchins: Sandia Natl Labs
Hi Li: Eastern Illinois Univ (Asst Prof)
Harry Talberth: World Resources Institute (Sr Economist)

2003:
Michael Jones: Bridgewater State College (Assoc Prof)
Cara Starbuck: Univ of GA (Post-doc) followed by NM State Univ (Asst Prof)