

## **Strategic Investment: A Case Study of Payoffs from Targeted University Funding**

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### **Abstract**

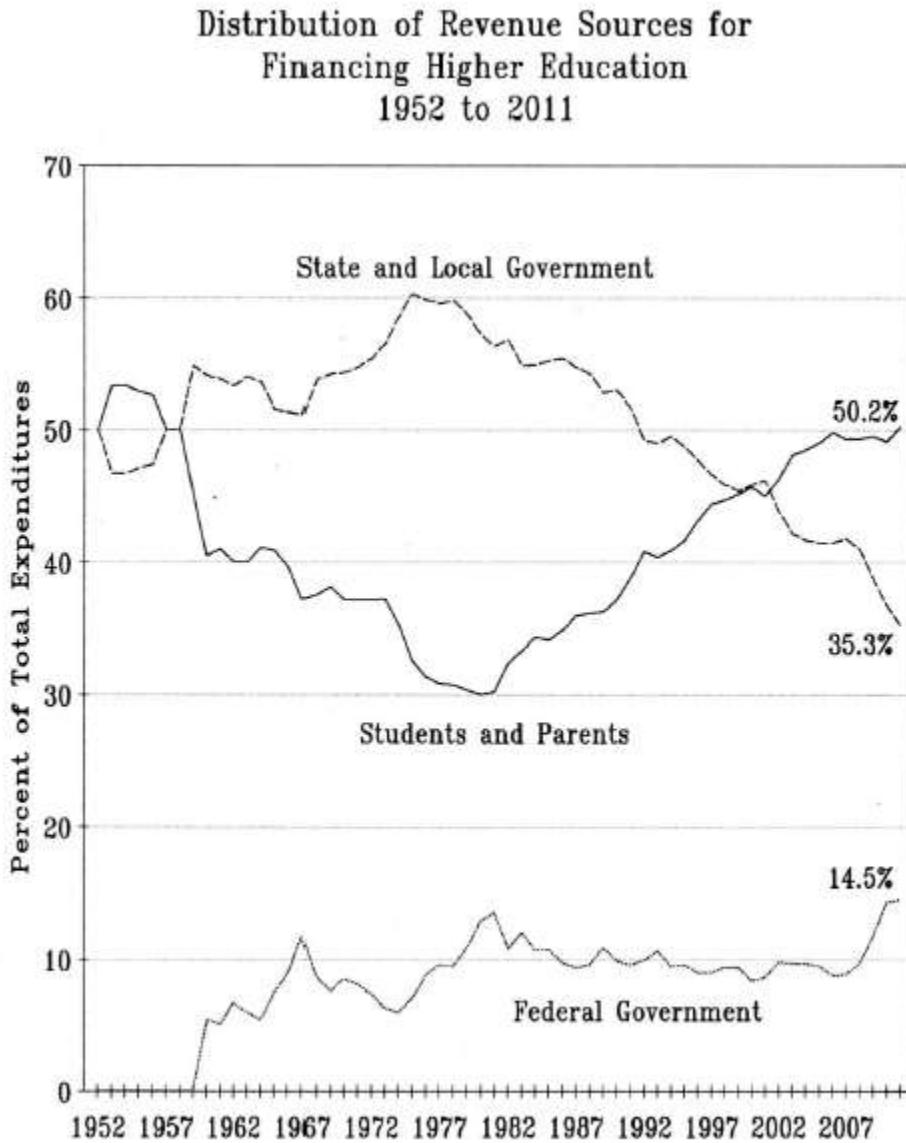
For more than a decade most public universities in the U.S. have faced the challenge of continuing to develop new programs or boost existing ones to a new level without significant new resources. A long-term pattern of cuts or limited growth in state appropriations occurred at a time when new and expensive fields in technology and science required investment. At the same time, expanded enrollments meant that core programs also had to be sustained to meet enrollment demands. Limited resources had to be targeted in hopes that modest investments could make significant differences. This case study examines the impact of a Midwestern university system's efforts over ten years to transform and elevate selected programs on its four campuses through strategic investments. Recurring investments were made beginning in 2003 to assist programs in attaining distinction and establishing national reputations. This 2012 study examined 116 programs funded between 2003 and 2008. The \$15.5 million investment resulted in the initial hire of 107 tenure-track faculty and 90 non-tenure track faculty, staff and graduate students. Campus matching investments were conservatively estimated at \$32 million. Faculty associated with the programs of excellence impacted thousands of students through teaching, garnered \$528 million in funding awards, and generated over 10,700 publications and presentations. Most original programs remain priorities on their campuses. Given the record of success in building national reputations, research and educational capacity, this study of targeted investment underscores the effectiveness of strategic investments as a means of transforming programs and institutions over time despite persistently challenging budget environments.

### **Introduction**

Since 2001 public funding for higher education in the United States has tracked the shifts in the economy generally. The post-9/11 recession meant that most states suffered shortfalls in their budgets that resulted in cuts to higher education in 2003-04. In the next four years, increases in state revenues relieved the stress on higher education budgets and in some states made up the earlier losses. Since 2008, a stubborn recession has again limited state appropriations. Even in states which maintained the level of dollars for higher education, the adjusted value over time in constant dollars did not match the growth in expenses. The result was to shift to students and families an increasing amount of the cost of higher education cost (see Figure 1). Funds from the American Recovery and Reinvestment Act of 2009 (ARRA)

assisted many states in maintaining current funding levels for education, but by 2012 ARRA funds had expired, resulting in a seven percent decrease in support for higher education (SHEEO, "State Higher Education Finance FY2012," 7) while the average amount students at public colleges paid in tuition, after state and institutional grants and scholarships, climbed 8.3%. This increase is the largest on record (Simon 2013).

**Figure 1:** Distribution of Revenue Sources for Financing Higher Education 1952-2011



Source: National Income and Product Accounts

The University of Nebraska system has not had the deep cuts that some universities experienced, but it has not been exempt from these constraints in budget growth. From 2006-2012 it had a total growth in state funds of 15.1 percent, an average of 2.1% each year, and an average tuition increase of 5.4 percent. In constant dollars, however, funding shrunk 11% since 2000, resulting in budget reallocations of \$76 million. In common with other universities, the University of Nebraska faced this fiscal challenge in a political climate filled with expectations to increase access and quality, cut costs and generate knowledge applications for economic and social advancement (Gumport 2001; Mintrom 2008).

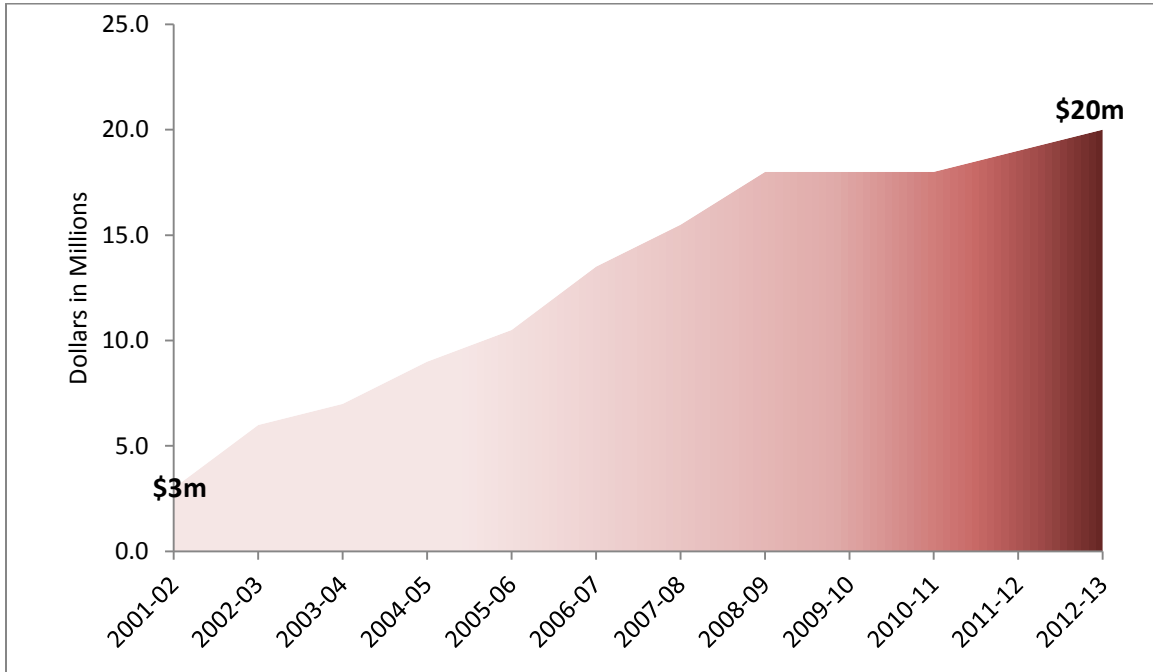
## **Framework**

This case study explores the experience of an institution that is striving to build programs in the face of sustained budgetary challenges. The collective case study method was chosen because of the potential to analyze a single depository with multiple cases (Merriam 1988, 1998; Bogdan and Biklen, 1992; Stake 1995). Further, the multiple cases could be "described and compared to provide insight into an issue" (Creswell 2002, 485).

The setting of the case study, the University of Nebraska system, is a public, higher education institution located in the midwestern United States. The University of Nebraska is a four-campus system comprised of the University of Nebraska at Kearney (UNK); University of Nebraska-Lincoln (UNL), University of Nebraska Medical Center (UNMC), and University of Nebraska at Omaha (UNO). Undergraduate, graduate and professional student enrollment is approximately 51,000; there are nearly 12,600 faculty and staff in the system; and the overall budget is \$2.3 billion.

In FY2003 the University of Nebraska instituted a budget allocation for Programs of Excellence (POE) to be used for a select group of academic programs. The purpose of the investment of these new permanent funds was to leverage the potential for a good program to reach a level of distinction and enhanced national reputation. POE funds are recurring funds and, depending upon budget constraints, the annual distribution has varied between \$1,000,000 and \$3,000,000 (see Figure 2). In FY2010 and FY2011 no POE funds were available. The POE funds are distributed across the four campuses through a proposal process administered by the Office of the Provost. POE funding decisions are made by the University of Nebraska President with recommendations coming from the Office of the Provost.

**Figure 2:** University of Nebraska Programs of Excellence Investment



The POE program is essentially a partnership with the campuses in which an influx of new permanent dollars enables a campus to move forward with a priority program for which such an investment has the potential to leverage the program to a new level of quality. The expectation is that each campus will continue to support the program, and campus investments are essential for most POE programs to fully succeed.

In 2011 the Office of the Executive Vice President and Provost initiated a review of the first five years of POE. Although every program that is awarded POE funds has to make an annual report of its activities and use of funds, the purpose of the review of the first five years was to determine the impact of POE investment on the campuses and on the University as a whole over time. In order to assess the impact of POE funding, the review asked a series of questions that would indicate the success of the programs and the manner in which the campuses supported them. The following questions were asked about each program:

1. Were POE funds used as proposed, and if not, how were they reallocated?
2. Did the campus make its own investments in the POE program?
3. What evidence from such things as external funding, awards, publications, or creative works resulted from the POE investment?
4. Does the POE program have a strategic plan for the future that is consistent with the campus strategic plan?
5. Has the leadership of the POE program been stable and effective?

6. If signs of difficulty in succeeding were noted, did the campus take measures to support the POE program?
7. Does the POE program remain a campus priority? If the POE program has been completed, is it still functioning successfully?

The researchers compiled information from all programs funded between 2003-2008 to answer these questions, both quantitatively and qualitatively. Only programs funded in the first five years were included in the study based on the assumption that any program would need a few years of development before an assessment of impact of the POE investment could be documented. Therefore, the study covered 116 separate programs. The review file on each program included the annual reports and the campus's evaluation. The Provost's Office analyzed all documents, established categories based on the questions and coded the content, (Bogdan and Biklen 1992, 166), and summarized the results on spread sheets for each campus. Summaries were sent to the chief academic officers of each of the four campuses for triangulation (Creswell 2002, 651).

University of Nebraska campus-level POE investments between FY2003 and FY2008 totaled a modest \$15.5 million. With campus investment, however, the initial POE funds during the period under review supported in full or in part 107 tenure-track faculty hires and 90 non-tenure track faculty, staff, and graduate students. The successful investment in faculty resulted in a growth of external awards and endowment gifts that were leveraged to assist in now funding 152 tenure-track faculty and 147 non-tenured faculty, staff and graduate students. The programs under review garnered an additional campus investment of \$31,952,441 and University of Foundation endowments and gifts associated with the programs total \$165,385,696. Faculty associated with these programs successfully competed for external funding awards of \$528,076,735 and published 10,727 publications. Most of the original programs funded between FY2003 and FY2008 are still in place today and remain strategic priorities for the respective campuses. When a program was discontinued, POE funds were shifted to other approved POE projects on the campus. No significant difficulties in leadership transitions, faculty retention and recruitment were reported by the campuses and ample evidence exists to conclude that campus administration provided adequate oversight of the implementation and administration of these funds.

### **Case Examples**

The following section provides a few campus examples of ways targeted POE funds advanced disciplines and areas leading to excellence across the University of Nebraska.

#### **UNK Undergraduate Research**

The University of Nebraska at Kearney (UNK) sought to strengthen its undergraduate program by providing an undergraduate research experience for each student. The UNK undergraduate research program was originally established through a \$62,500

grant from the Leslie E. Lancy Foundation. Beginning in the first year of POE funding in FY2003, NU invested \$367,000 over three years to enable UNK to expand its undergraduate research program in which students design, conduct and disseminate original scholarly projects consistent with the methods of their disciplines and in collaboration with their mentors.

Today, POE funds help support the salary of a director, an assistant director, and a staff member and annually provide \$19,000 in student stipends. The UNK undergraduate research program includes undergraduate research fellows, a summer student research program, an undergraduate research journal, and a celebratory student research day. On average, six or more students presented research papers at their disciplinary conferences annually and 123 UNK student presentations were made at the National Conference of Undergraduate Research over the last five years. Overall, undergraduate research has resulted in 188 publications and presentations, and led to the filing of two provisional patents. The National Survey of Student Engagement determined that UNK students report more participation in out-of-class research than many top institutions and student research has become one of the strengths of undergraduate education at UNK.

### **UNL Children, Youth, Families and Schools**

In FY2003, the University of Nebraska-Lincoln (UNL) received \$25,000 in POE funds to build on substantial faculty strength and outstanding programs in children, youth, families and schools by increasing interaction and coordination through establishing a national center for interdisciplinary research. In 2006, additional one-time POE funds were invested to renovate space to house the national center (\$285,000) and recurring funds provided to hire an additional tenure-track faculty member.

Through the years, UNL has made additional investments totaling \$274,040 in this program through equipment purchases, and internal and NU Foundation grants.

Today, the Nebraska Center for Research on Children, Youth, Families and Schools team includes 23 faculty, 34 staff and 95 students. Since its inception, faculty members in the Nebraska Center for Research on Children, Youth, Families and Schools have been awarded \$42,884,550 in external awards and produced 721 publications, papers, grants and awards. In 2005, one of these awards led to the establishment of the National Center for Research on Rural Education; in 2010, also through an external award, the Interdisciplinary Alliance for Partnerships Research (IAPR) program was launched. Currently, the IAPR boasts 101 faculty affiliates representing 20 departments, eight colleges and three university campuses.

In January, 2011 it was announced that a gift designated for early childhood education was being matched by University, private and federal sources resulting in an endowment of more than \$100 million. Today, the Buffett Early Childhood Institute, a system-wide initiative, has been launched. The Buffett Institute will engage early childhood faculty across the four-campus system, and the UNL faculty and staff associated with this POE are prominent among the experts contributing to the initiative.

### **UNL Nanoscale Science**

A POE commitment in FY2003 allowed UNL to expand the Nebraska Center for Materials and Nanoscience (NCMN) through hiring seven additional tenure-track faculty and two staff in nanomaterials, nanoscience, and nanotechnology to create and utilize materials, devices and systems through control of matter on the nanometer scale. Today, over 90 faculty members from 12 departments at UNL, UNMC and UNK campuses are part of the NCMN; seven faculty and five staff are fully or partially supported through the annual POE funding of \$603,846. Faculty and staff associated with the nanoscale science POE have garnered \$81,404,302 in external funding, are responsible for 2,260 publications, papers, grants, and awards as well as eight patents, and have established six "spinoff" companies.

In 2007, UNL broke ground on a Physical Science building and, by matching a \$6.9 million grant, also constructed a Nanoscience Metrology facility. These facilities house many of the NCMN's faculty, staff, students and equipment. In addition to these facilities, UNL has invested an estimated \$5,377,084 in the program through support for faculty partially funded through POE. The nanoscale science program also benefitted from a \$5,000,000 gift to the NU Foundation.

### **UNL Water Resources Initiative**

To leverage existing expertise in water at UNL and expand water-related research, POE funds were committed in 2004 for a cluster hire of three tenure-track faculty and one staff. Today, the POE receives \$300,000 annually and fully or partially supports eleven faculty. This investment builds upon water research efforts initiated at UNL in 1964 through the Nebraska Water Center. Since receiving this POE funding, UNL has invested \$1,894,954 in faculty and staff support, equipment and internal competitive funds in the POE; University of Nebraska central administration has awarded \$699,800 in Nebraska Research Initiative funds to faculty associated with the POE.

Water resources faculty have attracted \$14,322,383 in competitive external funds and awards, and generated 131 publications, grants and awards. Additionally, faculty expertise in water at UNL and across the system was the research core for the Robert B. Daugherty Water for Food Institute. The Daugherty Water for Food Institute is a research, education and policy analysis institute committed to helping the world efficiently use its limited freshwater resources, with particular focus on ensuring the food supply for current and future generations.

### **UNL Cather Project**

The Cather Project maintains a digital archive devoted to noted Nebraska author Willa Cather, organizes the International Cather Seminar, and has edited and overseen the publication of more than a dozen scholarly editions of Cather's work. The Cather Project already had depth in research and publications, but the addition

of POE funds allowed the Project to hire a permanent director and establish itself as a functioning center for scholarly work. The POE investment in 2003 was \$85,000, and the program has now brought in \$2,467,344 in external funds. Today the Cather Project is the premier center for the study of Willa Cather.

### **UNMC College of Public Health**

A POE investment in 2008 helped the University of Nebraska Medical Center launch the College of Public Health. The college was established to meet the state's needs for trained public health professionals (graduates), train and update those in public health professions, and research and disseminate new knowledge about public health issues. The original POE investment of \$663,600 resulted in the hiring of six tenure-track faculty. Today, the POE investment is augmented by external awards, allowing for support of 17 faculty; POE funds have been complemented by the investment of \$2,538,050 in federal Tobacco Settlement funds administered by the State of Nebraska.

In Fall, 2008 when the college first opened, 47 students were enrolled in its programs; by Fall, 2011, enrollment had grown to 156 students. The College of Public Health was accredited by the Council on Education for Public Health in October, 2011. Today, the college has five academic departments and offers six certificate programs, as well as three Masters and six doctoral programs. Additionally, College of Public Health faculty are responsible for obtaining \$38,667,559 in competitive external funds and generating 329 publications, papers, grants.

### **UNO Information Technology**

In 2003, the University of Nebraska at Omaha (UNO) received the first of seven POE awards to expand the College of Information, Science and Technology (IS&T) to meet the continued demand for information technology professionals. Annual POE investments currently total \$1,230,000 and fully or partially support nine faculty, five staff and two graduate assistants. UNO, the Peter Kiewit Institute (a system-wide engineering initiative), and system wide competitive funds from the Nebraska Research Initiative and the Nebraska Experimental Program to Stimulate Competitive Research (EPSCoR) invested in the College of Information, Science and Technology total an estimated \$1,005,522.

To date, faculty associated with the POE have landed \$20,129,119 in external competitive funds and produced 737 publications, papers, grants, and awards. They also filed five patents with three additional patents under review.

### **Conclusions and Recommendations**

Although the POE funds represent only a modest increase in permanent funding when spread across four campuses, overall the POE funds have played a key role in



the development of several programs that now have national stature. In the first two years of the POE program, the distribution of POE funds was more scattered, providing smaller sums to a wide variety of programs. Some one-time funding was available for equipment for labs or classrooms. Many of these investments were successful in building a specific program that did not require the investment of large sums of money.

As the programs matured and campuses became more astute in how they proposed to use POE funds, the projects became more focused and more ambitious. POE funds were significant in establishing the College of Public Health, for example, by providing funding over a period of years to help UNMC hire the number of faculty in selected areas needed for an accredited program. Funding for a cluster hire in water resources has helped build the core of faculty and research that are now part of the Daugherty Water for Food Institute. In terms of research contracts, the POE investment has helped generate many more millions of dollars in external funding.

POE investments in a program particular to one department and large investments in interdisciplinary projects worked to great advantage. POE funds had their greatest impact when they were part of a concerted effort by a campus to build a major program, and those programs that have been most successful were the ones where a campus matched or exceeded the POE investment. UNMC's requests over several years for POE to support the development of the College of Public Health helped to build its faculty. UNMC also moved POE funds from some programs that had earlier received them and reallocated them to Public Health.

Campus long-range planning for the development of a program was important for POE investment and building the faculty strength in a particular program. Since the awards for Fall, 2006, POE investments have favored programs with a long-term commitment, and those that built strength across disciplines and in emerging scholarly fields.

As a result of participation in the global knowledge economy, higher education institutions, similar to the University of Nebraska system, have an extraordinary chance to position themselves as bodies of great import, regionally, nationally and internationally (Taylor 2006; Mintrom 2008). In order to capitalize upon this opportunity, institutions have been and will continue to be challenged to build excellence at the same time they address budgetary constraints. Given the record of success POE's targeted investment, POE will likely continue to be a major budgetary commitment of the University of Nebraska. Future POE investments should focus on long-term commitments that present a clear plan and include a commitment of campus investment. Regular review and full accounting for POE allocations are important to insuring that funds are not diverted to more pressing short-term needs. The annual POE reporting process should include questions similar to those that structured Nebraska's review. The request for proposals should reflect an increased emphasis on campus and strategic priorities and on cross-disciplinary and emerging fields of scholarship.

Finance experts such as Moody's Investors Service don't offer higher education leaders much hope for relief—they recommend that higher education "will

have to continue to consider longer-term strategies for keeping costs low” (Kelderman 2013, A3). Therefore, employment of long-term strategies to keep costs low while at the same time investing strategically will be the ongoing challenge of institutional leaders. If they are successful, they will be helping their institutions meet the general publics’ expectations for programs characterized by regional, national and international acclaim and impact (Taylor 2006; Mintrom 2008; Billot 2011). This study offers evidence that institutions can strategically redirect their way into excellence over time with modest but targeted investment accompanied by careful planning and sustained focus.

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