

THE UNIVERSITY OF KANSAS  
Policy Research Institute  
RESEARCH PAPERS

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**Eighth Assessment of the Science,  
Engineering, and Math Infrastructure  
at Three Universities in Kansas**

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*prepared for*  
**Kansas NSF EPSCoR**

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## EXECUTIVE SUMMARY

Kansas entered the NSF Experimental Program to Stimulate Competitive Research (EPSCoR) in 1992. The first assessment of the state's progress in becoming more competitive for federal research and development (R&D) dollars was completed in March 1992. Since then, annual assessments of the status of science, engineering and math (SEM) research and infrastructure at the state's three Ph.D. granting institutions have occurred. The assessments use federal data and data provided by Kansas State University (KSU), University of Kansas-Lawrence (KU) and Wichita State University (WSU). These data revealed that, after three years of NSF EPSCoR funding, the state's competitive position had improved, especially for faculty who received EPSCoR funds.

Kansas is currently in Phase III (1999 – 2002) of the NSF EPSCoR program. Assessment 2000, the eighth assessment of the NSF EPSCoR program, examines the infrastructure for science, engineering, and math at KSU, KU and WSU. The assessment includes grant activity data for NSF EPSCoR funded faculty from Phases I, II, and III (herein known as Group I, II, and III) and the First Award program. A series of focus groups and interviews were also conducted as part of the eighth assessment. These included key administrators and faculty associated with science, engineering and math at the three universities.

Assessment 2000 reveals several important findings:

- ξ While the number of SEM faculty has declined, the number of female and minority faculty has increased. Gains have also been made in the number of graduate SEM degrees awarded.
- ξ The competitive position of Kansas as measured by federal R&D obligations and expenditures relative to surrounding states, EPSCoR states, peer institutions and neighboring institutions has improved, but the gap continues to widen for Kansas when compared to the U.S. average and top-level states and institutions. For example, Colorado received almost 5 times the federal R&D funds that Kansas received in FY1999.
- ξ Faculty who have participated in the Kansas NSF EPSCoR program continue to secure and improve their award numbers and amounts. Still, a number of faculty in this program have not been able to secure non-EPSCoR funds as a single PI.
- ξ Overall, the faculty experience with the Kansas NSF EPSCoR program has been positive and the program appears to have the largest impact on junior faculty.
- ξ First Awards, Faculty Start-Up, and Equipment Grants have been cited as helping faculty recruitment and retention.

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# Eighth Assessment of the Science, Engineering, and Math Infrastructure at Three Universities in Kansas

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## INTRODUCTION

In 1992, Kansas began participation in the NSF Experimental Program to Stimulate Competitive Research (EPSCoR). At that time, a plan was developed to assess progress in making Kansas more competitive for federal research and development (R&D) dollars. Since then, annual assessments of the status of science, engineering and math (SEM) research and infrastructure at the state's three Ph.D. granting institutions have occurred. The assessments use federal data and data provided by Kansas State University (KSU), University of Kansas-Lawrence<sup>1</sup> (KU) and Wichita State University (WSU), such as information about personnel, graduate enrollment, degrees, facilities, and grant activity. These data revealed that, after three years of EPSCoR funding, the state's competitive position had improved, especially for faculty who received EPSCoR funds.<sup>2</sup>

KANSAS NSF EPSCoR PROGRAM	
Phase I:	1992 – 1995
Phase II:	1995 – 1998
Phase III:	1999 – 2002
Phase IV:	Pending
First Awards:	started in 1996

Assessment of Phase I of Kansas NSF EPSCoR revealed that the state's competitive position had improved, especially for faculty who received EPSCoR funds.

Phase II of the Kansas NSF EPSCoR began in 1995 and concluded in 1998. Annual assessments continued to monitor growth in the number of science, engineering, and math faculty, degrees awarded, and grant activity. The 1997 assessment revealed that maintaining past gains was proving to be a challenge.<sup>3</sup> The number of professors and assistant professors was lower, which had a negative impact upon research and grant productivity. It was argued that with more faculty, the number of grants submitted and funded would increase, which would, in turn, increase the number of student research assistants that could be supported.

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<sup>1</sup>All data reported for the University of Kansas are for the Lawrence campus *only*. Medical Center data are not included.

<sup>2</sup> Stella, M. Elizabeth, *Fifth Assessment of the Science, Engineering, and Math Infrastructure at Three Universities in Kansas*, Research Papers: Report No. 236, Institute for Public Policy and Business Research, the University of Kansas, October 1996.

<sup>3</sup> Ott, Genna M., *Sixth Assessment of the Science, Engineering, and Math Infrastructure at Three Universities in Kansas*, Research Papers: Report No. 243, Institute for Public Policy and Business Research, the University of Kansas, December 1997.

## THE 8TH ASSESSMENT – ASSESSMENT 2000

Kansas is currently in Phase III (1999 – 2002) of the NSF EPSCoR program. Assessment 2000, the eighth assessment of the NSF EPSCoR program, examines the infrastructure for science, engineering and math at KSU, KU and WSU. The data look at faculty, personnel, faculty salaries, and degrees awarded. The assessment also includes data available from the National Science Foundation (NSF), such as NSF awards, R&D academic obligations for science and engineering and R&D expenditures. While previous assessments have tracked the grant activity of Group I and Group II (Phase 1 and 2) NSF EPSCoR faculty, this assessment adds Group III (Phase 3) and First Award grant activity. Grant activity data of NSF EPSCoR faculty were obtained from the individual institutions.

Kansas is currently in Phase III of the NSF EPSCoR program and undergoing its eighth assessment, which examines the infrastructure for SEM at KSU, KU and WSU.

Assessment 2000 reveals that Kansas' competitive position relative to surrounding states, EPSCoR states, peer institutions and neighboring institutions has improved, but the gap for Kansas continues to widen when compared to the U.S. average and top-level states and institutions.

Assessment 2000 reveals several important findings. While the number of SEM faculty has declined, the number of female and minority faculty and the number of students receiving SEM degrees has increased. Kansas' competitive position relative to surrounding states, EPSCoR states, peer institutions and neighboring institutions has improved, but the gap

continues to widen for Kansas when compared to the U.S. average and top-level states and institutions. Faculty who have participated in the Kansas NSF EPSCoR program continue to secure and improve their award numbers and amounts. Nonetheless, a number of faculty in this program — from one-third to two-thirds, depending on the phase and award — have not been able to secure non-EPSCoR funds as a single PI. A more detailed look follows.

## SEM Infrastructure for Kansas

### *SEM Faculty*

- The number of SEM faculty in Kansas has been declining since 1994. From 1999 to 2000, only KSU saw an increase in SEM faculty. (Table 1, Figure 1)

### *Female and Minority Faculty*

- The number of female SEM faculty in Kansas steadily increased in Kansas until 2000, which saw a decline (-2.4 percent) due to a decrease at WSU. (Table 2, Figure 2)

While the number of SEM faculty in Kansas has been declining, the number of female and minority faculty has been increasing.

- The number of minority SEM faculty in Kansas increased 16.1 percent from 1994 to 2000, despite a 5.8 percent decrease from 1999 to 2000. While all three universities experienced minority faculty decreases from 1999 to 2000, KSU experienced an increase in total SEM faculty for the same time period. (Table 3, Figure 2)

### *SEM Personnel*

- A look at SEM faculty by rank shows that the number of associate professors declined by 6.5 percent from 1999 to 2000. From 1994 to 2000, the number of SEM associate professors increased while the number of professors and assistant professors declined. Movement up in the ranks could account for some of the changes from assistant to associate professor and from associate to full professor. However, the long-term decline in the number of professors combined with the decline in total number of SEM faculty could indicate a weakening of the SEM faculty infrastructure in Kansas. (Table 4)
- The number of SEM personnel has increased 1.6 percent from 1994 to 2000. This increase is due to increases in associate professors, academic and technical staff, research associates and assistants, and post doctoral positions. (Table 5, Figure 3)

The SEM faculty infrastructure in Kansas could be weakening considering the decline in professors and total faculty.

### *Faculty Salaries*

- In FY2000, average faculty salaries at KU and KSU were 88.8 percent of their peer institutions' averages while the average faculty salary at WSU was 90.7 percent of its peer institutions' average. (Table 6)

### *Degrees Awarded*

- SEM degrees awarded at KSU, KU and WSU increased two percent from 1999 to 2000 due largely to the increase in Master degrees awarded. Since 1991, the number of graduate degrees awarded by KSU, KU and WSU increased 47 percent for Masters degrees and 22 percent for Ph.D. degrees. (Table 7, Figure 4)
- From 1991 to 2000, the number of SEM degrees awarded to women at KSU, KU and WSU increased at almost twice the rate for minorities, 22 percent compared to 11 percent increases, respectively. In 2000, women earned 43 percent of the SEM degrees awarded in Kansas and minorities earned 10 percent. (Table 7, Figure 5)

While SEM faculty have been declining, gains have been made in the number of graduate degrees awarded.

### SEM Research Activity

#### *Federal R&D Obligations*

- Federal R&D academic obligations to Kansas increased from FY1998 to FY1999. Health and Human Services (HHS), which includes NIH (National Institute of Health) grants, funded 41 percent of federal R&D in Kansas in FY1999. NSF is the second largest source of federal funds in Kansas, providing 17 percent of R&D obligations in FY1999. The third largest source of federal R&D academic obligations is USDA. (Figure 6, Figure 7)
- In FY1999, federal R&D obligations for science and engineering to universities and colleges in Kansas significantly fell below the neighboring states of Colorado, Missouri, and Iowa. The gap between Kansas and these three states widened from FY1998 to FY1999. Colorado received almost five times the R&D obligations that Kansas received in FY1999. (Table 8, Table 9)
- When comparing KU and KSU to their neighboring institutions, KU falls below four institutions (Colorado, Iowa, Colorado State, and Missouri) in FY1999 for federal R&D obligations for science and engineering. Federal R&D obligations to KSU are less than all the neighboring institutions except for Oklahoma State. However, this is an improvement over FY1998, which had KSU receiving the least amount of federal obligations compared to the neighboring institutions. (Table 10, Table 11)

NSF is the second largest source of federal funds in Kansas, funding 17% of R&D obligations in FY1999.

Colorado received almost 5 times the federal R&D funds that Kansas received in FY1999.

- In FY1999, the University of Colorado (CU) received over 3.5 times the obligations from HHS than KU received and almost 30 times the obligations than KSU received. In FY1999, for NSF obligations, CU received around 3.2 times the obligations received by KU and around 4.7 times the obligations received by KSU. (Table 10)
- When comparing the three universities in Kansas to their peer institutions, KSU and WSU are showing some improvement in science and engineering federal R&D obligations from FY1998 to FY1999. KU's position relative to its peers remained the same for the same time period. However, none of the Kansas institutions can be considered competitive with regards to federal funding with the top institutions in their peer groups. (Table 12, Table 13)

#### *NSF Awards and R&D Academic Obligations*

- From FY1999 to FY2000, the total NSF award amount to the Kansas institutions increased 0.5 percent. This increase was due chiefly to the increase in award amount to KU (Lawrence); KSU, WSU and KU (Med Center) reported decreases in NSF award amounts from FY1999 to FY2000. (Table 14)
- NSF dollars awarded to Kansas have increased from FY1996 to FY2000.
- From FY1996 to FY2000, NSF dollar awards increased over 42 percent in Kansas. However, the KU Med Center experienced a decline during the same time period. (Table 15, Figure 8)
  - For FY1996 to FY2000, Kansas experienced a higher percent change than the U.S., all the surrounding states, and about half of the EPSCoR states. (Table 16)
  - When looking at total award dollars from NSF in FY2000, Kansas is second from the bottom for the surrounding states and in the top third for the EPSCoR states. Colorado's (top surrounding state) award dollars from NSF are over 11 times greater than Kansas' and West Virginia's (top EPSCoR state) award dollars are around 2.5 times higher than Kansas'. (Table 17)
- Kansas' average NSF award is below the U.S. average.
- In FY2000, the average NSF award for Kansas of \$149,000 is below the U.S. average of \$188,000. Although Kansas has the second highest average for the surrounding states, its average award amount when compared to the EPSCoR states is among the lowest. (Table 18)

- Since FY1980, NSF academic R&D obligations to Kansas have increased except for a dip from FY1992 to FY1995. However, the gap between NSF obligations for Kansas and the U.S. average widened from FY1980 to FY1999. (Figure 9)

While NSF academic R&D obligations to Kansas have increased, the gap between Kansas and the U.S. average widened.

- From FY1990 to FY1999, NSF academic R&D obligations per 1,000 population to Kansas increased except for a decline from FY1992 to FY1995. While the gap between Kansas and the U.S. average for FY1999 is smaller than the gap in FY1990, the smallest gap was in FY1997. (Figure 10)

#### *Federal R&D Academic Obligations*

- Per capita federal R&D academic obligations for the U.S., Kansas, and surrounding states rose from FY1991 to FY1999 with Colorado experiencing the greatest rise, particularly since FY1997. (Figure 11)
- For FY2000, per capita federal R&D academic obligations for science and engineering for Kansas was a little over half of the U.S.'s (\$32.19 for Kansas compared to \$57.10 for the U.S.) Kansas' per capita obligations lagged the U.S. and all the surrounding states except Oklahoma. (Figure 11, Table 19, Table 23)
- When looking at percent change from FY1991 to FY2000, per capita obligations for Kansas increased by 58 percent compared to 43 percent for the U.S. (Table 20, Table 23)
- When comparing Kansas to the other EPSCoR states, per capita R&D obligations for science and engineering for Kansas fall around the middle at \$32.19 with a high of \$77.11 for Vermont and a low of \$13.77 for South Dakota. (Table 21, Table 24)
- From FY1991 to FY1999, the percent change in per capita obligations for Kansas increased 58 percent. This puts Kansas in the middle for EPSCoR states with a range of a 173 percent increase for Montana to a 26 percent decrease for West Virginia. (Table 22, Table 24)

Kansas' per capital federal R&D academic obligations lag the U.S. and all the surrounding states except for Oklahoma in FY2000.



### *R&D Expenditures*

- From FY1991 to FY1999, total R&D expenditures at KU, KSU and WSU increased. Compared to its peer institutions, KU had the greatest percent change in total R&D expenditures with a 101 percent increase from FY1991 to FY1999. WSU had the second highest expenditure increase compared to its peer institutions with a 181 percent change. (Table 25)
- Kansas' institutions are generally experiencing greater percent increases in total R&D expenditures when compared to their peer institutions.
- Federally financed R&D expenditures at KU, KSU and WSU increased from FY1991 to FY1999. Compared to its peer institutions, KSU had the highest percent change with a 79 percent increase in federally financed R&D expenditures. KU had the second highest expenditure increase for its peer institutions with a 117 percent change in federally financed expenditures. (Table 26)
  - For FY1999, KU ranked 75 for total R&D expenditures at academic institutions. This puts KU second from the bottom when compared to its peer institutions, which ranked from 21 (Colorado) to 152 (Oregon). (Table 25, Table 27)
  - KSU ranked 101 for total R&D expenditures for FY1999, while its peer institutions ranked from 29 (North Carolina State) to 102 (Oklahoma State). (Table 25, Table 27)
  - For FY1999, WSU ranked 211 for R&D expenditures compared to a rank of 180 for Old Dominion to a rank of 266 for Oakland University. (Table 25, Table 27)
- Kansas' institutions improved slightly in the rankings for total academic R&D expenditures from FY1998 to FY1999.
- From FY1998 to FY1999, the three Kansas institutions improved slightly in the rankings for total R&D expenditures at academic institutions: 77 to 75 for KU, 103 to 101 for KSU and 214 to 211 for WSU. (Table 27 and Table 28)
  - The sources of R&D expenditures for KU and its peer institutions vary with the federal government financing the bulk of the expenditures. The institutions with the greatest R&D expenditures are those that capture the most federal dollars. When comparing institutional sources for FY1999, KU, North Carolina, Iowa, and Oklahoma all received more funds from institutional sources than Colorado received. (Figure 12, Table 27)

- For KSU and its peer institutions, state and local governments are an important source of R&D expenditures. For KSU, North Carolina State, and Oklahoma State, state and local governments supplied more funds in FY1999 for R&D expenditures than the federal government. Institutional funds for North Carolina State and Oklahoma State were greater than federal funds for FY1999. (Figure 13, Table 27)
- WSU and its peer institutions are struggling for federal R&D expenditures from all sources. WSU received more funding from state and local governments and institutional funds in FY1999 than it received from the federal government. (Figure 14, Table 27)

#### Kansas NSF EPSCoR Faculty

##### *Grant Activity*

- From FY1992 to FY2000, the grant productivity of Group I Kansas NSF EPSCoR faculty increased 184 percent (132 percent when adjusted for inflation). From FY1999 to FY2000, the dollars awarded for this faculty group increased by 50 percent. (Table 29)
- The grant productivity of Kansas NSF EPSCoR faculty has increased for all groups – Group I, II, III and First Awards.
- The grant productivity of Group II NSF EPSCoR faculty increased from FY1994 to FY2000 with more proposals being submitted and awarded. Dollars awarded increased 110 percent (81 percent when adjusted for inflation) for the same time period. (Table 30)
  - While Group III NSF EPSCoR faculty have only been tracked for the last three years, significant gains in grant productivity can be seen with a 76 percent increase in dollars awarded to this faculty group from FY1998 to FY2000. (Table 31)
  - When looking at Group I, II and III NSF EPSCoR faculty combined,<sup>4</sup> the impact of the NSF EPSCoR program in Kansas can be seen clearly – and it is a positive one. Dollars awarded to faculty in these groups increased 141 percent from FY1994 to FY2000 (108 percent when adjusted for inflation). The number of proposals submitted is up as is the number of grants awarded. The success rate (percent of submissions awarded) has also improved from 37 percent to 57 percent. (Table 32)

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<sup>4</sup> Combining these faculty groups avoids double or triple counting of awards since some faculty are part of two or three groups.

- Faculty receiving First Awards from the NSF EPSCoR program have been tracked starting in the year the award was received.<sup>5</sup> As more faculty are tracked, the expectation would be for awards to increase and this is clearly seen in the data. However, the data show a slight decline from FY1999 to FY2000. (Table 33)

*Distribution of Dollars Awarded – Group I*

- The distribution of total dollars awarded to Group I NSF EPSCoR faculty shows that these faculty, as a whole, are making gains in securing larger grant amounts. A look at the institutional level, however, shows that WSU faculty are struggling to secure those larger, non-EPSCoR grants. (Table 34)

Kansas NSF faculty, as a whole, are making gains in securing larger grant amounts.

- The number of Group I NSF EPSCoR faculty securing funds varies from year to year. However, it does appear that this group of faculty is doing a better job of getting funding than when tracking began in FY1992. (Figure 15, Figure 16)

*Distribution of Dollars Awarded – Group II*

- Although the total number of faculty involved in the NSF EPSCoR program decreased from FY1996 to FY2000, the percent of NSF EPSCoR faculty receiving awards increased from 48 percent to 63 percent for the same time period. (Table 35)
- The number of Group II NSF EPSCoR faculty receiving awards improved dramatically from FY1994 to FY1995 (from 33 to 45); since then, the number of faculty receiving awards has remained fairly constant (from 41 to 45). The number of faculty receiving more and larger grants appears to have improved following an NSF EPSCoR award. (Figure 17, Figure 18)

*Distribution of Dollars Awarded – Group III*

- The number of Group III NSF EPSCoR faculty receiving awards continues to increase each year as does the awards amounts. (Table 36, Figure 19, Figure 20)

*Distribution of Dollars Awarded – First Awards*

- As more new faculty members receive First Awards, the expectation is that these faculty will secure non-EPSCoR funding. The data show the percentage of First Award faculty receiving non-EPSCoR funding increased from 40 percent in FY1995 to 67 percent in FY2000. (Table 37)

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<sup>5</sup> Therefore, the number of faculty in the program increases with each year.

- The distribution of awards to the First Award Group, as expected, shows a steady increase in the number of faculty receiving awards.<sup>6</sup> (Figure 21, Figure 22)

#### *Distribution of Dollars Awarded – Groups I, II & III Combined*

- A comparison of dollars awarded to NSF EPSCoR faculty (Group I, II, and III combined) to the number of faculty involved in the program at the three institutions shows the positive impact the program has had on Kansas. With each new phase of NSF EPSCoR (new faculty added into the program), the dollars awarded increased significantly. (Figure 23)

### FOCUS GROUPS AND INTERVIEWS 2001

To further assess the impact of the NSF EPSCoR program on Kansas, the Policy Research Institute at the University of Kansas also conducted a series of focus groups and interviews as part of the eighth assessment. These were held on the KSU, KU and WSU campuses in February and

Focus groups and interviews were held on the KSU, KU and WSU campuses in 2001 to further assess the impact of the NSF EPSCoR program on Kansas.

March 2001 and included key administrators and faculty associated with science, engineering and math. High praise was given for the First Award program and funds for start-up packages and other infrastructure development. Some key findings from these discussions follow; for more detail about the focus groups and interviews see Appendices C and D.

#### Faculty Focus Groups

##### *General Research Funding Issues and Obstacles*

- Faculty considered being located in Kansas as a major challenge to overcome, particularly with regards to recruiting faculty. EPSCoR is not going to change this.

##### *Impact on Faculty*

- Overall, faculty experience with EPSCoR was positive and substantial and it appears to have the largest impact on junior faculty. Many junior faculty credited EPSCoR with helping them to ignite their research career.
- EPSCoR was highly praised as a recruitment tool with several junior faculty crediting EPSCoR for their decision to take a faculty position at a Kansas institution.

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<sup>6</sup> The number of First Award faculty tracked increases with each year as new faculty enter into the program.

- Equipment grants were another component of EPSCoR that was identified by all Kansas institutions as being very important.

#### *Impact on Collaboration*

- Faculty at all three institutions were divided on EPSCoR's role in stimulating collaboration. Some believe the low level of funding for collaborative research was a hindrance to collaboration.

Overall, the faculty experience with the Kansas NSF EPSCoR program has been positive and it appears to have the largest impact on junior faculty.

#### *Proposal Review*

- Faculty disagreed on the usefulness of the EPSCoR proposal review. However, they believed the review process was very important to young investigators because they need the specific feedback the review process generates.

#### *Faculty Retention*

- While faculty agreed that they did not stay at a Kansas institution simply because Kansas is an EPSCoR state, they could see that the availability of funding, particularly through the First Award Program, made it easier to stay.

#### *Student Recruitment*

- Faculty were reluctant to give much credit to EPSCoR for having an impact on graduate student recruitment even though they admitted they were able to offer research positions to graduate students with EPSCoR funds.
- Overall, the problems that plague faculty recruitment apply to graduate student recruitment as well: Kansas is not a desirable location to many students and the stipends and pay are much lower in Kansas than in other locations.

#### *Recommendations from Faculty*

- Faculty at all three institutions would like to see EPSCoR funds made available to support graduate students – for salaries as well as travel funds for site visits during recruitment.
- Faculty recommended providing a writer to assist junior faculty with organizing and presenting proposals. The transition from writing research reports to writing research proposals was difficult for many new investigators.
- Faculty would like to see EPSCoR work more with the state legislature to encourage them to change their attitudes toward basic research. They felt that Kansas needs a long-term perspective on research.
- Faculty at all three institutions noted frustration with the timeframe during which the money must be spent and would like to see more flexibility with funding.

## EPSCoR Interviews

### *Faculty Recruitment and Retention*

- Those interviewed believe that the impact of EPSCoR on recruiting faculty has been positive – citing the availability of First Awards, funds for start-up packages, and equipment grants. Those interviewed also agreed that EPSCoR has raised the level of research in some departments and potential faculty see that and want to be a part of it.

The First Award grants, funds for start-up packages and equipment grants have been cited as helping faculty recruitment and retention.

- While the views on the impact of EPSCoR on faculty retention varied from institution to institution and from department to department, it was generally agreed that EPSCoR could not do any more than it was already doing with regards to faculty retention. EPSCoR helps to make the research environment such that faculty do not want to leave.

### *Equipment Grants*

- Equipment grants have been invaluable in securing needed instrumentation.

### *First Awards*

- First Award faculty were much more likely than [other new faculty] to get independent funding at the national level later on.

### *Department's Competitiveness*

- Those interviewed credited EPSCoR with improving their department's competitiveness, particularly with regards to faculty recruitment. With help from EPSCoR in the form of start-up packages and equipment grants, KSU, KU and WSU have been more successful in recruiting quality faculty.
- The First Award program has improved faculty competitiveness with regards to research.

### *Student Recruitment*

- In general, those interviewed felt that EPSCoR has had a positive impact on graduate student recruitment by directly funding graduate students with EPSCoR money or by using funds to buy specialized equipment that attracts students.

### *Views on EPSCoR's Priority Shift from Collaboration to First Awards*

- Those interviewed indicated that the shift away from large collaborative projects to First Awards and infrastructure development was the right direction to go. They recognized that funds were limited and priorities needed to be set; however, if additional funds did become available, some indicated that they would like to see money available for collaborative projects.

The shift to First Awards and infrastructure development was generally considered the right direction to go for the greatest impact with EPSCoR dollars.

### *Most Positive Impact of EPSCoR*

- The EPSCoR program was seen as crucial in not only attracting and retaining quality faculty but also in helping faculty become successful in their research.
- The EPSCoR program has worked well in providing a bridge for faculty members to get other funding.

### *Suggestions*

- Creating more flexibility in the funding cycle for EPSCoR is highly recommended. Because funds are virtually never available at the start of a grant period, money could be used more efficiently and productively if there was more time to spend it. While it was recognized that this might be a problem at the federal level, anything that that could be done by Kansas NSF EPSCoR to expedite funds would be extremely helpful.
- A carefully conceived and critically managed approach to help mid-career faculty was suggested. This program would be aimed at faculty members who are seeking a new research path or who have stalled research careers. It was suggested that a mid-career award program include a faculty member's research award history as a criteria for funds. A strong review process was also suggested.
- More support for graduate students and post-doctoral positions would aid in the recruitment and retention of quality students.
- Expand the EPSCoR program in Kansas to bring students and faculty from the smaller colleges around the state and involve them in the research being done at the three research institutions.

Whatever the Kansas NSF EPSCoR program can do to expand the time to spend an EPSCoR grant would improve efficiency, productivity, and usefulness of EPSCoR grants.

**Tables for Kansas NSF EPSCoR Assessment 2000**



TABLE 1

**Science, Engineering, and Math Faculty  
KSU, KU and WSU: 1991 - 2000**

Institution	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	Percent Change*	
											99 - 00	94 - 00
KSU	623	613	611	642	641	624	610	621	608	615	1.2%	-4.2%
KU-Lawrence	399	409	415	420	406	397	398	397	409	406	-0.7%	-3.3%
WSU*	209	204	200	175	178	168	174	169	173	160	-7.5%	-8.6%
STATE												
Science	903	898	902	883	869	836	831	841	836	830	-0.7%	-6.0%
Engineering	235	233	226	259	263	261	259	253	261	259	-0.8%	0.0%
Math	93	95	98	95	93	92	92	93	93	92	-1.1%	-3.2%
<b>TOTAL</b>	<b>1,231</b>	<b>1,226</b>	<b>1,226</b>	<b>1,237</b>	<b>1,225</b>	<b>1,189</b>	<b>1,182</b>	<b>1,187</b>	<b>1,190</b>	<b>1,181</b>	<b>-0.8%</b>	<b>-4.5%</b>

\*Program changes in Science data for WSU starting in 1994; percent change is calculated for 1994 - 2000.

Source: KSU, KU and WSU databases, 2000.

TABLE 2

**Science, Engineering, and Math Faculty: Female**  
**KSU, KU and WSU: 1991 - 2000**

Institution											Percent Change*	
	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	99 - 00	94 - 00
<b>KSU</b>												
Total Female	58	58	65	70	72	82	84	89	90	90	0.0%	28.6%
Total Faculty	623	613	611	642	641	624	610	621	608	615	1.2%	-4.2%
% Female	9%	9%	11%	11%	11%	13%	14%	14%	15%	15%		
<b>KU-Lawrence</b>												
Total Female	50	58	64	68	67	65	64	66	71	73	2.8%	7.4%
Total Faculty	399	409	415	420	406	397	398	397	409	406	-0.7%	-3.3%
% Female	13%	14%	15%	16%	17%	16%	16%	17%	17%	18%		
<b>WSU*</b>												
Total Female	55	51	48	39	36	34	36	40	45	38	-15.6%	-2.6%
Total Faculty	209	204	200	175	178	168	174	169	173	160	-7.5%	-8.6%
% Female	26%	25%	24%	22%	20%	20%	21%	24%	26%	24%		
<b>STATE</b>												
Total Female	163	167	177	177	175	181	184	195	206	201	-2.4%	13.6%
Total Faculty	1,231	1,226	1,226	1,237	1,225	1,189	1,182	1,187	1,190	1,181	-0.8%	-4.5%
% Female	13%	14%	14%	14%	14%	15%	16%	16%	17%	17%		

\*Program changes in Science data for WSU starting in 1994; percent change is calculated for 1994 - 2000.

Source: KSU, KU and WSU databases, 2000.

TABLE 3

**Science, Engineering, and Math Faculty: Minority  
KSU, KU and WSU: 1991 - 2000**

Institution	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	Percent Change*	
											99 - 00	94 - 00
<b>KSU</b>												
Total Minority	58	64	63	70	76	78	80	94	100	93	-7.0%	32.9%
Total Faculty	623	613	611	642	641	624	610	621	608	615	1.2%	-4.2%
% Minority	9%	10%	10%	11%	12%	13%	13%	15%	16%	15%		
<b>KU-Lawrence</b>												
Total Minority	39	43	45	50	46	49	52	52	54	51	-5.6%	2.0%
Total Faculty	399	409	415	420	406	397	398	397	409	406	-0.7%	-3.3%
% Minority	10%	11%	11%	12%	11%	12%	13%	13%	13%	13%		
<b>WSU*</b>												
Total Minority	32	35	35	35	39	38	38	37	37	36	-2.7%	2.9%
Total Faculty	209	204	200	175	178	168	174	169	173	160	-7.5%	-8.6%
% Minority	15%	17%	18%	20%	22%	23%	22%	22%	21%	23%		
<b>STATE</b>												
Total Minority	129	142	143	155	161	165	170	183	191	180	-5.8%	16.1%
Total Faculty	1,231	1,226	1,226	1,237	1,225	1,189	1,182	1,187	1,190	1,181	-0.8%	-4.5%
% Minority	10%	12%	12%	13%	13%	14%	14%	15%	16%	15%		

\*Program changes in Science data for WSU starting in 1994; percent change calculated for 1994 - 2000.

Source: KSU, KU and WSU databases, 2000.

Prepared by PRI/KU for Kansas NSF EPSCoR, April 2001.

TABLE 4

**Science, Engineering, and Math Faculty by Rank  
KSU, KU and WSU: 1991 - 2000**

Faculty Rank	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	Percent Change*	
											99 -00	94 - 00
Professor	557	558	555	559	553	542	540	546	534	545	2.1%	-2.5%
Associate Professor	334	322	326	327	351	354	360	366	384	359	-6.5%	9.8%
Assistant Professor	340	346	345	351	321	293	279	275	272	277	1.8%	-21.1%
<b>Total</b>	<b>1,231</b>	<b>1,226</b>	<b>1,226</b>	<b>1,237</b>	<b>1,225</b>	<b>1,189</b>	<b>1,179</b>	<b>1,187</b>	<b>1,190</b>	<b>1,181</b>	<b>-0.8%</b>	<b>-4.5%</b>

\*Program changes in Science data for WSU starting in 1994; percent change is calculated for 1994 - 2000.

Source: KSU, KU and WSU databases, 2000.

TABLE 5

**Science, Engineering, and Math Personnel  
KSU, KU and WSU: 1991 - 2000**

Faculty Rank											Percent Change*	
	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	99-00	94-00
Professor	557	558	555	559	553	542	540	546	534	545	2.1%	-2.5%
Associate Professor	334	322	326	327	351	354	360	366	384	359	-6.5%	9.8%
Assistant Professor	340	346	345	351	321	293	279	275	272	277	1.8%	-21.1%
Academic Staff, Directors, & Technical Staff	376	616	514	495	491	474	539	629	571	601	5.3%	21.4%
Subtotal	1,607	1,842	1,740	1,732	1,716	1,663	1,718	1,816	1,761	1,782	1.2%	2.9%
Research Associates & Assistants	341	352	344	310	293	328	350	365	392	395	0.8%	27.4%
Post Doctoral	45	58	65	52	65	73	84	79	82	82	0.0%	57.7%
Graduate TA	846	789	868	911	970	900	877	858	811	827	2.0%	-9.2%
Student RA	817	885	985	1,065	970	978	858	845	848	1,048	23.6%	-1.6%
Subtotal	2,049	2,084	2,262	2,338	2,298	2,279	2,169	2,147	2,133	2,352	10.3%	0.6%
<b>Total</b>	<b>3,656</b>	<b>3,926</b>	<b>4,002</b>	<b>4,070</b>	<b>4,014</b>	<b>3,942</b>	<b>3,887</b>	<b>3,963</b>	<b>3,894</b>	<b>4,134</b>	<b>6.2%</b>	<b>1.6%</b>

\*Program changes in Science data for WSU starting in 1994; percent change is calculated for 1994 - 2000.

Source: KSU, KU and WSU databases, 2000.

TABLE 6

**Average Faculty Salary at Peer Institutions\***  
**for KU, KSU and WSU: FY1998 - FY2000**

<b>KU Peer Institutions</b>	<b>FY98</b>	<b>FY99</b>	<b>FY00</b>	<b>% of Ave</b>
University of North Carolina	\$ 71,463	\$ 73,904	\$ 79,321	
University of Iowa	65,961	68,357	71,286	
<i>Average Salary Peers</i>	<i>63,287</i>	<i>65,895</i>	<i>69,128</i>	
University of Colorado	60,848	63,189	64,686	
University of Kansas	55,818	58,061	61,408	88.8%
University of Oklahoma	54,037	56,377	58,235	
University of Oregon	50,352	52,873	53,739	
<b>KSU Peer Institutions</b>	<b>FY98</b>	<b>FY99</b>	<b>FY00</b>	<b>% of Ave</b>
North Carolina State	\$ 66,171	\$ 68,460	\$ 70,785	
Iowa State	63,158	65,128	67,329	
Colorado State	60,656	62,829	64,799	
<i>Average Salary Peers</i>	<i>56,838</i>	<i>58,096</i>	<i>60,333</i>	
Oklahoma State	55,079	57,511	59,255	
Oregon State	52,342	54,530	54,915	
Kansas State University	50,042	51,341	53,586	88.8%
<b>WSU Peer Institutions</b>	<b>FY98</b>	<b>FY99</b>	<b>FY00</b>	<b>% of Ave</b>
Oakland University (Michigan)	\$ 58,821	\$ 60,229	\$ 61,060	
University of Nevada LV	57,654	60,160	61,280	
Old Dominion (Virginia)	56,803	56,519	61,760	
University of Akron (Ohio)	53,652	55,590	56,912	
<i>Average Salaries Peers</i>	<i>51,803</i>	<i>54,420</i>	<i>56,429</i>	
Portland State Univ (Oregon)	50,576	52,752	54,374	
Wichita State University	47,752	49,326	51,195	90.7%

*\*Peer average is a weighted average of four faculty ranks, which factors in the distribution by faculty rank of the Regents Institution.*

Source: AAUP Faculty Salary Surveys as reported in the ACADEME, Office of the Board of Regents, Table 4.35, 1999 and 2000.

TABLE 7

**Science, Engineering, and Math Degrees Awarded  
KSU, KU and WSU: 1991 - 2000**

KANSAS	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	99-00	91-00
	Percent Change											
<b>Total Population</b>												
Ph.D.	182	236	197	218	238	241	248	253	228	222	-3%	22%
Master	559	621	675	787	828	869	774	749	754	824	9%	47%
Bachelor	2,723	3,123	3,039	3,205	3,140	3,075	3,081	2,816	2,798	2,797	0%	3%
Subtotal	3,464	3,980	3,911	4,210	4,206	4,185	4,103	3,818	3,780	3,843	2%	11%
<b>Women Only</b>												
Ph.D.	40	60	61	57	56	64	90	84	81	86	6%	115%
Master	210	202	285	327	348	334	298	279	294	315	7%	50%
Bachelor	1,111	1,233	1,235	1,257	1,260	1,249	1,347	1,246	1,262	1,259	0%	13%
Subtotal	1,361	1,495	1,581	1,641	1,664	1,647	1,735	1,609	1,637	1,660	1%	22%
% Women	39%	38%	40%	39%	40%	39%	42%	42%	43%	43%		
<b>Minorities Only*</b>												
Ph.D.	1	2	11	9	26	19	18	11	8	15	n.a.	n.a.
Master	16	15	34	29	37	58	53	45	37	55	49%	49%
Bachelor	147	172	154	218	269	311	297	271	278	298	7%	11%
Subtotal	164	189	199	256	332	388	368	327	323	368	14%	11%
% Minorities	5%	5%	5%	6%	8%	9%	9%	9%	9%	10%		

\*KSU ethnic data for science and math were not available from the institution's database until 1995. Percent change is for 1995 - 2000. n.a. = not applicable. Percent change not calculated. Numbers too small to generate a meaningful percentage.

Source: KSU, KU and WSU databases, 2000.

TABLE 8

**Federal R&D Obligations for Science and Engineering to Universities and Colleges  
for Kansas and Surrounding States, by Agency: FY1999**  
(In Thousands of Dollars)

State	Total	USDA	Commerce	DoD	ED	DOE	EPA	HHS	Interior	NASA	NSF	Other
Colorado	504,673	12,277	46,339	22,423	8,578	13,945	8,626	170,677	5,472	73,256	142,144	648
Missouri	399,909	27,379	1,203	10,302	6,781	4,578	8,868	298,238	1,368	8,223	32,343	536
Iowa	214,975	30,762	2,421	5,120	3,599	5,101	2,915	136,574	372	6,365	20,294	1,452
<b>Kansas</b>	<b>109,403</b>	<b>15,309</b>	<b>113</b>	<b>4,681</b>	<b>12,685</b>	<b>4,580</b>	<b>2,558</b>	<b>45,225</b>	<b>553</b>	<b>5,352</b>	<b>18,196</b>	<b>151</b>
Oklahoma	99,634	20,170	6,052	6,133	2,253	6,053	3,087	30,124	458	7,908	16,372	1,024
Nebraska	79,037	16,631	186	3,209	2,050	939	270	30,998	476	2,812	18,576	2,890
US Total	\$ 18,057,927	\$ 946,046	\$ 311,334	\$ 1,802,000	\$ 325,940	\$ 651,038	\$ 178,767	\$ 9,841,333	\$ 82,070	\$ 1,038,583	\$ 2,699,225	\$ 181,591

Source: National Science Foundation/SRS, Survey of Federal Science and Engineering Support to Universities, Colleges, and Nonprofit Institutions, Fiscal Year 1999, Table B-9.



TABLE 9

**Federal R&D Obligations for Science and Engineering to Universities and Colleges  
for Kansas and Surrounding States, by Agency: FY1998**  
(In Thousands of Dollars)

State	Total	USDA	Commerce	DoD	ED	DOE	EPA	HHS	Interior	NASA	NSF	Other
Colorado	432,229	10,709	3,104	20,155	3,240	4,523	5,846	79,280	2,273	22,201	54,622	350
Missouri	341,020	24,726	1,114	10,592	4,863	4,373	2,991	257,803	977	5,382	28,134	65
Iowa	184,724	26,836	2,550	5,063	1,585	6,144	2,009	112,983	347	9,548	17,092	567
<b>Kansas</b>	<b>101,723</b>	<b>13,571</b>	<b>733</b>	<b>5,519</b>	<b>9,708</b>	<b>4,185</b>	<b>4,162</b>	<b>43,160</b>	<b>710</b>	<b>4,552</b>	<b>15,298</b>	<b>125</b>
Oklahoma	97,515	21,562	5,031	8,043	2,139	3,481	1,859	30,049	338	8,581	16,066	366
Nebraska	66,331	16,403	195	4,460	861	705	-	25,259	233	2,342	12,736	3,137
US Total	\$ 16,031,984	\$ 872,072	\$ 205,903	\$ 1,710,637	\$ 242,643	\$ 632,490	\$ 186,019	\$ 8,629,051	\$ 65,897	\$ 924,091	\$ 2,448,276	\$ 114,905

Source: National Science Foundation/SRS, Survey of Federal Science and Engineering Support to Universities, Colleges, and Nonprofit Institutions, Fiscal Year 1998, Table B-9.

TABLE 10

**Federal R&D Obligations for Science and Engineering to Universities and Colleges  
for Kansas and its Neighboring Institutions\*, by Agency: FY1999**  
(in Thousands of Dollars)

Institutions	Total	USDA	Commerce	DoD	ED	DOE	EPA	HHS	NASA	NSF	Other**
University of Colorado	285,748	405	20,339	12,780	5,176	7,297	5,972	138,287	61,386	32,528	1,578
University of Iowa	140,755	435	212	3,842	166	2,403	854	121,558	4,689	6,461	135
Colorado State University	81,472	11,870	8,681	7,486	150	2,866	1,974	27,260	3,732	13,900	3,553
University of Missouri	70,956	20,960	1,030	1,973	3,193	1,195	3,590	24,113	1,523	12,364	1,015
<b>University of Kansas</b>	<b>67,025</b>	<b>300</b>	<b>101</b>	<b>2,566</b>	<b>10,899</b>	<b>572</b>	<b>158</b>	<b>39,041</b>	<b>3,239</b>	<b>10,043</b>	<b>106</b>
Iowa State University	63,670	30,047	2,209	1,278	488	2,626	335	10,457	1,651	12,890	1,689
University of Oklahoma	50,658	80	6,052	2,198	150	3,472	846	26,761	1,253	9,040	806
University of Nebraska	46,928	16,384	95	2,595	-	-	270	4,838	1,720	18,066	2,957
<b>Kansas State University</b>	<b>36,281</b>	<b>14,909</b>	<b>12</b>	<b>1,818</b>	<b>619</b>	<b>3,883</b>	<b>2,325</b>	<b>4,630</b>	<b>505</b>	<b>6,982</b>	<b>598</b>
Oklahoma State University	35,917	15,971	-	3,759	258	906	283	2,853	6,655	4,924	308

\*Wichita State not in the list of top 200 institutions. WSU Total = \$4,742.

\*\*This column displays the following agencies, if they reported obligations in the variables represented by this table: the Departments of Housing and Urban Development, Interior, Labor, State, and Transportation; the Agency for International Development; the Appalachian Regional Commission; the Bureau of Engraving and Printing; the General Services Administration; the Nuclear Regulatory Commission; the Office of Justice Programs; and the Social Security Administration.

Source: National Science Foundation/SRS, Survey of Federal Science and Engineering Support to Universities, Colleges, and Nonprofit Institutions, Fiscal Year 1999, Table B-16.

TABLE 11

**Federal R&D Obligations for Science and Engineering to Universities and Colleges  
for Kansas and its Neighboring Institutions\*, by Agency: FY1998**  
(in Thousands of Dollars)

Institutions	Total	USDA	Commerce	DoD	ED	DOE	EPA	HHS	NASA	NSF	Other**
University of Colorado	242,967	87	13,440	9,281	4,944	5,522	2,930	126,968	46,298	31,937	1,560
University of Iowa	123,429	5	60	4,236	232	1,967	-	101,384	8,096	6,860	587
Colorado State University	77,671	10,469	9,954	7,141	150	3,089	3,761	24,402	3,778	12,377	2,550
University of Missouri	64,594	18,937	1,068	1,899	2,274	1,293	2,664	23,192	708	11,584	975
<b>University of Kansas</b>	<b>62,404</b>	<b>-</b>	<b>683</b>	<b>3,128</b>	<b>8,708</b>	<b>414</b>	<b>642</b>	<b>37,726</b>	<b>2,002</b>	<b>8,845</b>	<b>256</b>
Iowa State University	54,739	26,644	2,490	827	101	4,177	1,173	9,088	1,407	8,505	327
University of Oklahoma	49,746	32	5,031	3,396	442	1,968	1,523	26,588	1,472	8,928	366
University of Nebraska	40,563	15,926	95	3,108	-	-	-	4,263	1,557	12,330	3,284
Oklahoma State University	38,751	17,239	-	4,124	302	931	336	2,331	6,997	6,224	267
<b>Kansas State University</b>	<b>34,317</b>	<b>13,477</b>	<b>-</b>	<b>2,064</b>	<b>223</b>	<b>3,651</b>	<b>3,520</b>	<b>4,179</b>	<b>836</b>	<b>5,789</b>	<b>578</b>

\*Wichita State not in the list of top 200 institutions. WSU Total = \$4,481.

\*\*This column displays the following agencies, if they reported obligations in the variables represented by this table: the Departments of Housing and Urban Development, Interior, Labor, State, and Transportation; the Agency for International Development; the Appalachian Regional Commission; the Bureau of Engraving and Printing; the General Services Administration; the Nuclear Regulatory Commission; the Office of Justice Programs; and the Social Security Administration.

Source: National Science Foundation/SRS, Survey of Federal Science and Engineering Support to Universities, Colleges, and Nonprofit Institutions, Fiscal Year 1998, Table B-16.

TABLE 12

**Federal R&D Obligations for Science and Engineering to Universities and Colleges  
for Kansas and Peer Institutions, by Agency: FY1999**  
(In Thousands of Dollars)

	Total	USDA	Commerce	DoD	ED	DOE	EPA	HHS	NASA	NSF	Other*
<b>KU Peer Institutions</b>											
Colorado	285,748	405	20,339	12,780	5,176	7,297	5,972	138,287	61,386	32,528	1,578
North Carolina	223,840	519	217	7,147	5,266	1,592	6,931	182,504	949	12,306	6,409
Iowa	140,755	435	212	3,842	166	2,403	854	121,558	4,689	6,461	135
Kansas	67,025	300	101	2,566	10,899	572	158	39,041	3,239	10,043	106
Oklahoma	50,658	80	6,052	2,198	150	3,472	846	26,761	1,253	9,040	806
Oregon	36,774	114	33	1,835	6,822	1,180	34	16,249	371	10,084	52
<b>KSU Peer Institutions</b>											
North Carolina State	87,947	29,766	5,897	13,451	1,066	3,396	3,638	8,846	3,204	17,236	1,447
Colorado State	81,472	11,870	8,681	7,486	150	2,866	1,974	27,260	3,732	13,900	3,553
Oregon State	75,243	17,693	5,090	6,563	145	1,601	2,018	8,872	6,433	20,605	6,223
Iowa State	63,670	30,047	2,209	1,278	488	2,626	335	10,457	1,651	12,890	1,689
Kansas State	36,281	14,909	12	1,818	619	3,883	2,325	4,630	505	6,982	598
Oklahoma State	35,917	15,971	-	3,759	258	906	283	2,853	6,655	4,924	308
<b>WSU Peer Institutions</b>											
Old Dominion (Virginia)	13,432	-	86	5,545	-	1,048	-	686	3,597	2,285	185
University of Nevada LV	6,007	818	-	500	406	967	662	139	372	1,798	345
University of Akron (Ohio)	5,485	175	20	61	259	200	-	906	1,251	2,613	-
Wichita State	4,742	-	-	228	764	125	-	1,399	1,568	658	-
Oakland (Michigan)	4,179	-	-	620	392	-	-	2,748	-	419	-
Portland State (Oregon)	4,172	24	-	141	1,387	31	234	952	-	247	250

\*This column displays the following agencies, if they reported obligations in the variables represented by this table: the Departments of Housing and Urban Development, Interior, Labor, State, and Transportation; the Agency for International Development; the Appalachian Regional Commission; the Bureau of Engraving and Printing; the General Services Administration; the Nuclear Regulatory Commission; the Office of Justice Programs; and the Social Security Administration.

Source: National Science Foundation/SRS, Survey of Federal Science and Engineering Support to Universities, Colleges, and Nonprofit Institutions, Fiscal Year 1999, Table B-16.

TABLE 13

**Federal R&D Obligations for Science and Engineering to Universities and Colleges  
for Kansas and Peer Institutions, by Agency: FY1998**

(In Thousands of Dollars)

	Total	USDA	Commerce	DoD	ED	DOE	EPA	HHS	NASA	NSF	Other*
<b>KU Peer Institutions</b>											
Colorado	242,967	87	13,440	9,281	4,944	5,522	2,930	126,968	46,298	31,937	1,560
North Carolina	207,368	370	114	11,065	5,962	1,500	9,424	155,497	1,359	12,669	9,408
Iowa	123,429	5	60	4,236	232	1,967	-	101,384	8,096	6,860	587
<b>Kansas</b>	<b>62,404</b>	<b>-</b>	<b>683</b>	<b>3,128</b>	<b>8,708</b>	<b>414</b>	<b>642</b>	<b>37,726</b>	<b>2,002</b>	<b>8,845</b>	<b>256</b>
Oklahoma	49,746	32	5,031	3,396	442	1,968	1,523	26,588	1,472	8,928	366
Oregon	33,541	68	-	1,858	5,304	1,928	34	14,220	188	9,919	22
<b>KSU Peer Institutions</b>											
North Carolina State	79,368	27,586	4,097	15,472	854	2,817	3,924	8,269	2,733	11,553	2,063
Colorado State	77,671	10,469	9,954	7,141	150	3,089	3,761	24,402	3,778	12,377	2,550
Oregon State	73,770	16,497	5,327	6,285	241	1,229	6,515	8,786	5,249	15,963	7,678
Iowa State	54,739	26,644	2,490	827	101	4,177	1,173	9,088	1,407	8,505	327
Oklahoma State	38,751	17,239	-	4,124	302	931	336	2,331	6,997	6,224	267
<b>Kansas State</b>	<b>34,317</b>	<b>13,477</b>	<b>-</b>	<b>2,064</b>	<b>223</b>	<b>3,651</b>	<b>3,520</b>	<b>4,179</b>	<b>836</b>	<b>5,789</b>	<b>578</b>
<b>WSU Peer Institutions</b>											
Old Dominion (Virginia)	11,787	-	106	2,769	-	1,157	6	498	4,310	2,826	115
Portland State (Oregon)	6,016	-	2,000	108	1,560	-	234	1,254	11	849	-
University of Nevada LV	5,978	553	-	200	-	1,590	330	295	308	2,413	289
University of Akron (Ohio)	4,613	-	-	118	251	622	-	488	1,176	1,958	-
<b>Wichita State</b>	<b>4,481</b>	<b>-</b>	<b>50</b>	<b>327</b>	<b>491</b>	<b>120</b>	<b>-</b>	<b>1,198</b>	<b>1,714</b>	<b>581</b>	<b>-</b>
Oakland (Michigan)	3,023	-	-	50	-	-	-	2,310	-	663	-

\*This column displays the following agencies, if they reported obligations in the variables represented by this table: the Departments of Housing and Urban Development, Interior, Labor, State, and Transportation; the Agency for International Development; the Appalachian Regional Commission; the Bureau of Engraving and Printing; the General Services Administration; the Nuclear Regulatory Commission; the Office of Justice Programs; and the Social Security Administration.

Source: National Science Foundation/SRS, Survey of Federal Science and Engineering Support to Universities, Colleges, and Nonprofit Institutions, Fiscal Year 1998, Table B-16.

TABLE 14

**NSF Awards by Institutions**  
**FY1999 - FY2000**  
(Award Amount in Thousands of Dollars)

<b>Institution</b>	<b>FY1999</b>		<b>FY2000</b>		<b>% Change 1999-2000</b>
	<b>No. of Awards</b>	<b>Total Award Amount</b>	<b>No. of Awards</b>	<b>Total Award Amount</b>	
Kansas State	60	6,912	45	6,379	-7.7%
KU (Lawrence)	78	9,328	67	10,481	12.4%
KU (Med Center)	6	711	3	405	-43.0%
Wichita State	7	659	4	292	-55.7%
Other Institutions	6	1,313	9	1,452	10.6%
Total	157	\$18,921	128	\$19,009	0.5%

Source: NSF, Award List, [ntalpha.bfa.nsf.gov/AwdLst2/State](http://ntalpha.bfa.nsf.gov/AwdLst2/State), retrieved 4-30-01.

TABLE 15

**NSF Awards by Institution**  
**FY1996 - FY2000**  
(Award Amount in Thousands of Dollars)

	1996	1997	1998	1999	2000	% Change 1996-00
Kansas State	3,775	5,529	5,790	6,912	6,379	69.00%
KU (Lawrence)	8,091	8,380	8,361	9,328	10,481	31.00%
KU (Med Center)	524	608	484	711	405	-22.7%
Wichita State	240	471	581	659	292	21.7%
Other Institutions	731	1,721	172	1,313	1,452	98.6%
Total	\$ 13,361	\$ 16,707	\$ 15,385	\$ 18,921	\$ 19,009	42.3%

Source: NSF, Award List, [ntalpha.bfa.nsf.gov/AwdLst2/State](http://ntalpha.bfa.nsf.gov/AwdLst2/State), Retrieved 11-2-00 and 4-30-01.

TABLE 16

**NSF Awards for U.S., Kansas, Surrounding States,  
and EPSCoR States: FY1996 - FY2000**  
(In Thousands of Dollars, Sorted by % Change)

State	1996	1997	1998	1999	2000	% Change 1996-00
<b>Surrounding States</b>						
Kansas	13,358	16,707	15,385	18,921	19,009	42.3%
Oklahoma	15,019	15,663	16,409	17,309	20,905	39.2%
Missouri	26,382	32,263	32,858	36,419	33,258	26.1%
<b>US Total</b>						<b>22.3%</b>
Iowa	20,595	17,036	17,811	20,989	23,077	12.1%
Nebraska	15,040	14,744	13,737	20,873	15,024	-0.1%
Colorado	221,779	245,276	257,504	256,817	217,487	-1.9%
<b>EPSCoR States</b>						
Mississippi	9,609	8,769	11,393	20,217	20,714	115.6%
Vermont	4,404	7,679	7,426	7,848	9,039	105.2%
Alabama	12,923	13,312	19,248	22,093	23,296	80.3%
South Dakota	5,772	7,889	6,604	5,653	10,173	76.2%
North Dakota	4,526	6,032	6,751	8,588	7,899	74.5%
Nevada	8,084	9,687	9,844	9,687	14,046	73.8%
Arkansas	4,826	6,682	6,418	9,583	7,915	64.0%
Idaho	3,484	2,579	3,605	6,308	5,603	60.8%
Kentucky	12,316	12,668	13,434	19,201	17,679	43.5%
Kansas	13,358	16,707	15,385	18,921	19,009	42.3%
South Carolina	15,707	21,153	23,214	24,639	21,912	39.5%
Oklahoma	15,019	15,663	16,409	17,309	20,905	39.2%
Puerto Rico	9,937	7,686	13,742	13,744	12,790	28.7%
Maine	10,705	9,420	7,236	9,980	13,303	24.3%
<b>US Total</b>						<b>22.3%</b>
Wyoming	7,523	8,261	8,244	6,106	9,144	21.5%
Montana	14,926	13,017	13,290	16,464	15,286	2.4%
West Virginia	47,692	38,845	47,946	47,502	47,692	0.0%
Nebraska	15,040	14,744	13,737	20,873	15,024	-0.1%
Louisiana	22,440	28,498	24,096	21,893	20,991	-6.5%
<b>US Total</b>	<b>3,052,890</b>	<b>3,142,548</b>	<b>3,265,636</b>	<b>3,516,865</b>	<b>3,732,998</b>	<b>22.3%</b>

Source: NSF, Award Summary: by State/Institution, FY 2000, <http://ntalpha.bfa.gov/AwdLst2/>, Jan. 22, 2001.



TABLE 17

**NSF Awards for U.S., Kansas, Surrounding States,  
and EPSCoR States: FY2000**  
(Sorted by Total Award)

State	No. of Awards	Total Award (in \$1,000)	Ave Award (in \$1,000)
<b>Surrounding States</b>			
Colorado	511	\$218,365	\$371
Missouri	242	33,578	139
Iowa	215	23,385	109
Oklahoma	144	21,262	148
Kansas	128	19,009	149
Nebraska	109	15,192	139
<b>EPSCoR States</b>			
West Virginia	30	\$47,692	\$1,163
Alabama	145	23,272	160
South Carolina	152	22,120	146
Louisiana	159	21,387	135
Oklahoma	144	21,262	148
Mississippi	84	21,154	252
Kansas	128	19,009	149
Kentucky	111	17,777	160
Montana	86	15,505	180
Nebraska	109	15,192	139
Nevada	75	14,046	187
Maine	84	13,303	158
Puerto Rico	47	13,143	280
South Dakota	41	10,173	248
Wyoming	59	9,144	155
Vermont	44	9,039	205
Arkansas	54	8,245	153
North Dakota	36	8,119	226
Idaho	33	5,603	170
<b>US Total</b>	<b>19,805</b>	<b>\$3,732,998</b>	<b>\$188</b>

Source: NSF, Award Summary: by State/Institution, FY 2000,  
<http://ntalpha.bfa.nsf.gov/AwdLst2/>, April 30, 2001.

TABLE 18

**NSF Awards for U.S., Kansas, Surrounding States,  
and EPSCoR States: FY2000**  
(Sorted by Average Award)

State	No. of Awards	Total Award (in \$1,000)	Ave Award (in \$1,000)
<b>Surrounding States</b>			
Colorado	511	\$218,365	\$371
<b>US Total</b>			<b>\$188</b>
Kansas	128	19,009	149
Oklahoma	144	21,262	148
Nebraska	109	15,192	139
Missouri	242	33,578	139
Iowa	215	23,385	109
<b>EPSCoR States</b>			
West Virginia	30	\$47,692	\$1,163
Puerto Rico	47	13,143	280
Mississippi	84	21,154	252
South Dakota	41	10,173	248
North Dakota	36	8,119	226
Vermont	44	9,039	205
<b>US Total</b>			<b>\$188</b>
Nevada	75	14,046	187
Montana	86	15,505	180
Idaho	33	5,603	170
Alabama	145	23,272	160
Kentucky	111	17,777	160
Maine	84	13,303	158
Wyoming	59	9,144	155
Arkansas	54	8,245	153
Kansas	128	19,009	149
Oklahoma	144	21,262	148
South Carolina	152	22,120	146
Nebraska	109	15,192	139
Louisiana	159	21,387	135
<b>US Total</b>	<b>19,805</b>	<b>\$3,732,998</b>	<b>\$188</b>

Source: NSF, Award Summary: by State/Institution, FY 2000,  
<http://ntalpha.bfa.nsf.gov/AwdLst2/>, April 30, 2001.

TABLE 19

**Federal R & D Academic Obligations for Science and Engineering  
for U.S., Kansas, and Surrounding States: FY1991 - FY1999**  
(Sorted by FY1999 per capita)

Surrounding States	FY 1991 (\$1,000)	FY1998 (\$1,000)	FY1999 (\$1,000)	\$ per capita \$ per capita		1998-99 1991-99		
				FY 1991	FY1998	FY1999	% Change	\$ per capita
Colorado	190,435	372,241	413,899	56.55	93.79	102.04	8.8%	80.4%
Missouri	181,893	300,550	354,892	35.27	55.27	64.90	17.4%	84.0%
Iowa	124,814	156,307	181,286	44.72	54.63	63.18	15.6%	41.3%
<b>U.S.</b>	<b>10,091,898</b>	<b>13,876,806</b>	<b>15,569,904</b>	<b>40.02</b>	<b>51.35</b>	<b>57.10</b>	<b>11.2%</b>	<b>42.7%</b>
Nebraska	42,824	49,835	58,787	26.92	30.01	35.29	17.6%	31.1%
Kansas	50,895	83,094	85,444	20.40	31.49	32.19	2.2%	57.8%
Oklahoma	33,148	65,437	67,914	10.47	19.59	20.22	3.2%	93.2%

Source: National Science Foundation/SRS, Survey of Federal Science and Engineering Support to Universities, Colleges, and Non-Profit Institutions, Table B-5, FY1998 and FY1999, and U.S. Bureau of the Census, Population Estimates, Internet Release Date 12/29/99, <http://www.census.gov/population/estimates/state/st.99-3.txt>, April 5, 2001.

TABLE 20

**Federal R & D Academic Obligations for Science and Engineering  
for U.S., Kansas, and Surrounding States: FY1991 - FY1999**  
(Sorted by 91 - 99 per capita % change)

Surrounding States	FY 1991 (\$1,000)	FY1998 (\$1,000)	FY1999 (\$1,000)	\$ per capita \$ per capita		1998-99 1991-99		
				FY 1991	FY1998	FY1999	% Change	\$ per capita
Oklahoma	33,148	65,437	67,914	10.47	19.59	20.22	3.2%	93.2%
Missouri	181,893	300,550	354,892	35.27	55.27	64.90	17.4%	84.0%
Colorado	190,435	372,241	413,899	56.55	93.79	102.04	8.8%	80.4%
Kansas	50,895	83,094	85,444	20.40	31.49	32.19	2.2%	57.8%
<b>U.S.</b>	<b>10,091,898</b>	<b>13,876,806</b>	<b>15,569,904</b>	<b>40.02</b>	<b>51.35</b>	<b>57.10</b>	<b>11.2%</b>	<b>42.7%</b>
Iowa	124,814	156,307	181,286	44.72	54.63	63.18	15.6%	41.3%
Nebraska	42,824	49,835	58,787	26.92	30.01	35.29	17.6%	31.1%

Source: National Science Foundation/SRS, Survey of Federal Science and Engineering Support to Universities, Colleges, and Non-Profit Institutions, Table B-5, FY1998 and FY1999, and U.S. Bureau of the Census, Population Estimates, Internet Release Date 12/29/99, <http://www.census.gov/population/estimates/state/st.99-3.txt>, April 5, 2001.

TABLE 21

**Federal R & D Academic Obligations for Science and Engineering  
for U.S., Kansas, and EPSCoR States: FY1991 - FY1999**  
(Sorted by FY1999 per capita)

EPSCoR States	FY 1991 (\$1,000)	FY1998 (\$1,000)	FY1999 (\$1,000)	\$ per capita		1998-99		1991-99	
				FY 1991	FY1999	FY1998	FY1999	% Change	% Change
Vermont	37,872	39,269	45,781	66.78	66.49	77.11	77.11	16.0%	15.5%
Alabama	155,818	229,285	254,544	38.09	52.70	58.25	58.25	10.5%	52.9%
<b>U.S.</b>	<b>10,091,898</b>	<b>13,876,806</b>	<b>15,569,904</b>	<b>40.02</b>	<b>51.35</b>	<b>57.10</b>	<b>57.10</b>	<b>11.2%</b>	<b>42.7%</b>
Montana	16,216	34,570	48,443	20.07	39.30	54.88	54.88	39.6%	173.4%
North Dakota	18,666	22,168	29,335	29.43	34.76	46.29	46.29	33.2%	57.3%
Mississippi	42,970	75,868	102,662	16.58	27.57	37.08	37.08	34.5%	123.6%
Nebraska	42,824	49,835	58,787	27.09	30.01	35.29	35.29	17.6%	30.2%
Louisiana	101,680	133,247	149,680	23.98	30.54	34.24	34.24	12.1%	42.8%
<b>Kansas</b>	<b>50,895</b>	<b>83,094</b>	<b>85,444</b>	<b>20.40</b>	<b>31.49</b>	<b>32.19</b>	<b>32.19</b>	<b>2.2%</b>	<b>57.8%</b>
South Carolina	54,996	115,827	112,155	15.45	30.17	28.86	28.86	-4.3%	86.8%
Wyoming	10,886	16,161	12,606	23.78	33.67	26.28	26.28	-21.9%	10.5%
Kentucky	46,190	73,265	91,678	12.43	18.62	23.15	23.15	24.3%	86.1%
Nevada	21,909	30,274	40,708	17.05	17.36	22.50	22.50	29.6%	32.0%
Arkansas	25,785	46,840	54,085	10.88	18.45	21.20	21.20	14.9%	94.9%
Oklahoma	33,148	65,437	67,914	10.47	19.59	20.22	20.22	3.2%	93.2%
Idaho	13,694	17,792	20,658	13.18	14.45	16.50	16.50	14.2%	25.2%
Maine	9,740	16,331	18,411	7.88	13.09	14.69	14.69	12.2%	86.4%
West Virginia	33,711	22,569	25,080	18.75	12.46	13.88	13.88	11.4%	-26.0%
South Dakota	6,705	8,747	10,095	9.56	11.97	13.77	13.77	15.0%	44.1%

Source: National Science Foundation/SRS, Survey of Federal Science and Engineering Support to Universities, Colleges, and Non-Profit Institutions, Table B-5, FY1998 and FY1999, and U.S. Bureau of the Census, Population Estimates, Internet Release Date 12/29/99, <http://www.census.gov/population/estimates/state/st.99-3.txt>, April 5, 2001.

TABLE 22

**Federal R & D Academic Obligations for Science and Engineering  
for U.S., Kansas, and EPSCoR States: FY1991 - FY1999**  
(Sorted by 91 - 99 per capita % change)

EPSCoR States	FY 1991 (\$1,000)	FY1998 (\$1,000)	FY1999 (\$1,000)	\$ per capita \$ per capita		1998-99		1991-99	
				FY 1991	FY1998	FY1999	% Change	\$ per capita	% Change
Montana	16,216	34,570	48,443	20.07	39.30	54.88	39.6%	173.4%	173.4%
Mississippi	42,970	75,868	102,662	16.58	27.57	37.08	34.5%	123.6%	123.6%
Arkansas	25,785	46,840	54,085	10.88	18.45	21.20	14.9%	94.9%	94.9%
Oklahoma	33,148	65,437	67,914	10.47	19.59	20.22	3.2%	93.2%	93.2%
South Carolina	54,996	115,827	112,155	15.45	30.17	28.86	-4.3%	86.8%	86.8%
Kentucky	46,190	73,265	91,678	12.43	18.62	23.15	24.3%	86.1%	86.1%
Kansas	50,895	83,094	85,444	20.40	31.49	32.19	2.2%	57.8%	57.8%
North Dakota	18,666	22,168	29,335	29.43	34.76	46.29	33.2%	57.3%	57.3%
Alabama	155,818	229,285	254,544	38.09	52.70	58.25	10.5%	52.9%	52.9%
South Dakota	6,705	8,747	10,095	9.56	11.97	13.77	15.0%	44.1%	44.1%
Louisiana	101,680	133,247	149,680	23.98	30.54	34.24	12.1%	42.8%	42.8%
<b>U.S.</b>	<b>10,091,898</b>	<b>13,876,806</b>	<b>15,569,904</b>	<b>40.02</b>	<b>51.35</b>	<b>57.10</b>	<b>11.2%</b>	<b>42.7%</b>	<b>42.7%</b>
Nevada	21,909	30,274	40,708	17.05	17.36	22.50	29.6%	32.0%	32.0%
Nebraska	42,824	49,835	58,787	27.09	30.01	35.29	17.6%	30.2%	30.2%
Idaho	13,694	17,792	20,658	13.18	14.45	16.50	14.2%	25.2%	25.2%
Vermont	37,872	39,269	45,781	66.78	66.49	77.11	16.0%	15.5%	15.5%
Wyoming	10,886	16,161	12,606	23.78	33.67	26.28	-21.9%	10.5%	10.5%
West Virginia	33,711	22,569	25,080	18.75	12.46	13.88	11.4%	-26.0%	-26.0%

Source: National Science Foundation/SRS, Survey of Federal Science and Engineering Support to Universities, Colleges, and Non-Profit Institutions, Table B-5, FY1998 and FY1999, and U.S. Bureau of the Census, Population Estimates, Internet Release Date 12/29/99, <http://www.census.gov/population/estimates/state/st.99-3.txt>, April 5, 2001.

TABLE 23

**Per Capita Federal R & D Academic Obligations for Science and Engineering  
for U.S., Kansas, and Surrounding States: FY1991 - FY1999**  
(Sorted by FY1999 per capita)

Surrounding States	1998-99 1991 - 99										
	FY1991	FY1992	FY1993	FY1994	FY1995	FY1996	FY1997	FY1998	FY1999	% Change	% Change
Colorado	56.55	63.35	58.91	66.94	68.53	67.31	75.11	93.79	102.04	8.8%	80.4%
Missouri	35.27	39.34	37.70	41.55	44.95	48.05	50.27	55.27	64.90	17.4%	84.0%
Iowa	44.72	46.30	47.37	50.46	48.86	48.74	51.70	54.63	63.18	15.6%	41.3%
<b>U.S.</b>	<b>40.02</b>	<b>42.85</b>	<b>42.77</b>	<b>45.70</b>	<b>46.35</b>	<b>46.55</b>	<b>48.62</b>	<b>51.35</b>	<b>57.10</b>	<b>11.2%</b>	<b>42.7%</b>
Nebraska	26.92	25.50	25.52	24.80	27.78	30.84	31.09	30.01	35.29	17.6%	31.1%
<b>Kansas</b>	<b>20.40</b>	<b>23.59</b>	<b>24.54</b>	<b>22.23</b>	<b>24.71</b>	<b>24.82</b>	<b>26.00</b>	<b>31.49</b>	<b>32.19</b>	<b>2.2%</b>	<b>57.8%</b>
Oklahoma	10.47	16.58	13.98	14.02	15.67	14.91	17.41	19.59	20.22	3.2%	93.2%

Source: National Science Foundation/SRS, Survey of Federal Science and Engineering Support to Universities, Colleges, and Non-Profit Institutions, Table B-5, FY1998 and FY1999, and U.S. Bureau of the Census, Population Estimates, Internet Release Date 12/29/99, <http://www.census.gov/population/estimates/state/st.99-3.txt>, April 5, 2001.

TABLE 24

**Per Capita Federal R & D Academic Obligations for Science and Engineering  
for U.S., Kansas, and EPSCoR States: FY1991 - FY1999**  
(Sorted by FY1999 per capita)

EPSCoR States	FY1991	FY1992	FY1993	FY1994	FY1995	FY1996	FY1997	FY1998	FY1999	1998-99		1991-99	
										% Change	% Change	% Change	% Change
Vermont	66.78	57.87	62.62	59.74	60.37	57.82	66.71	66.49	77.11	16.0%	15.5%	16.0%	15.5%
Alabama	38.09	40.02	38.38	42.28	47.13	46.65	51.76	52.70	58.25	10.5%	52.9%	10.5%	52.9%
U.S.	40.02	42.85	42.77	45.70	46.35	46.55	48.62	51.35	57.10	11.2%	42.7%	11.2%	42.7%
Montana	20.07	22.90	29.05	29.59	27.75	29.76	37.10	39.30	54.88	39.6%	173.4%	39.6%	173.4%
North Dakota	29.43	33.69	33.00	30.03	42.86	48.63	38.48	34.76	46.29	33.2%	57.3%	33.2%	57.3%
Mississippi	16.58	16.79	19.54	17.59	18.12	16.98	19.01	27.57	37.08	34.5%	123.6%	34.5%	123.6%
Nebraska	27.09	25.50	25.52	24.80	27.78	30.84	31.09	30.01	35.29	17.6%	30.2%	17.6%	30.2%
Louisiana	23.98	24.70	22.48	26.61	24.20	27.90	30.58	30.54	34.24	12.1%	42.8%	12.1%	42.8%
Kansas	20.40	23.59	24.54	22.23	24.71	24.82	26.00	31.49	32.19	2.2%	57.8%	2.2%	57.8%
South Carolina	15.45	16.78	15.69	19.55	19.68	24.04	27.85	30.17	28.86	-4.3%	86.8%	-4.3%	86.8%
Wyoming	23.78	27.42	37.03	27.38	24.24	28.70	31.36	33.67	26.28	-21.9%	10.5%	-21.9%	10.5%
Kentucky	12.43	14.95	15.51	16.40	16.24	17.84	18.65	18.62	23.15	24.3%	86.1%	24.3%	86.1%
Nevada	17.05	18.83	18.02	18.76	15.56	14.43	14.17	17.36	22.50	29.6%	32.0%	29.6%	32.0%
Arkansas	10.88	12.32	13.43	15.50	15.56	16.61	17.02	18.45	21.20	14.9%	94.9%	14.9%	94.9%
Oklahoma	10.47	16.58	13.98	14.02	15.67	14.91	17.41	19.59	20.22	3.2%	93.2%	3.2%	93.2%
Idaho	13.18	13.97	15.03	16.84	12.74	10.58	12.70	14.45	16.50	14.2%	25.2%	14.2%	25.2%
Maine	7.88	8.39	10.96	11.46	11.10	8.61	11.89	13.09	14.69	12.2%	86.4%	12.2%	86.4%
West Virginia	18.75	15.88	21.09	13.88	10.86	14.14	10.45	12.46	13.88	11.4%	-26.0%	11.4%	-26.0%
South Dakota	9.56	10.32	13.96	14.62	13.39	11.67	17.99	11.97	13.77	15.0%	44.1%	15.0%	44.1%

Source: National Science Foundation/SRS, Survey of Federal Science and Engineering Support to Universities, Colleges, and Non-Profit Institutions, Table B-5, FY1998 and FY1999, and U.S. Bureau of the Census, Population Estimates, Internet Release Date 12/29/99, <http://www.census.gov/population/estimates/state/st.99-3.txt>, April 5, 2001.



TABLE 25

**Total R&D Expenditures at KU, KSU and WSU and Their Peer Institutions  
FY1991 - FY1999**  
(In Thousands of Dollars)

Institutions	1991	1992	1993	1994	1995	1996	1997	1998	1999	Rank	% Change 1991-99
<b>KU Peer Institutions</b>											
University of Colorado	160,526	176,266	193,217	234,267	243,932	251,301	269,816	311,203	318,618	21	98.5%
University of North Carolina	142,681	161,549	179,157	201,622	209,118	208,529	221,380	235,296	252,676	33	77.1%
University of Iowa	124,058	135,418	148,811	157,036	164,893	178,228	184,414	199,063	207,135	43	67.0%
University of Oklahoma	79,777	92,146	92,019	95,747	102,337	109,071	114,387	126,861	142,085	68	78.1%
<b>University of Kansas</b>	<b>65,982</b>	<b>75,004</b>	<b>85,134</b>	<b>95,701</b>	<b>100,702</b>	<b>100,649</b>	<b>108,893</b>	<b>117,115</b>	<b>132,752</b>	<b>75</b>	<b>101.2%</b>
University of Oregon	26,151	30,242	30,738	31,170	30,386	33,654	31,487	33,315	32,695	152	25.0%
<b>KSU Peer Institutions</b>											
North Carolina State University	142,606	143,008	155,324	173,407	180,191	190,748	229,292	254,254	270,621	29	89.8%
Iowa State University	134,657	132,580	148,549	155,982	154,932	151,914	155,433	156,766	161,301	55	19.8%
Colorado State University	80,474	107,339	115,385	112,457	122,172	126,701	128,580	140,179	150,281	62	86.7%
Oregon State University	96,199	107,573	114,004	119,772	123,402	131,334	131,467	138,240	139,285	73	44.8%
<b>Kansas State University</b>	<b>53,010</b>	<b>57,723</b>	<b>62,562</b>	<b>65,696</b>	<b>71,103</b>	<b>71,222</b>	<b>76,896</b>	<b>81,233</b>	<b>85,580</b>	<b>101</b>	<b>61.4%</b>
Oklahoma State University	67,492	71,238	72,920	70,808	75,906	82,960	62,480	71,466	83,108	102	23.1%
<b>WSU Peer Institutions</b>											
Old Dominion (Virginia)	10,040	10,859	14,097	14,911	14,439	17,577	18,583	20,150	23,030	180	129.4%
University of Nevada LV	19,491	13,300	19,373	15,486	17,268	16,893	15,628	16,912	20,170	192	3.5%
University of Akron (Ohio)	13,405	14,825	17,558	16,783	15,589	15,507	17,999	16,326	16,279	203	21.4%
<b>Wichita State University</b>	<b>5,182</b>	<b>6,285</b>	<b>6,407</b>	<b>7,483</b>	<b>9,691</b>	<b>9,904</b>	<b>11,797</b>	<b>13,117</b>	<b>14,555</b>	<b>211</b>	<b>180.9%</b>
Portland State Univ (Oregon)	4,169	4,433	5,860	7,146	7,920	9,376	9,285	10,507	13,940	213	234.4%
Oakland University (Michigan)	5,912	5,804	6,096	6,285	7,168	6,832	6,598	7,272	6,422	266	8.6%

Source: National Science Foundation/SRS, Survey of Research and Development Expenditures at Universities and Colleges, FY 1998, Table B-32 and FY 1999, Table B-32.

TABLE 26

**Federally Financed R&D Expenditures at KU, KSU and WSU  
and Their Peer Institutions: FY1991 - FY1999**  
(In Thousands of Dollars)

Institutions	1991	1992	1993	1994	1995	1996	1997	1998	1999	Rank	% Change 1991-99
<b>KU Peer Institutions</b>											
University of Colorado	119,068	129,894	138,584	158,163	169,666	177,517	192,201	228,342	244,686	11	105.5%
University of North Carolina	103,485	113,774	130,920	149,047	156,626	157,034	153,985	171,505	182,935	25	76.8%
University of Iowa	81,007	88,360	93,483	99,536	103,115	105,646	108,534	115,312	122,638	40	51.4%
University of Oklahoma	25,786	29,733	33,298	35,266	37,112	42,679	45,756	54,451	57,589	82	123.3%
<b>University of Kansas</b>	<b>26,419</b>	<b>31,992</b>	<b>37,738</b>	<b>40,816</b>	<b>42,209</b>	<b>41,858</b>	<b>46,733</b>	<b>50,567</b>	<b>57,272</b>	<b>83</b>	<b>116.8%</b>
University of Oregon	19,311	21,002	21,465	22,204	23,789	26,411	26,020	27,041	27,336	124	41.6%
<b>KSU Peer Institutions</b>											
Colorado State University	55,689	64,679	68,733	66,464	75,216	74,930	79,393	80,451	91,943	54	65.1%
Oregon State University	51,099	59,739	61,118	65,069	68,687	79,977	80,131	82,416	81,649	64	59.8%
North Carolina State University	46,894	50,501	62,470	69,608	68,675	74,485	69,473	79,533	66,310	75	41.4%
Iowa State University	42,793	45,144	50,695	56,439	58,766	54,904	52,938	51,196	54,179	93	26.6%
<b>Kansas State University</b>	<b>15,726</b>	<b>18,583</b>	<b>19,582</b>	<b>21,547</b>	<b>25,266</b>	<b>24,769</b>	<b>25,781</b>	<b>27,001</b>	<b>28,102</b>	<b>123</b>	<b>78.7%</b>
Oklahoma State University	15,756	15,384	20,840	20,440	18,951	25,034	21,455	23,220	23,179	137	47.1%
<b>WSU Peer Institutions</b>											
Old Dominion (Virginia)	6,576	6,284	7,050	7,888	7,968	9,266	10,736	12,346	13,706	173	108.4%
University of Nevada LV	17,568	10,006	10,585	9,543	10,464	11,142	9,221	9,713	10,248	195	-41.7%
Portland State Univ (Oregon)	2,580	2,771	3,869	4,377	4,659	5,675	5,960	6,881	9,313	203	261.0%
University of Akron (Ohio)	3,411	4,243	4,329	4,016	4,231	4,793	5,146	4,042	7,140	224	109.3%
<b>Wichita State University</b>	<b>1,768</b>	<b>2,575</b>	<b>2,315</b>	<b>1,752</b>	<b>2,551</b>	<b>2,196</b>	<b>2,602</b>	<b>2,646</b>	<b>3,260</b>	<b>269</b>	<b>84.4%</b>
Oakland University (Michigan)	2,852	3,013	3,026	3,202	3,860	3,222	3,303	3,218	3,033	273	6.3%

Source: National Science Foundation/SRS, Survey of Research and Development Expenditures at Universities and Colleges, FY 1998, Table B-33 and FY 1999, Table B-33.

TABLE 27

**R & D Expenditures by Source of Funds at KU, KSU and WSU  
and Their Peer Institutions: FY1999**  
(In Thousands of Dollars)

Institutions	Federal Govt	State & Local Govts	Institutional Funds	Total	Rank
<b>KU Peer Institutions</b>					
University of Colorado	244,686	6,199	25,148	318,618	21
University of North Carolina	182,935	14,571	49,375	252,767	33
University of Iowa	122,638	5,191	48,095	207,135	43
University of Oklahoma	57,589	15,803	45,402	142,085	68
<b>University of Kansas</b>	<b>57,272</b>	<b>11,363</b>	<b>36,465</b>	<b>132,752</b>	<b>75</b>
University of Oregon	27,336	383	3,429	32,695	152
<b>KSU Peer Institutions</b>					
North Carolina State University	66,310	97,150	75,195	270,621	29
Iowa State University	54,179	47,923	41,309	161,301	55
Colorado State University	91,943	16,776	34,342	150,281	62
Oregon State University	81,649	28,847	24,395	139,285	73
<b>Kansas State University</b>	<b>28,102</b>	<b>34,451</b>	<b>16,141</b>	<b>85,580</b>	<b>101</b>
Oklahoma State University	23,179	24,896	30,459	83,108	102
<b>WSU Peer Institutions</b>					
Old Dominion (Virginia)	13,706	4,035	2,502	23,030	180
University of Nevada LV	10,248	1,978	5,348	20,170	192
University of Akron (Ohio)	7,140	882	4,009	16,279	203
<b>Wichita State University</b>	<b>3,260</b>	<b>4,486</b>	<b>5,573</b>	<b>14,555</b>	<b>211</b>
Portland State Univ (Oregon)	9,313	578	2,743	13,940	213
Oakland University (Michigan)	3,033	420	1,716	6,422	266

Source: National Science Foundation/Division of Science Resources Studies, Survey of Research and Development Expenditures at Universities and Colleges, Fiscal Year 1999, Tables B-29, B-32, and B-35.

TABLE 28

**R & D Expenditures by Source of Funds at KU, KSU and WSU  
and Their Peer Institutions: FY1998**  
(In Thousands of Dollars)

Institutions	Federal Govt	State & Local Govts	Institutional Funds	Total	Rank
<b>KU Peer Institutions</b>					
University of Colorado	228,342	5,139	32,795	311,203	17
University of North Carolina	171,505	29,691	29,240	235,296	31
University of Iowa	115,312	5,898	45,687	199,063	40
University of Oklahoma	54,451	13,063	37,494	126,861	74
<b>University of Kansas</b>	<b>50,567</b>	<b>9,662</b>	<b>35,467</b>	<b>117,115</b>	<b>77</b>
University of Oregon	27,041	247	3,625	33,315	151
<b>KSU Peer Institutions</b>					
North Carolina State University	79,533	88,497	49,831	254,254	29
Iowa State University	51,196	46,802	41,836	156,766	51
Colorado State University	80,451	19,168	34,271	140,179	63
Oregon State University	82,416	28,017	14,558	138,240	65
<b>Kansas State University</b>	<b>27,001</b>	<b>32,599</b>	<b>15,799</b>	<b>81,233</b>	<b>103</b>
Oklahoma State University	23,220	23,412	21,381	71,466	113
<b>WSU Peer Institutions</b>					
Old Dominion (Virginia)	12,346	3,858	1,972	20,150	184
University of Nevada LV	9,713	1,548	3,190	16,912	198
University of Akron (Ohio)	4,042	1,296	5,288	16,326	199
<b>Wichita State University</b>	<b>2,646</b>	<b>4,680</b>	<b>4,940</b>	<b>13,117</b>	<b>214</b>
Portland State Univ (Oregon)	6,881	758	1,885	10,507	231
Oakland University (Michigan)	3,218	703	2,163	7,272	250

Source: National Science Foundation/SRS, Survey of Research and Development Expenditures at Universities and Colleges, Fiscal Year 1998, Tables B-29, B-32 and B35.

TABLE 29

**Grant Activity of EPSCoR Funded Faculty  
at KSU, KU and WSU: Group I  
FY1992 - FY2000**

	FY1992	FY1994	FY1996	FY1998	FY1999	FY2000
Proposals Submitted*	145	174	177	167	170	158
Grants Awarded	54	72	82	99	93	87
Percent Awarded	37%	41%	46%	59%	55%	55%
Dollars Awarded	\$ 3,856,552	\$ 7,170,855	\$ 8,268,271	\$ 7,778,515	\$ 7,311,993	\$ 10,965,036
Adjusted for Inflation (to 2000 dollars)**	\$ 4,733,416	\$ 8,332,127	\$ 9,118,921	\$ 8,217,548	\$ 7,557,774	\$ 10,965,036
Percent Change Dollars Awarded 1992 to 2000 (Adjusted for Inflation)	184%					
1999 to 2000 (Adjusted for Inflation)	132%					
	50%					
	45%					

\*Include only those grants where faculty served as principal investigator.  
Does NOT include EPSCoR (NSF, EPA, Defense, or NIH).

\*\*Adjusted for Inflation Equation: final year dollars = initial year dollars \* (final year cpi) / (initial year cpi),  
where cpi1992 = 140.3, cpi1994 = 148.2, cpi1996 = 156.9, cpi1998 = 163.0, cpi1999 = 166.6, and cpi2000 = 172.2.

Source: KSU, KU and WSU databases, 2000 and Bureau of Labor Statistics, Consumer Price Index-All Urban Consumers,  
Base Period: 1982-84 = 100.

TABLE 30

Grant Activity of EPSCoR Funded Faculty  
at KSU, KU and WSU: Group II  
FY1994 - FY2000

	FY1994	FY1995	FY1996	FY1997	FY1998	FY1999	FY2000
Proposals Submitted*	165	219	206	257	188	190	180
Grants Awarded	52	60	81	109	104	100	110
Percent Awarded	32%	27%	39%	42%	55%	53%	61%
Dollars Awarded	\$ 5,845,739	\$ 7,105,400	\$ 8,027,799	\$ 10,067,519	\$ 7,790,523	\$ 9,496,259	\$ 12,291,433
Adjusted for Inflation (to 2000 dollars)**	\$ 6,792,417	\$ 8,028,543	\$ 8,810,625	\$ 10,801,413	\$ 8,230,234	\$ 9,815,461	\$ 12,291,433
Percent Change Dollars Awarded 1994 to 2000		110%					
(Adjusted for Inflation)		81%					
1999 to 2000		29%					
(Adjusted for Inflation)		25%					

\*Include only those grants where faculty served as principal investigator.  
Does NOT include EPSCoR (NSF, EPA, Defense, or NIH).

\*\*Adjusted for Inflation Equation: final year dollars = initial year dollars \* (final year cpi) / (initial year cpi),  
where cpi1994 = 148.2, cpi1995 = 152.4, cpi1996 = 156.9, cpi1997 = 160.5, cpi1998 = 163.0, cpi1999 = 166.6, and cpi2000 = 172.2.

Source: KSU, KU and WSU databases, 2000 and Bureau of Labor Statistics, Consumer Price Index-All Urban Consumers, Base Period: 1982-84 = 100

TABLE 31

**Grant Activity of EPSCoR Funded Faculty  
at KSU, KU and WSU: Group III  
FY1998 - FY2000**

	FY1998	FY1999	FY2000
Proposals Submitted	108	144	141
Grants Awarded	64	61	87
Percent Awarded	59%	42%	62%
Dollars Awarded	\$ 5,610,105	\$ 7,298,753	\$ 10,179,517
<i>Adjusted for Inflation</i>			
(to 2000 dollars)**	\$ 5,926,749	\$ 7,544,089	\$ 10,179,517
Percent Change Dollars Awarded			
1998 to 2000	76%		
(Adjusted for Inflation)	72%		
1999 to 2000	39%		
(Adjusted for Inflation)	35%		

\*Include only those grants where faculty served as principal investigator.  
Does NOT include EPSCoR (NSF, EPA, Defense, or NIH).

\*\*Adjusted for Inflation Equation:  $\text{final year dollars} = \text{initial year dollars} * (\text{final year cpi}) / (\text{initial year cpi})$   
where  $\text{cpi}1992 = 140.3$ ,  $\text{cpi}1994 = 148.2$ ,  $\text{cpi}1996 = 156.9$ ,  $\text{cpi}1998 = 163.0$ ,  $\text{cpi}1999 = 166.6$ ,  
and  $\text{cpi}2000 = 172.2$ .

Source: KSU, KU and WSU databases, 2000 and Bureau of Labor Statistics, Consumer Price Index-  
All Urban Consumers, Base Period: 1982-84 = 100.

TABLE 32

**Grant Activity of EPSCoR Funded Faculty  
at KSU, KU and WSU: Group I, II & III Combined  
FY1994 - FY2000**

	FY1994	FY1995	FY1996	FY1997	FY1998	FY1999	FY2000
Proposals Submitted*	252	296	298	367	332	359	346
Grants Awarded	93	91	128	151	190	179	198
Percent Awarded	37%	31%	43%	41%	57%	50%	57%
Dollars Awarded	\$ 9,621,080	\$ 11,197,094	\$ 12,631,056	\$ 14,963,695	\$ 15,978,516	\$ 17,263,506	\$ 23,214,974
Adjusted for Inflation (to 2000 dollars)**	\$ 11,179,150	\$ 12,651,835	\$ 13,862,765	\$ 16,054,506	\$ 16,880,371	\$ 17,843,792	\$ 23,214,974
Percent Change Dollars Awarded 1994 to 2000	141%						
(Adjusted for Inflation)	108%						
1999 to 2000	34%						
(Adjusted for Inflation)	30%						

\*Include only those grants where faculty served as principal investigator. Does NOT include EPSCoR (NSF, EPA, Defense, or NIH).  
Group III totals not added in until FY1998.

\*\*Adjusted for Inflation Equation: final year dollars = initial year dollars\*(final year cpi)/(initial year cpi),  
where cpi1994 = 148.2, cpi1995 = 152.4, cpi1996 = 156.9, cpi1997 = 160.5, cpi1998 = 163.0, cpi1999 = 166.6, and cpi2000 = 172.2.

Source: KSU, KU and WSU databases, 2000 and Bureau of Labor Statistics, Consumer Price Index-All Urban Consumers, Base Period: 1982-84 = 100.



TABLE 33

**Grant Activity of EPSCoR Funded Faculty  
at KSU, KU and WSU: First Awards  
FY1995 - FY2000**

	FY1995	FY1996	FY1997	FY1998	FY1999	FY2000
Proposals Submitted*	43	76	92	134	140	147
Grants Awarded	9	20	33	59	66	64
Percent Awarded	21%	26%	36%	44%	47%	44%
Dollars Awarded	\$ 493,039	\$ 737,945	\$ 1,831,344	\$ 4,460,737	\$ 4,725,143	\$ 4,361,134
Adjusted for Inflation (to 2000 dollars)**	\$ 557,095	\$ 809,905	\$ 1,964,844	\$ 4,712,509	\$ 4,883,971	\$ 4,361,134
Percent Change Dollars Awarded 1995 to 2000	785%					
(Adjusted for Inflation) 1999 to 2000	683%					
(Adjusted for Inflation)	-8%					
	-11%					

\*include only those grants where faculty served as principal investigator. Tracking begins for faculty in the year that the First Award was received. Does NOT include EPSCoR (NSF, EPA, Defense, or NIH).

\*\* Adjusted for Inflation Equation: final year dollars = initial year dollars\*(final year cpi)/(initial year cpi), where cpi1994 = 148.2, cpi1995 = 152.4, cpi1996 = 156.9, cpi1997 = 160.5, cpi1998 = 163.0, cpi1999 = 166.6, and cpi2000 = 172.2.

Source: KSU, KU and WSU databases, 2000 and Bureau of Labor Statistics, Consumer Price Index-All Urban Consumers, Base Period: 1982-84 = 100.

TABLE 34

**Distribution by Total Dollars Awarded to EPSCoR Faculty: Group I  
FY1992 - FY2000**

Funding Range:	Number of EPSCOR Faculty Within Funding Range									
<b>KSU</b>	<b>1992</b>	<b>1993</b>	<b>1994</b>	<b>1995</b>	<b>1996</b>	<b>1997</b>	<b>1998</b>	<b>1999</b>	<b>2000</b>	
\$1 - \$49,999	6	5	4	6	2	4	3	5	3	
\$50,000 - \$99,999	3	3	6	5	4	1	0	3	2	
\$100,000 - \$249,999	6	7	6	6	8	11	10	8	6	
\$250,000 - \$499,999	1	0	6	2	4	5	3	4	2	
\$500,000 +	1	0	2	2	3	3	2	0	3	
<b>KSU Total</b>	<b>17</b>	<b>15</b>	<b>24</b>	<b>21</b>	<b>21</b>	<b>24</b>	<b>18</b>	<b>20</b>	<b>16</b>	
No. of Faculty	30	30	34	34	33	31	26	26	26	
% of Faculty	57%	50%	71%	62%	64%	77%	69%	77%	62%	
<b>KU</b>	<b>1992</b>	<b>1993</b>	<b>1994</b>	<b>1995</b>	<b>1996</b>	<b>1997</b>	<b>1998</b>	<b>1999</b>	<b>2000</b>	
\$1 - \$49,999	5	7	7	5	4	4	8	5	7	
\$50,000 - \$99,999	6	3	3	4	2	6	2	3	1	
\$100,000 - \$249,999	3	5	6	6	5	2	8	5	5	
\$250,000 - \$499,999	2	1	1	2	1	3	3	4	3	
\$500,000 +	0	1	0	0	2	0	0	2	4	
<b>KU Total</b>	<b>16</b>	<b>17</b>	<b>17</b>	<b>17</b>	<b>14</b>	<b>15</b>	<b>21</b>	<b>19</b>	<b>20</b>	
No. of Faculty	34	34	34	33	33	32	30	29	29	
% of Faculty	47%	50%	50%	52%	42%	47%	70%	66%	69%	
<b>WSU</b>	<b>1992</b>	<b>1993</b>	<b>1994</b>	<b>1995</b>	<b>1996</b>	<b>1997</b>	<b>1998</b>	<b>1999</b>	<b>2000</b>	
\$1 - \$49,999	3	0	4	3	1	5	2	2	0	
\$50,000 - \$99,999	0	2	2	1	1	0	2	2	1	
\$100,000 - \$249,999	0	6	0	0	0	0	0	0	1	
\$250,000 - \$499,999	0	0	0	0	0	1	0	0	0	
\$500,000 +	0	0	0	0	0	0	0	0	0	
<b>WSU Total</b>	<b>3</b>	<b>8</b>	<b>6</b>	<b>4</b>	<b>2</b>	<b>6</b>	<b>4</b>	<b>4</b>	<b>2</b>	
No. of Faculty	14	14	14	14	14	13	12	12	12	
% of Faculty	21%	57%	43%	29%	14%	46%	33%	33%	17%	
<b>STATE TOTAL</b>	<b>1992</b>	<b>1993</b>	<b>1994</b>	<b>1995</b>	<b>1996</b>	<b>1997</b>	<b>1998</b>	<b>1999</b>	<b>2000</b>	
\$1 - \$49,999	14	12	15	14	7	13	13	12	10	
\$50,000 - \$99,999	9	8	11	10	7	7	4	8	4	
\$100,000 - \$249,999	9	18	12	12	13	13	18	13	12	
\$250,000 - \$499,999	3	1	7	4	5	9	6	8	5	
\$500,000 +	1	1	2	2	5	3	2	2	7	
<b>State Total</b>	<b>36</b>	<b>40</b>	<b>47</b>	<b>42</b>	<b>37</b>	<b>45</b>	<b>43</b>	<b>43</b>	<b>38</b>	
No. of Faculty	78	78	82	81	80	76	68	67	67	
% of Faculty	46%	51%	57%	52%	46%	59%	63%	64%	57%	

Source: KSU, KU and WSU databases, 2000.

TABLE 35

**Distribution by Total Dollars Awarded to EPSCoR Faculty: Group II  
FY1994 - FY2000**

<b>Funding Range:</b>	<b>Number of EPSCOR Faculty Within Funding Range</b>						
<b>KSU</b>	<b>1994</b>	<b>1995</b>	<b>1996</b>	<b>1997</b>	<b>1998</b>	<b>1999</b>	<b>2000</b>
\$1 - \$49,999	0	7	2	0	2	2	0
\$50,000 - \$99,999	3	2	6	2	2	1	3
\$100,000 - \$249,999	6	6	5	8	7	8	6
\$250,000 - \$499,999	4	4	4	8	5	5	3
\$500,000 +	2	2	3	3	2	1	3
<b>KSU Total</b>	<b>15</b>	<b>21</b>	<b>20</b>	<b>21</b>	<b>18</b>	<b>17</b>	<b>15</b>
No. of Faculty	29	29	30	28	26	25	25
% of Faculty	52%	72%	67%	75%	69%	68%	60%
<b>KU</b>	<b>1994</b>	<b>1995</b>	<b>1996</b>	<b>1997</b>	<b>1998</b>	<b>1999</b>	<b>2000</b>
\$1 - \$49,999	4	4	4	4	5	0	6
\$50,000 - \$99,999	3	4	5	3	3	5	1
\$100,000 - \$249,999	2	4	1	2	7	9	7
\$250,000 - \$499,999	3	3	2	4	3	4	5
\$500,000 +	0	0	2	0	1	2	3
<b>KU Total</b>	<b>12</b>	<b>15</b>	<b>14</b>	<b>13</b>	<b>19</b>	<b>20</b>	<b>22</b>
No. of Faculty	36	36	36	36	34	31	31
% of Faculty	33%	42%	39%	36%	56%	65%	71%
<b>WSU</b>	<b>1994</b>	<b>1995</b>	<b>1996</b>	<b>1997</b>	<b>1998</b>	<b>1999</b>	<b>2000</b>
\$1 - \$49,999	4	5	4	6	2	3	1
\$50,000 - \$99,999	1	2	2	1	2	3	3
\$100,000 - \$249,999	1	2	0	1	2	1	3
\$250,000 - \$499,999	0	0	1	1	0	0	1
\$500,000 +	0	0	0	1	0	0	0
<b>WSU Total</b>	<b>6</b>	<b>9</b>	<b>7</b>	<b>10</b>	<b>6</b>	<b>7</b>	<b>8</b>
No. of Faculty	20	19	19	18	16	16	16
% of Faculty	30%	47%	37%	56%	38%	44%	50%
<b>STATE TOTAL</b>	<b>1994</b>	<b>1995</b>	<b>1996</b>	<b>1997</b>	<b>1998</b>	<b>1999</b>	<b>2000</b>
\$1 - \$49,999	8	16	10	10	9	5	7
\$50,000 - \$99,999	7	8	13	6	7	9	7
\$100,000 - \$249,999	9	12	6	11	16	18	16
\$250,000 - \$499,999	7	7	7	13	8	9	9
\$500,000 +	2	2	5	4	3	3	6
<b>State Total</b>	<b>33</b>	<b>45</b>	<b>41</b>	<b>44</b>	<b>43</b>	<b>44</b>	<b>45</b>
No. of Faculty	85	84	85	82	76	72	72
% of Faculty	39%	54%	48%	54%	57%	61%	63%

Source: KSU, KU and WSU databases, 2000.

TABLE 36

**Distribution by Total Dollars Awarded to EPSCoR Faculty: Group III  
FY1998 - FY2000**

Funding Range:	Number of EPSCoR Faculty Within Funding Range											
	KSU			KU			WSU			STATE		
	1998	1999	2000	1998	1999	2000	1998	1999	2000	1998	1999	2000
\$1 - \$49,999	1	3	2	0	0	3	1	1	3	2	4	8
\$50,000 - \$99,999	1	0	1	2	1	0	1	1	2	4	2	3
\$100,000 - \$249,999	1	3	3	4	4	1	3	2	4	8	9	8
\$250,000 - \$499,999	2	1	3	1	5	6	1	1	1	4	7	10
\$500,000 +	0	1	0	2	1	2	1	1	2	3	3	4
<b>Total</b>	<b>5</b>	<b>8</b>	<b>9</b>	<b>9</b>	<b>11</b>	<b>12</b>	<b>7</b>	<b>6</b>	<b>12</b>	<b>21</b>	<b>25</b>	<b>33</b>
No. of Faculty	17	17	17	25	25	25	20	20	20	62	62	62
% of Faculty	29%	47%	53%	36%	44%	48%	35%	30%	60%	34%	40%	53%

Source: KSU, KU and WSU databases, 2000.

TABLE 37

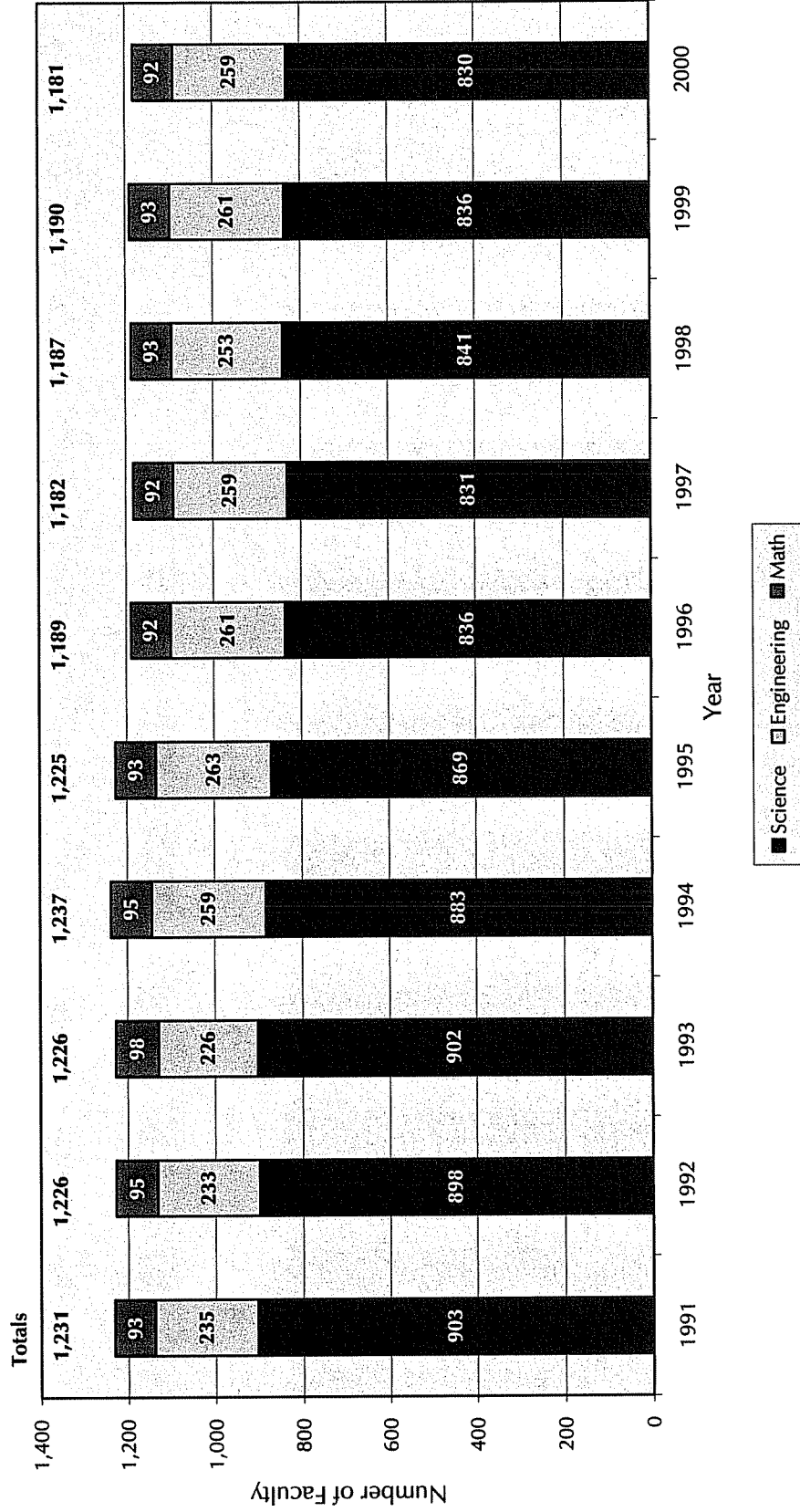
**Distribution by Total Dollars Awarded to EPSCoR Faculty: First Awards  
FY1995 - FY2000**

<b>Funding Range:</b>	<b>Number of EPSCoR Faculty Within Funding Range</b>					
<b>KSU</b>						
	<b>1995</b>	<b>1996</b>	<b>1997</b>	<b>1998</b>	<b>1999</b>	<b>2000</b>
\$1 - \$49,999	2	3	2	4	6	4
\$50,000 - \$99,999	1	3	0	3	2	6
\$100,000 - \$249,999	2	1	6	5	7	5
\$250,000 - \$499,999	0	0	1	1	2	1
\$500,000 +	0	0	0	1	0	0
<b>KSU Total</b>	<b>5</b>	<b>7</b>	<b>9</b>	<b>14</b>	<b>17</b>	<b>16</b>
No. of Faculty	7	11	15	21	24	26
% of Faculty	71%	64%	60%	67%	71%	62%
<b>KU</b>						
	<b>1995</b>	<b>1996</b>	<b>1997</b>	<b>1998</b>	<b>1999</b>	<b>2000</b>
\$1 - \$49,999	1	5	1	1	0	3
\$50,000 - \$99,999	0	2	3	1	3	3
\$100,000 - \$249,999	0	0	2	2	3	2
\$250,000 - \$499,999	0	0	0	5	1	5
\$500,000 +	0	0	0	0	2	1
<b>KU Total</b>	<b>1</b>	<b>7</b>	<b>6</b>	<b>9</b>	<b>9</b>	<b>14</b>
No. of Faculty	6	9	12	14	15	19
% of Faculty	17%	78%	50%	64%	60%	74%
<b>WSU</b>						
	<b>1995</b>	<b>1996</b>	<b>1997</b>	<b>1998</b>	<b>1999</b>	<b>2000</b>
\$1 - \$49,999	0	2	1	1	2	2
\$50,000 - \$99,999	0	0	0	0	0	1
\$100,000 - \$249,999	0	0	0	1	1	2
\$250,000 - \$499,999	0	0	0	0	0	0
\$500,000 +	0	0	0	0	0	0
<b>WSU Total</b>	<b>0</b>	<b>2</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>5</b>
No. of Faculty	2	4	4	3	6	7
% of Faculty	0%	50%	25%	67%	50%	71%
<b>STATE TOTAL</b>						
	<b>1995</b>	<b>1996</b>	<b>1997</b>	<b>1998</b>	<b>1999</b>	<b>2000</b>
\$1 - \$49,999	4	9	6	8	6	5
\$50,000 - \$99,999	1	5	3	4	5	10
\$100,000 - \$249,999	2	1	8	8	11	9
\$250,000 - \$499,999	0	0	1	6	3	6
\$500,000 +	0	0	0	1	2	1
<b>State Total</b>	<b>6</b>	<b>16</b>	<b>16</b>	<b>25</b>	<b>29</b>	<b>35</b>
No. of Faculty	15	24	31	38	45	52
% of Faculty	40%	67%	52%	66%	64%	67%

Source: KSU, KU and WSU databases, 2000.

**Figures for the Kansas NSF EPSCoR Assessment 2000**

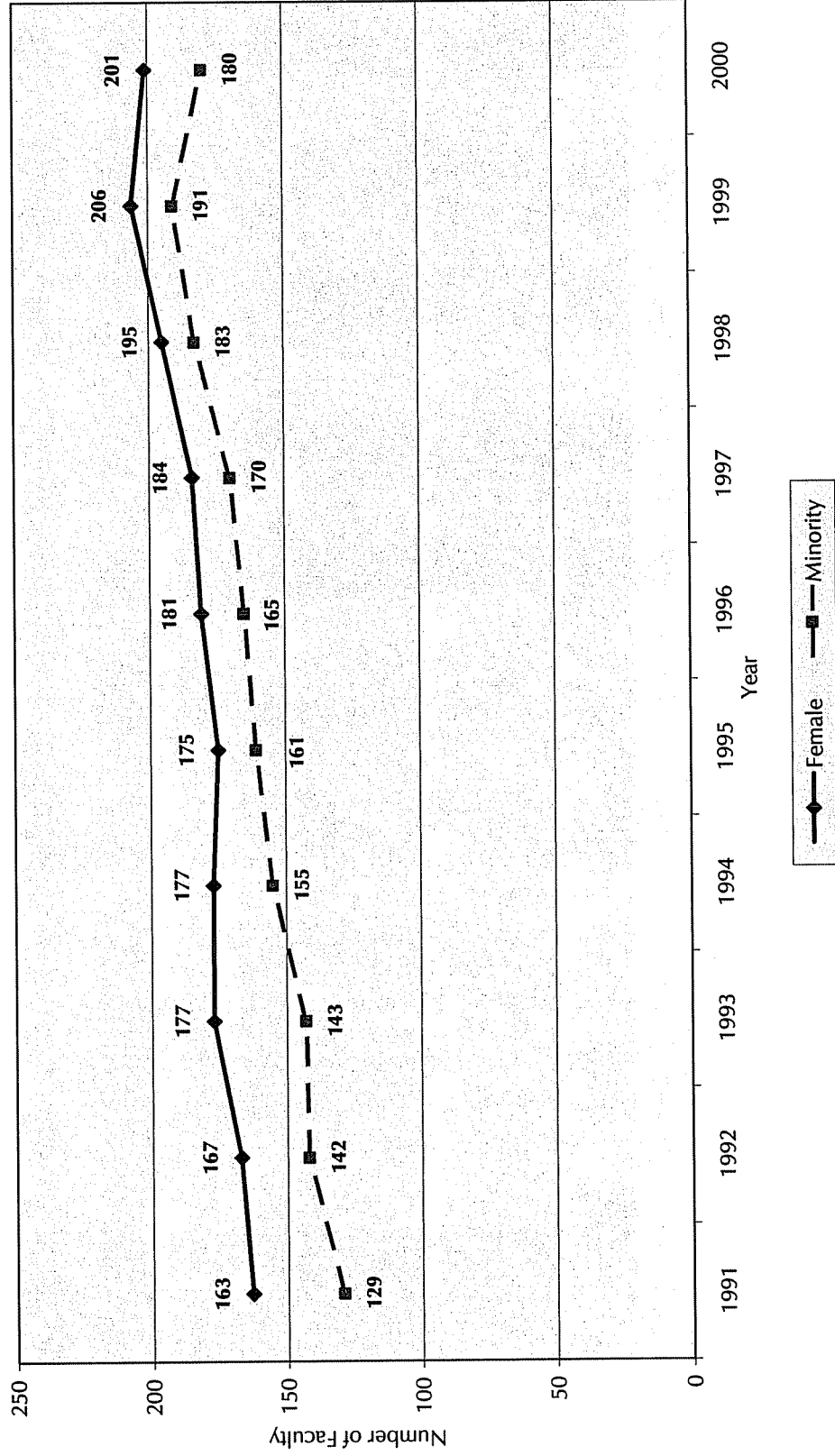
FIGURE 1  
**Science, Engineering, and Math Faculty**  
**KSU, KU and WSU: 1991 - 2000**



Source: KSU, KU and WSU databases, 2000.

FIGURE 2

### Science, Engineering, and Math Faculty: Female and Minority KSU, KU and WSU: 1991 - 2000



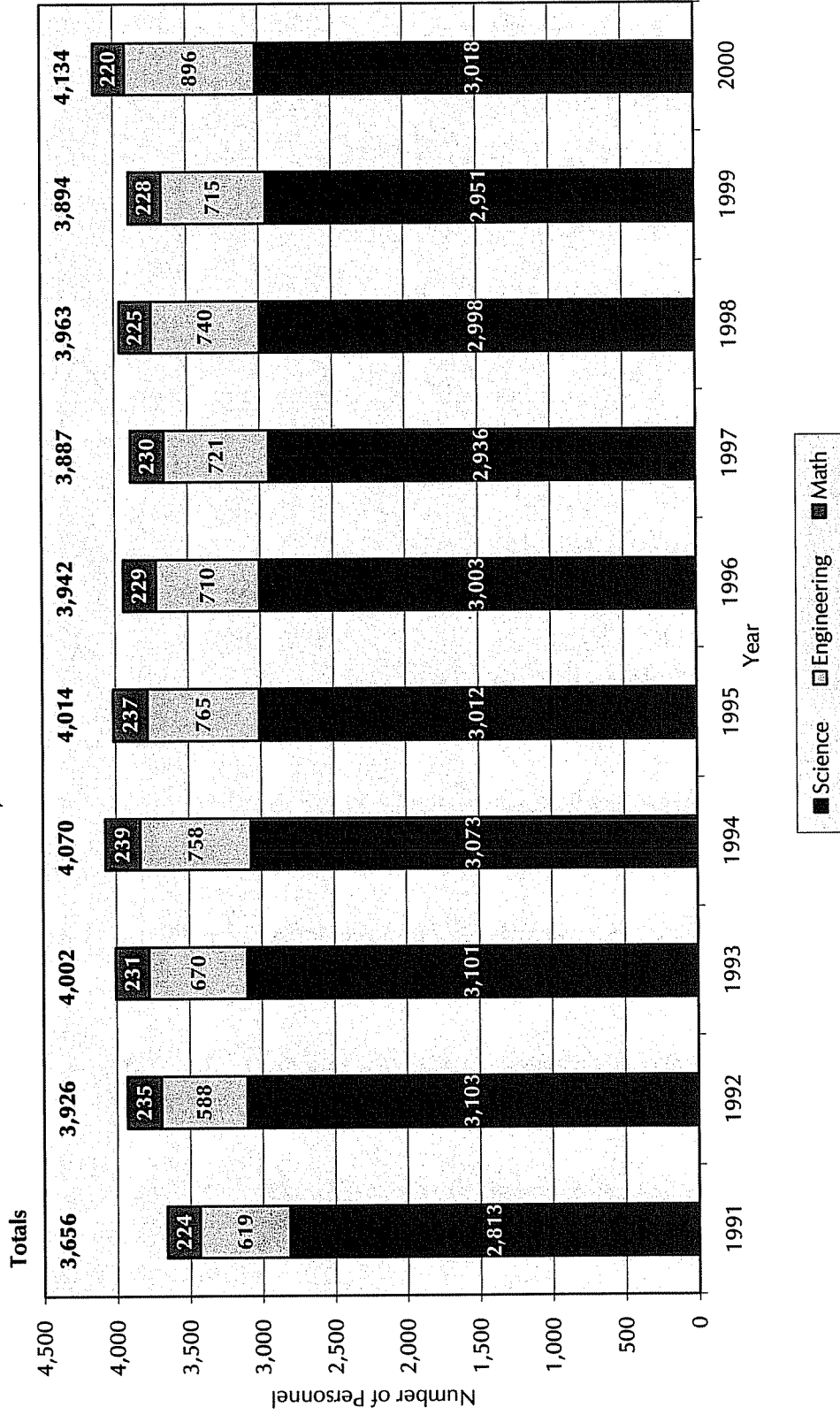
Source: KSU, KU and WSU databases, 2000.

Prepared by PRI/KU for Kansas NSF EPSCoR, April 2001.



FIGURE 3

### Science, Engineering, and Math Personnel KSU, KU and WSU: 1991 - 2000

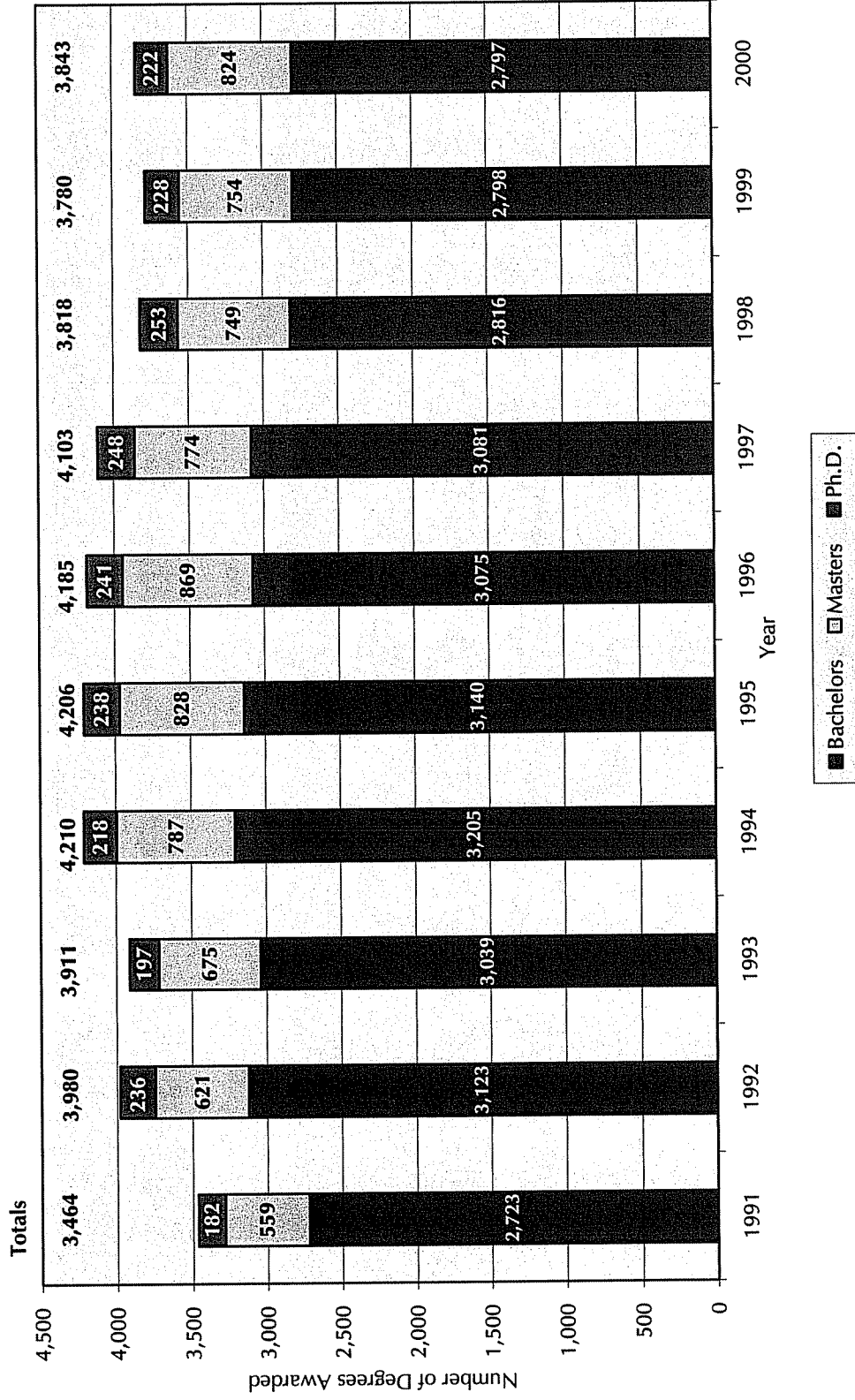


Source: KSU, KU and WSU databases, 2000.

Prepared by PRI/KU for Kansas NSF EPSCoR, April 2001.

FIGURE 4

**Science, Engineering, and Math Degrees Awarded  
KSU, KU and WSU: 1991 - 2000**

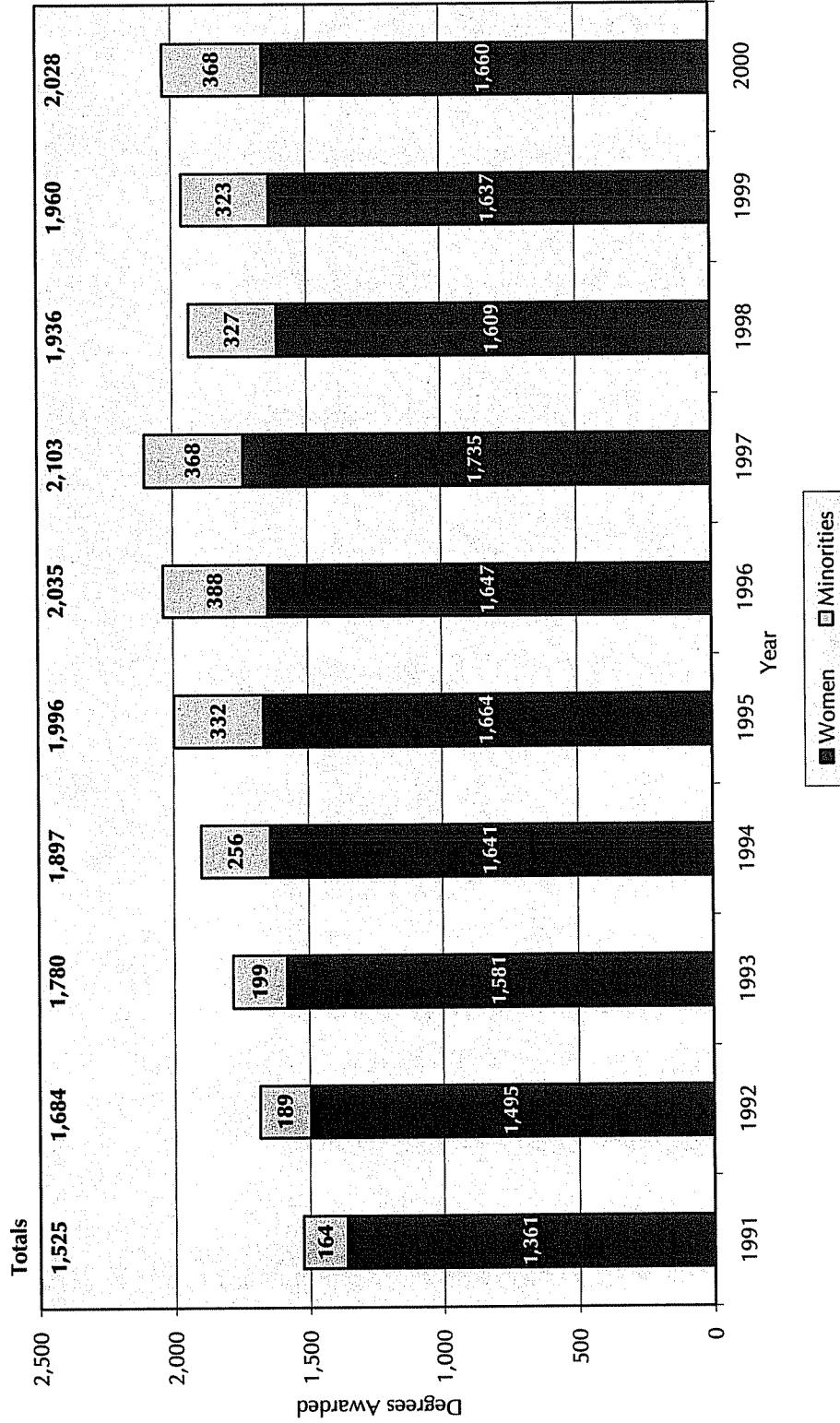


Source: KSU, KU and WSU databases, 2000.

Prepared by PRI/KU for Kansas NSF EPSCoR, April 2001.

FIGURE 5

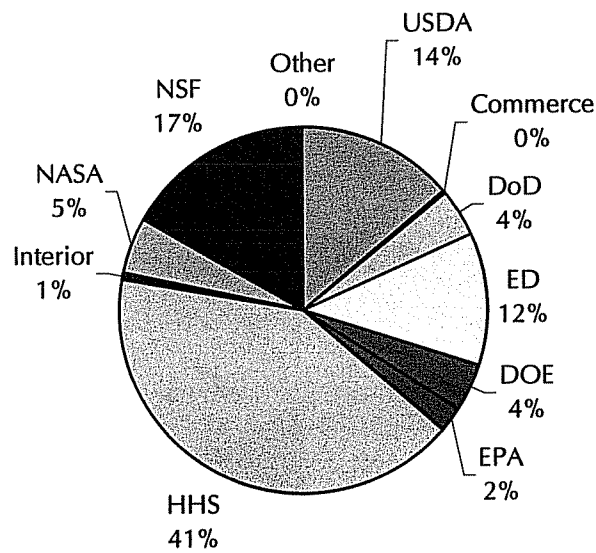
**Science, Engineering and Math Degrees Awarded to Women and Minorities  
KSU, KU and WSU: 1991 - 2000**



Source: KSU, KU and WSU databases, 2000.

FIGURE 6

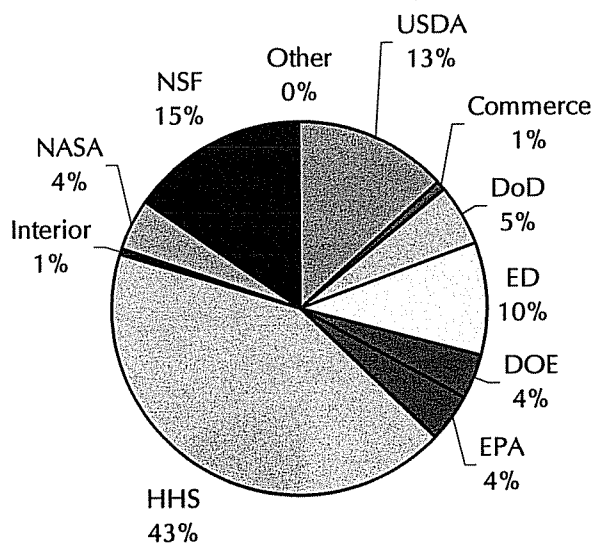
**Federal R&D Academic Obligations  
in Kansas, by Agency  
FY 1999 Total = \$109,403,000**



Source: NSF/SRS, Survey of Federal Science and Engineering Support, FY1999, Table B-9.

FIGURE 7

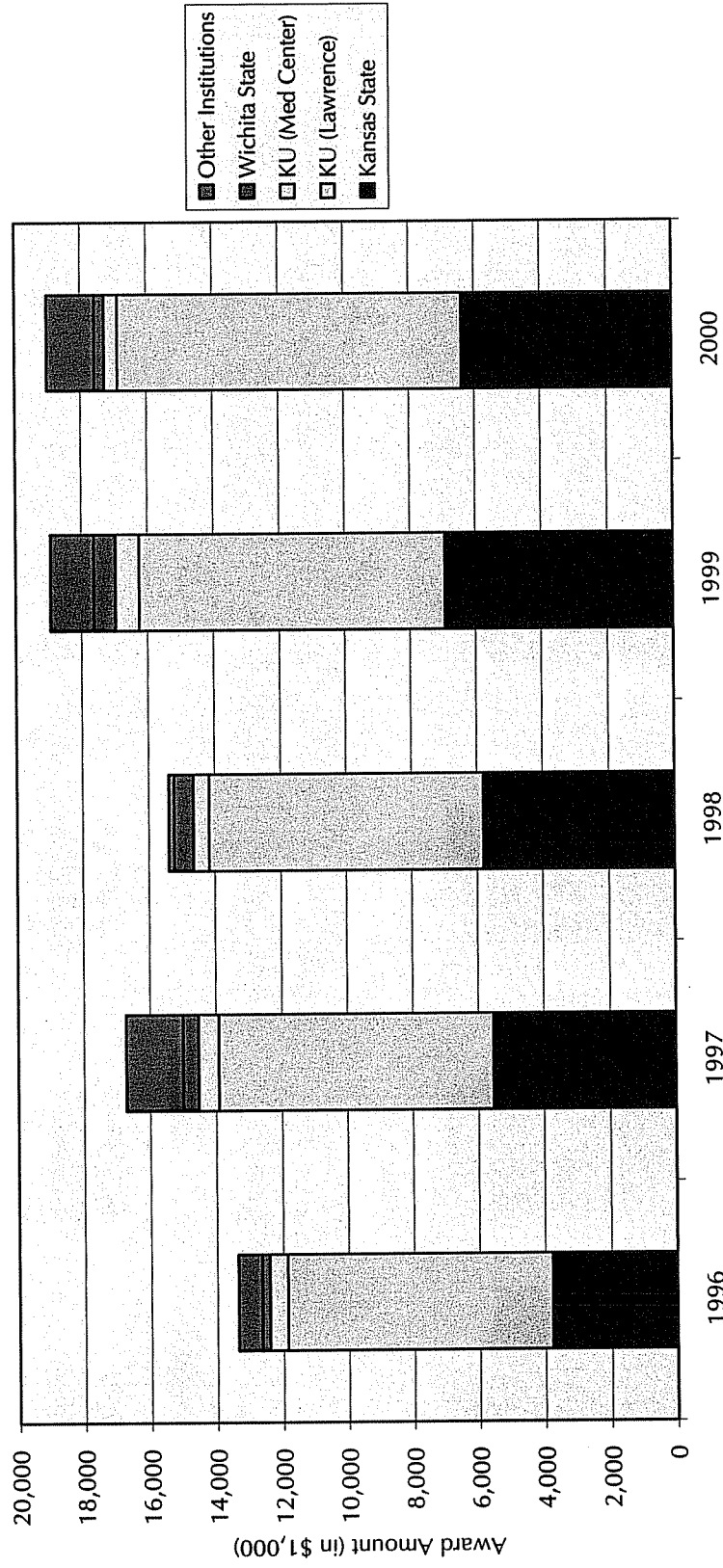
**Federal R&D Academic Obligations  
in Kansas, by Agency  
FY 1998 Total = \$101,723,000**



Source: NSF/SRS, Survey of Federal Science and Engineering Support, FY1998, Table B-9.

FIGURE 8

### NSF Awards by Institution FY1996 - FY2000

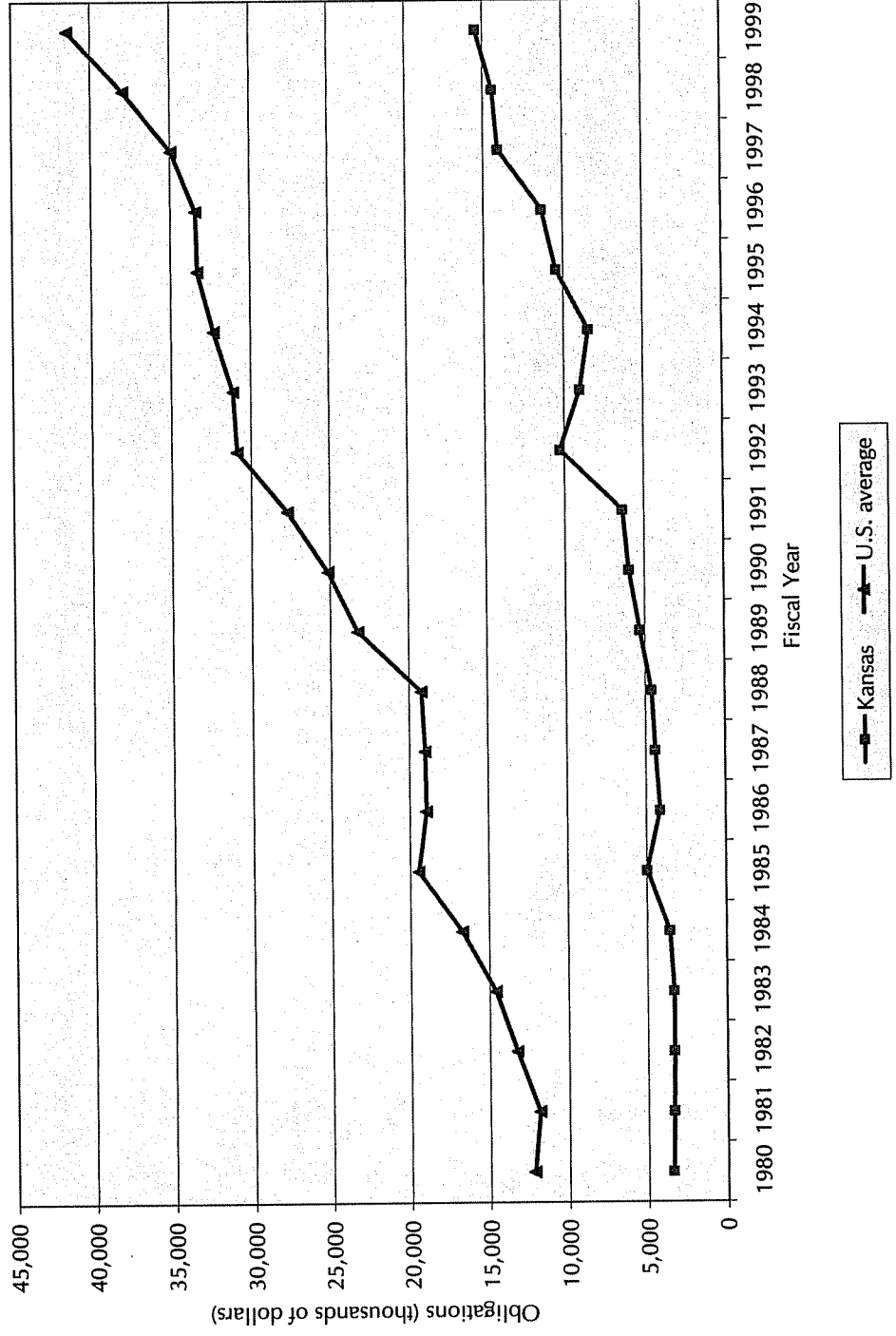


Source: NSF, Award List, April 30, 2001.

Prepared by PRI/KU for Kansas NSF EPSCoR, April 2001.

FIGURE 9

### NSF Academic R&D Obligations FY1980 - FY1999

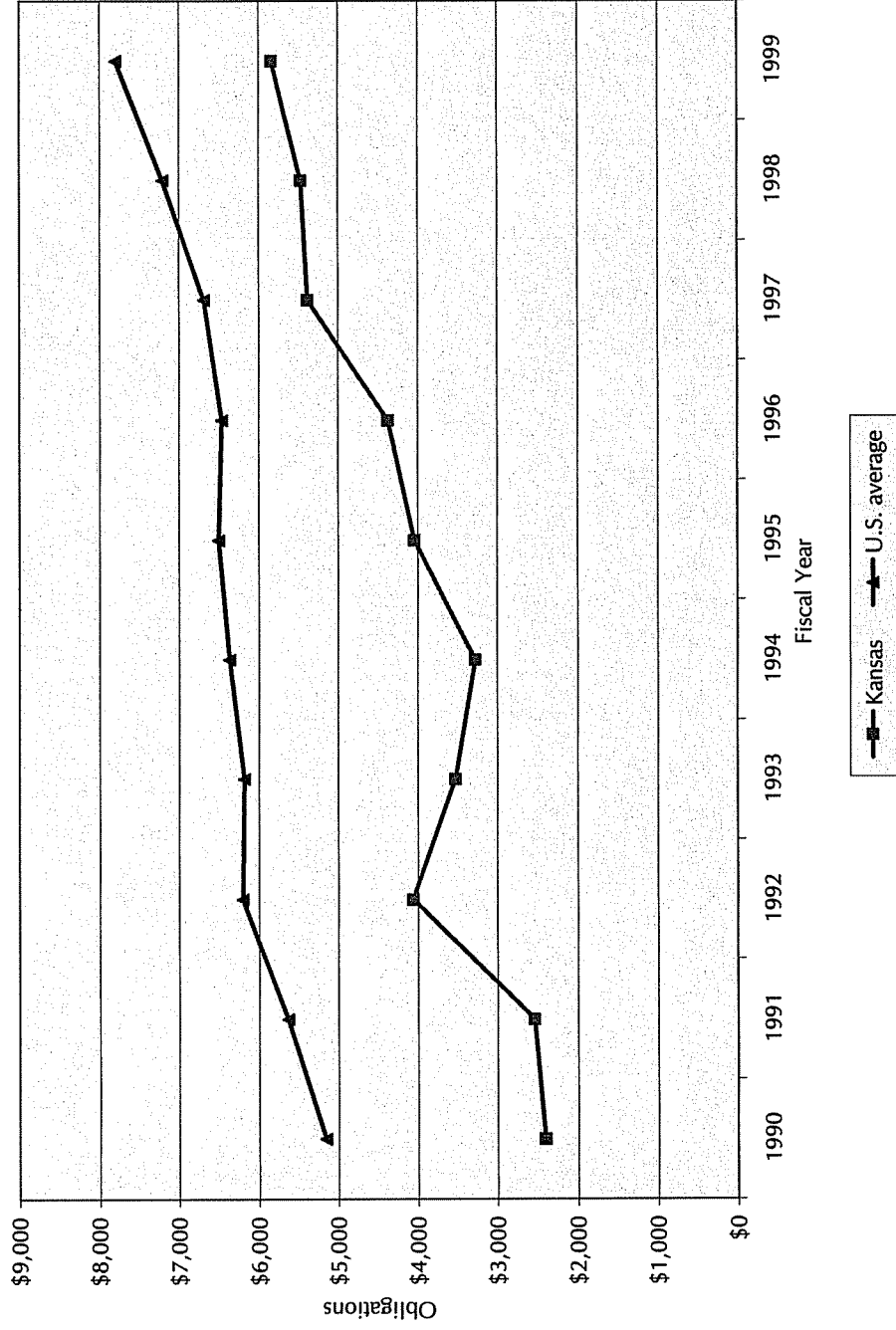


Source: NSF WebCASPARD Database System, April 6, 2001.

Prepared by PRI/KU for Kansas NSF EPSCoR, April 2001.

FIGURE 10

### NSF Academic R&D Obligations Per 1,000 Population FY1990 - FY1999

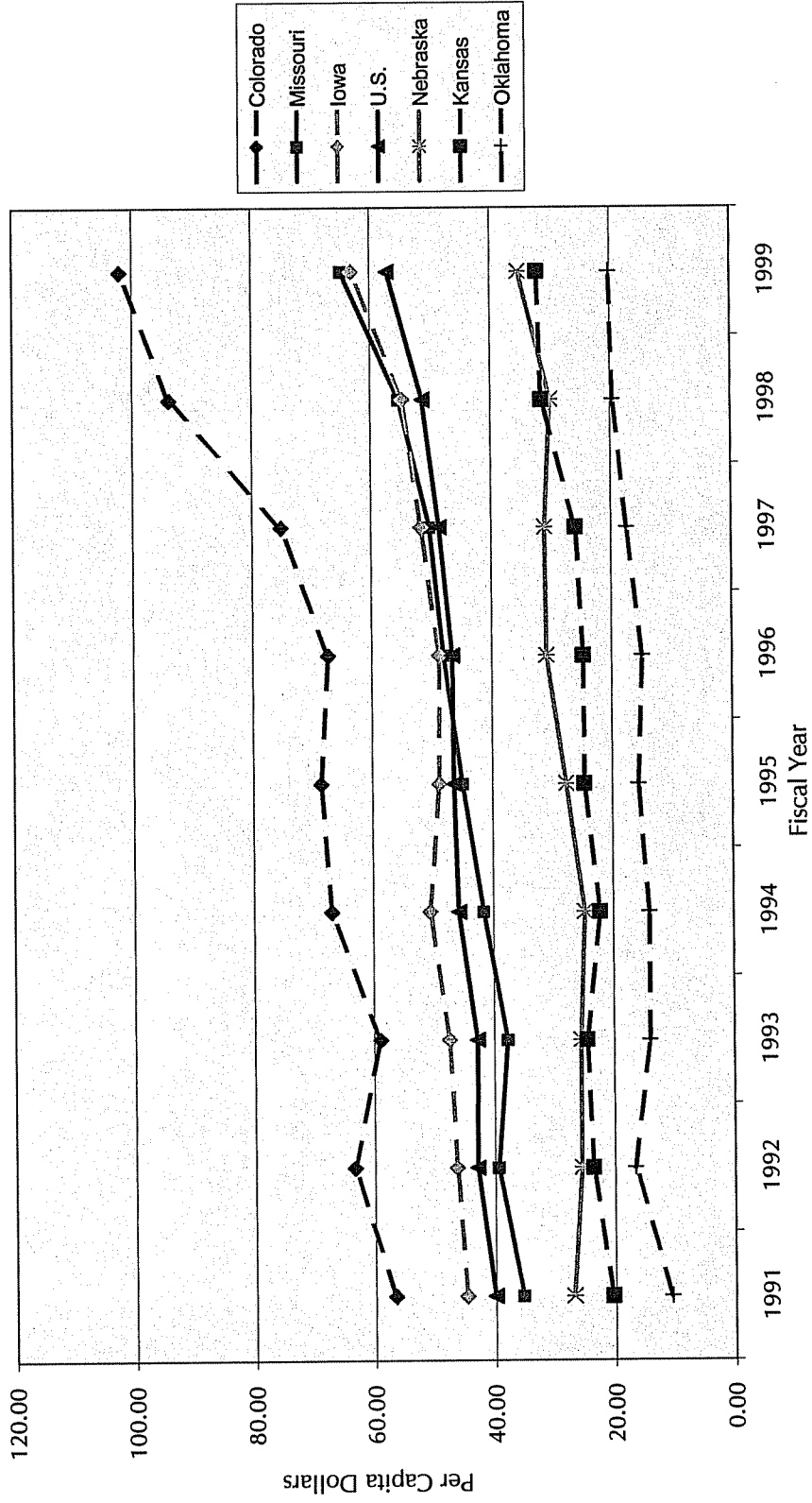


Source: NSF WebCASPARD Database System, April 6, 2001 and U.S. Bureau of the Census.



FIGURE 11

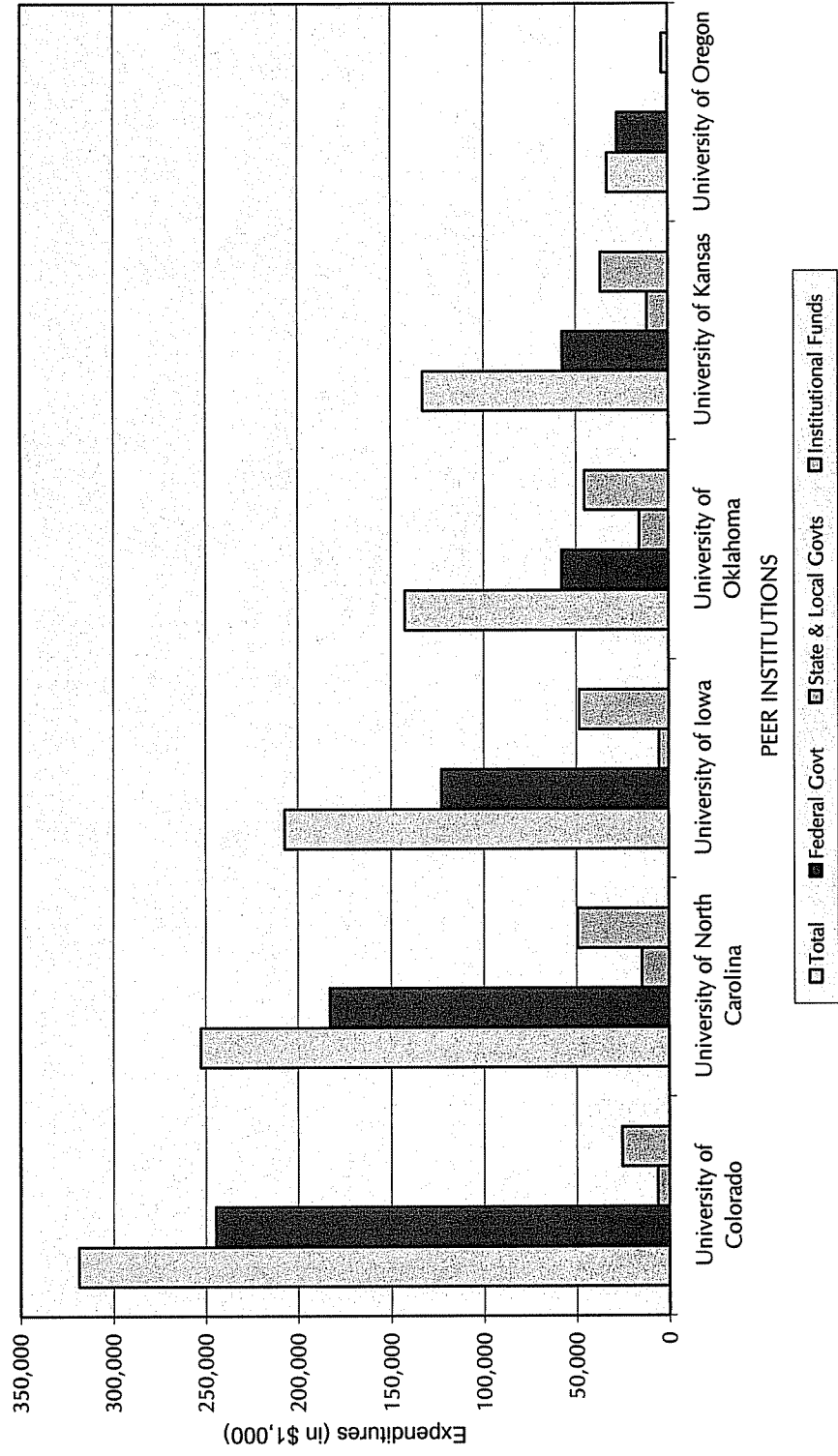
**Per Capita Federal R&D Academic Obligations  
for U.S., Kansas, and Surrounding States:  
FY1991 - FY1999**



Source: NSF/SRS Survey, FY1999 and U.S. Bureau of the Census, Population Estimates.

FIGURE 12

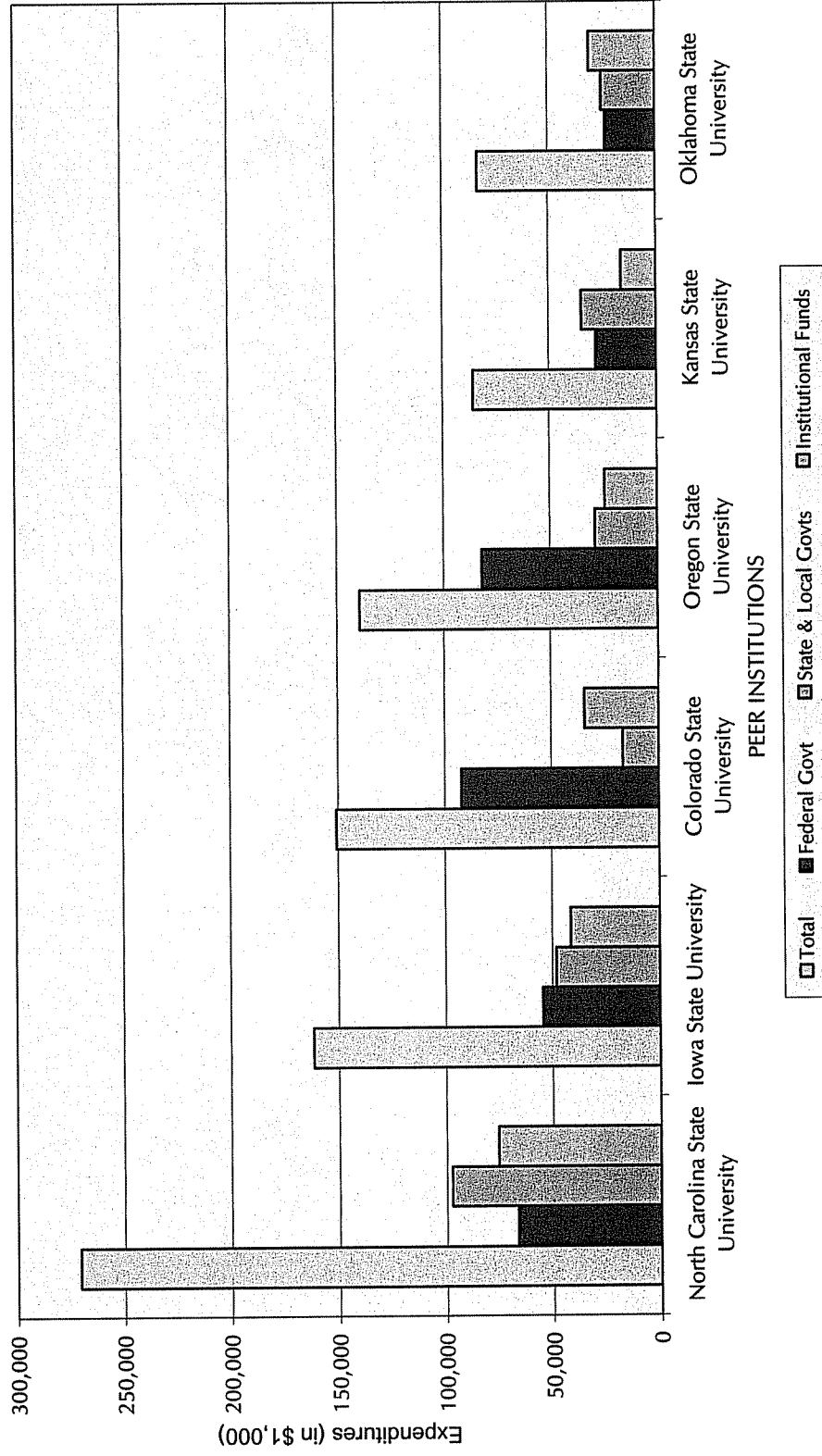
**R&D Expenditures by Source: FY1999**  
**KU & Peer Institutions**



Source: NSF/SRS Survey, FY1999.

FIGURE 13

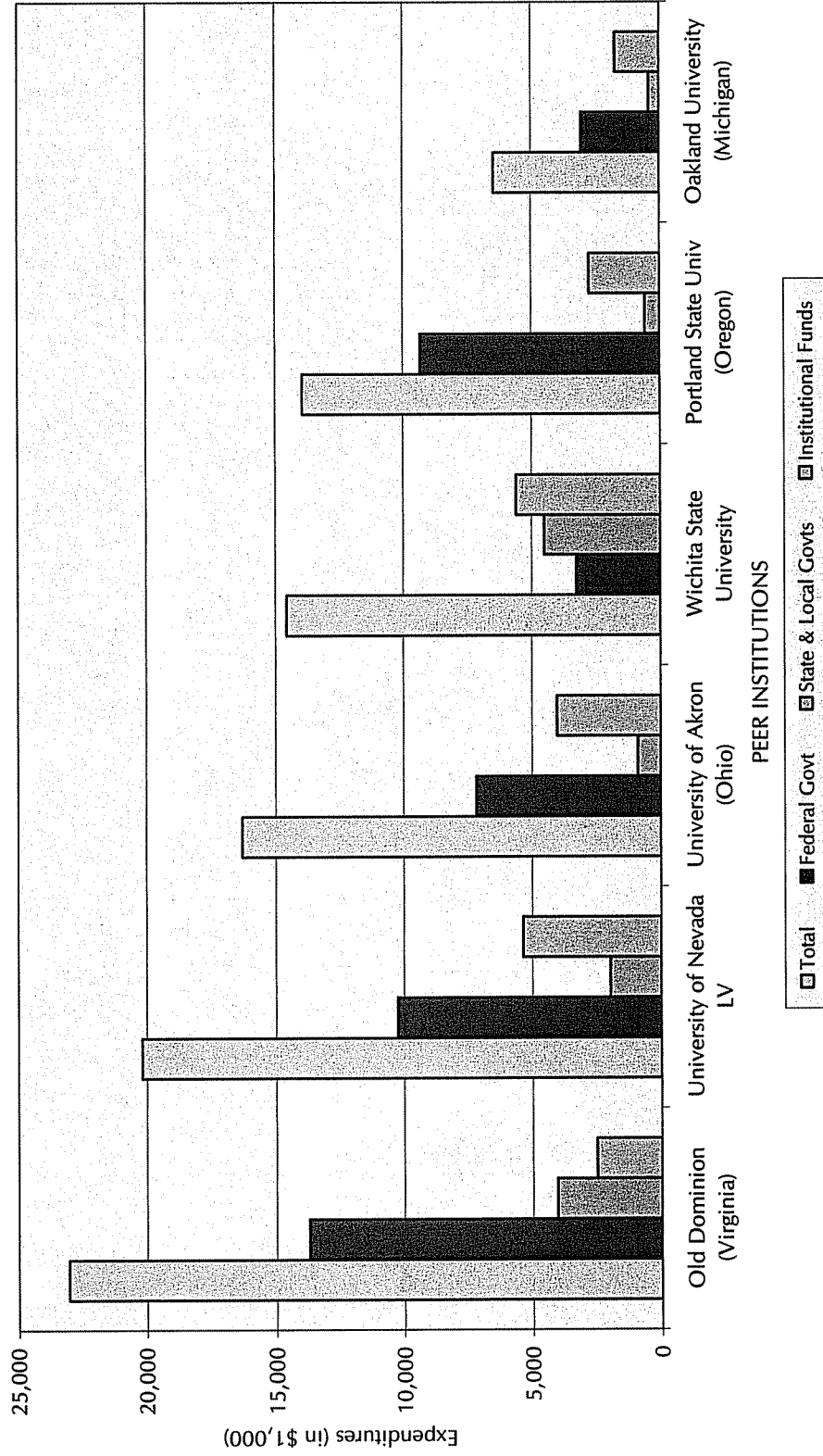
**R&D Expenditures by Source: FY1999**  
**KSU & Peer Institutions**



Source: NSF/SRS Survey, FY1999.

FIGURE 14

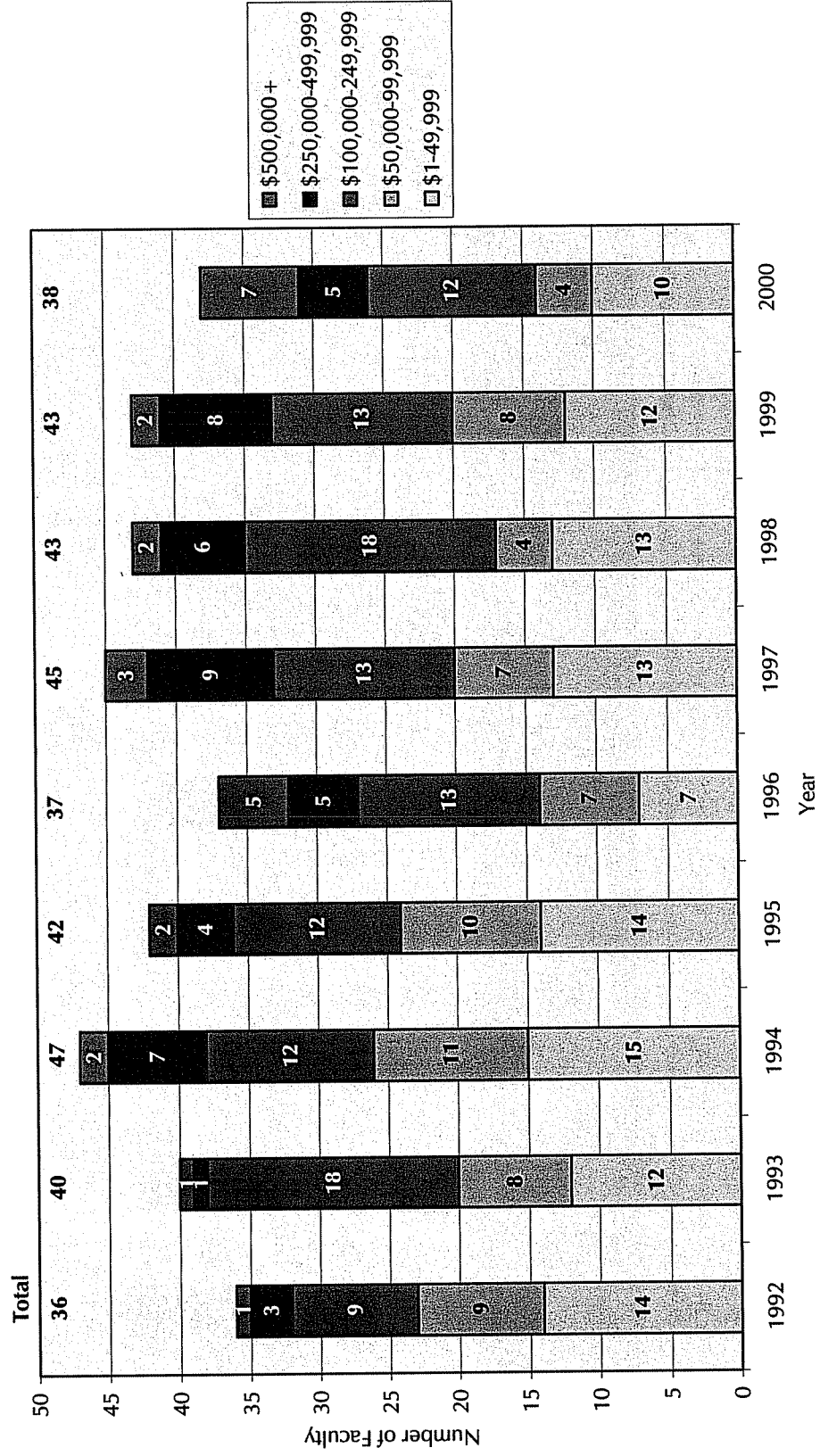
**R&D Expenditures by Source: FY1999**  
**WSU & Peer Institutions**



Source: NSF/SRS Survey, FY1999.

FIGURE 15

**Distribution of Awards to Group I  
Number of EPSCoR Faculty in Each Funding Range:  
FY1992 - FY2000**

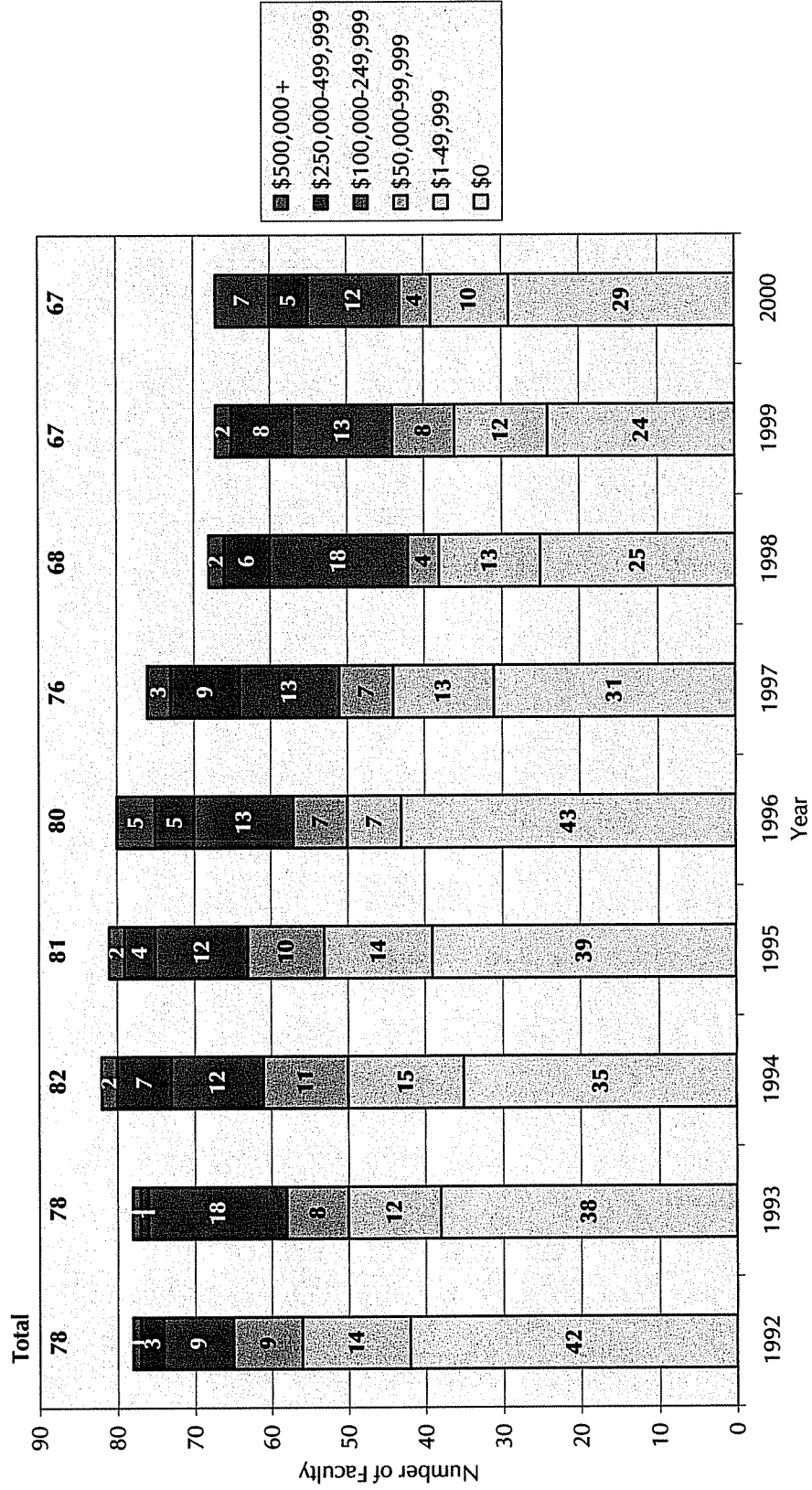


Source: KSU, KU and WSU databases, 2000.

Prepared by PRI/KU for Kansas NSF EPSCoR, April 2001.

FIGURE 16

**Distribution of Awards to Group I  
Number of EPSCoR Faculty in Each Funding Range:  
FY1992 - FY2000  
(Includes Faculty that Received No Award)**

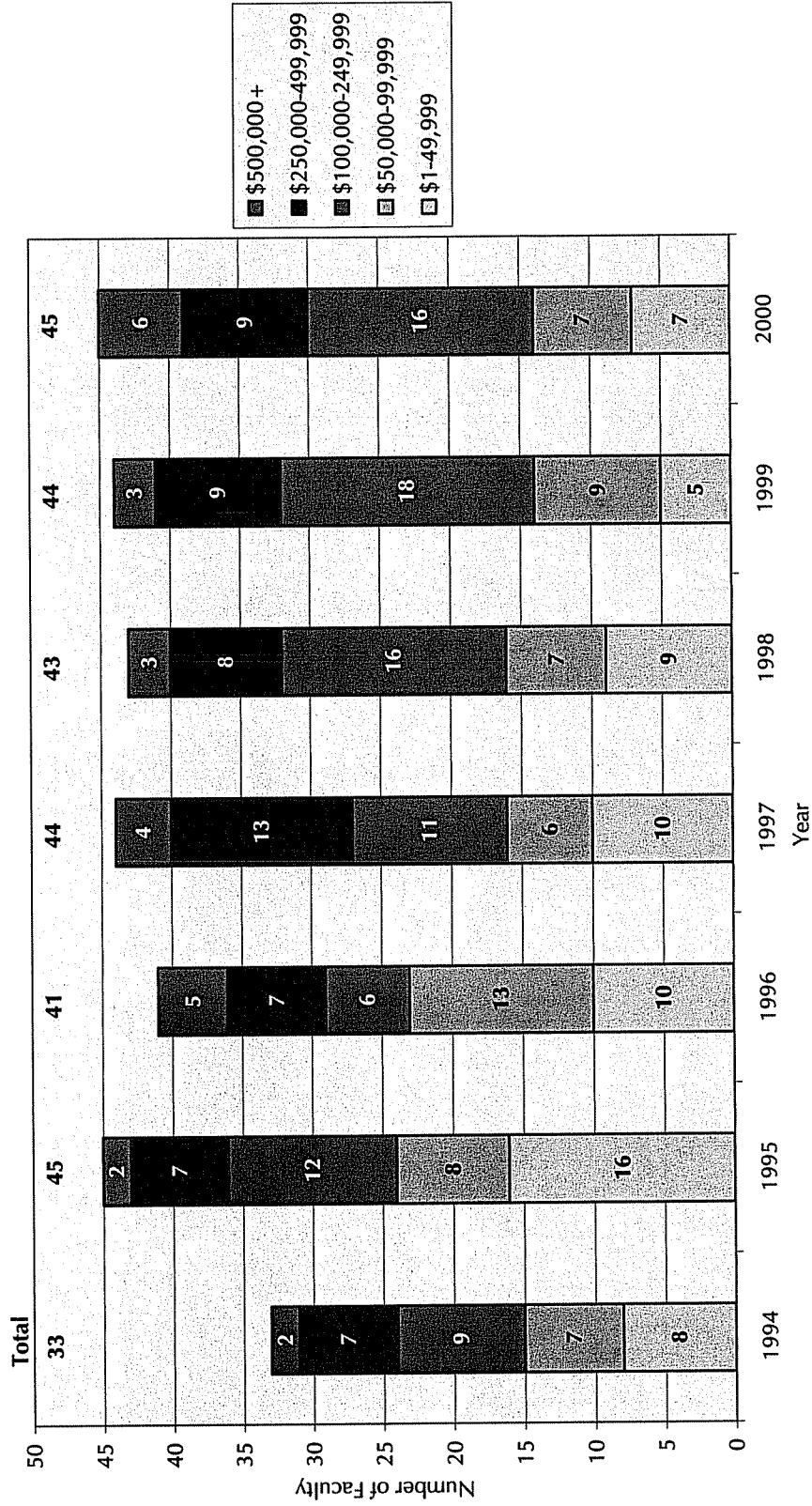


Source: KSU, KU and WSU databases, 2000.

Prepared by PRI/KU for Kansas NSF EPSCoR, April 2001.

FIGURE 17

**Distribution of Awards to Group II  
Number of EPSCoR Faculty in Each Funding Range:  
FY1994 - FY2000**

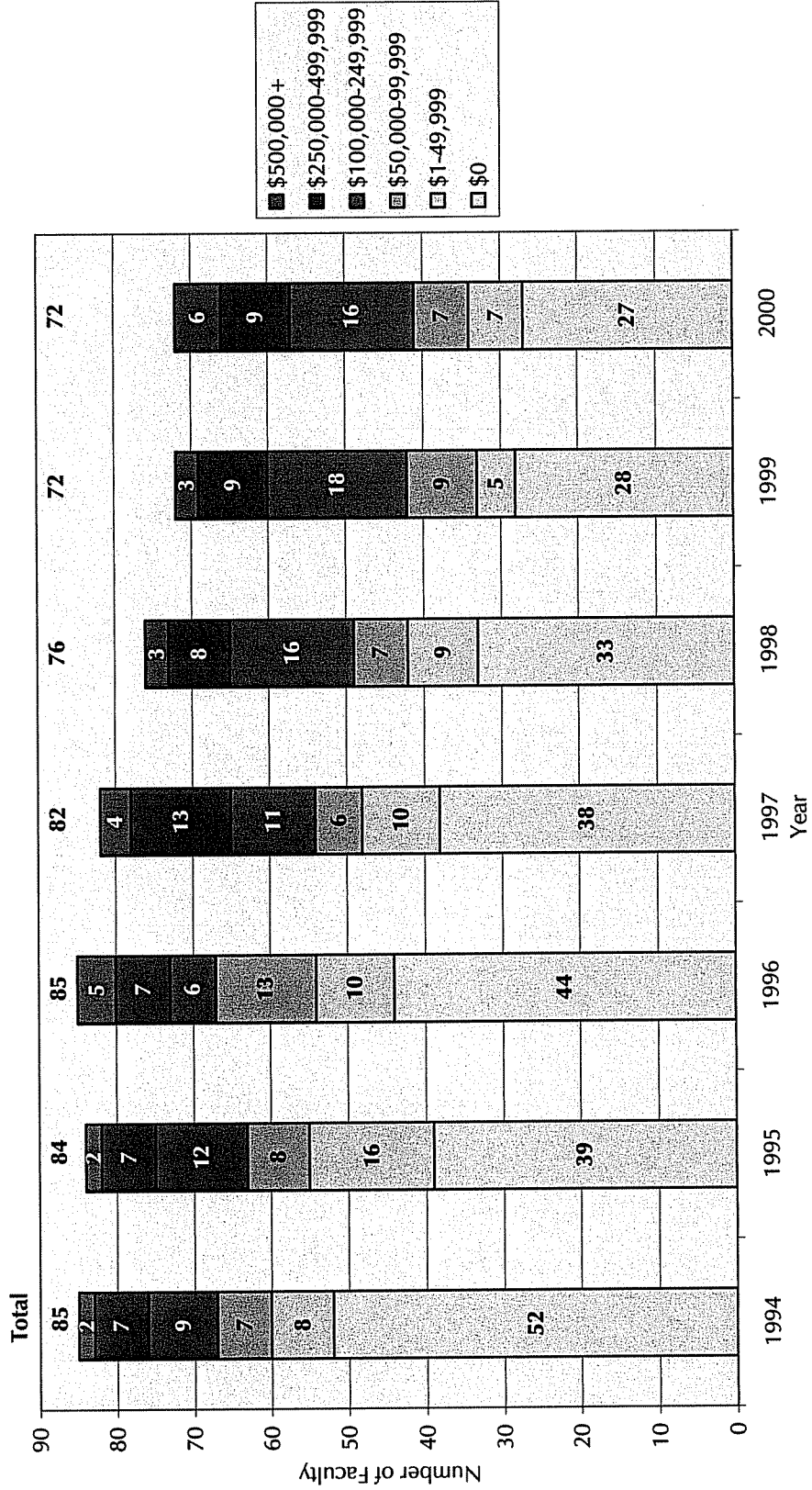


Source: KSU, KU and WSU databases, 2000.

Prepared by PRI/KU for Kansas NSF EPSCoR, April 2001.

FIGURE 18

**Distribution of Awards to Group II  
Number of EPSCoR Faculty in Each Funding Range:  
FY1994 - FY2000  
(Includes Faculty that Received No Award)**



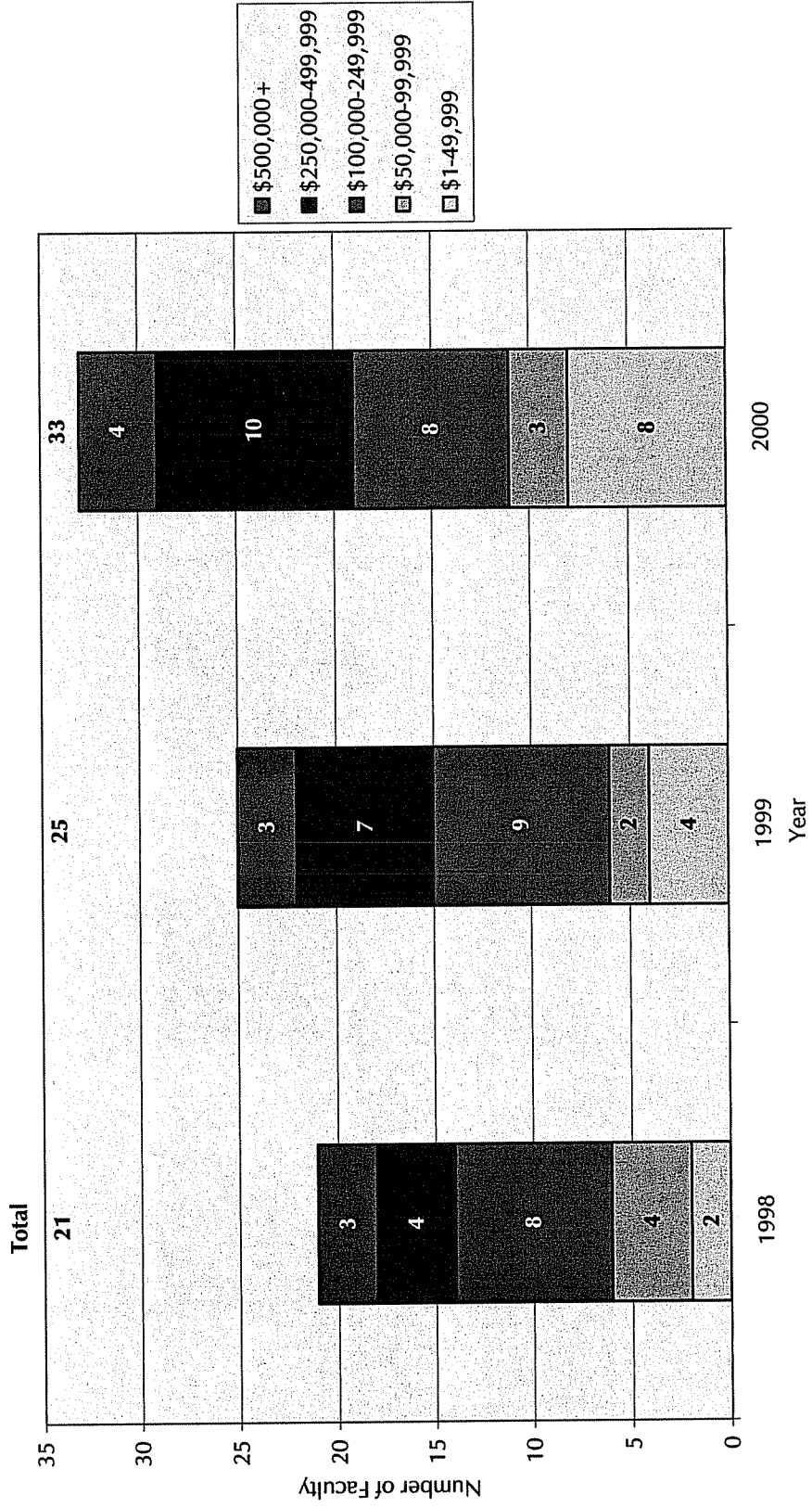
Source: KSU, KU and WSU databases, 2000.

Prepared by PRI/KU for Kansas NSF EPSCoR, April 2001.



FIGURE 19

**Distribution of Awards to Group III  
Number of EPSCoR Faculty in Each Funding Range:  
FY1998 - FY2000**

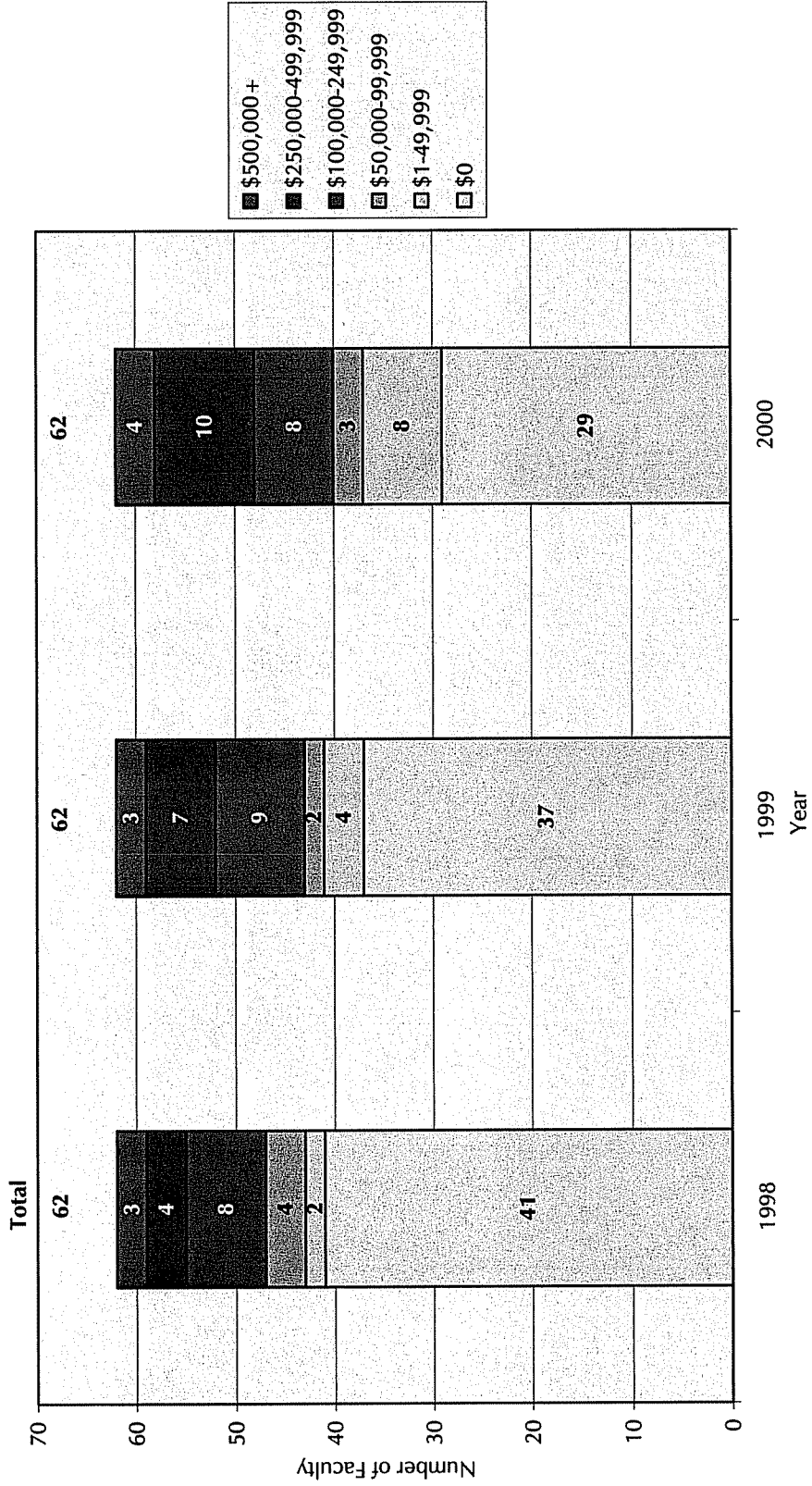


Source: KSU, KU and WSU databases, 2000.

Prepared by PR/KU for Kansas NSF EPSCoR, April 2001.

FIGURE 20

**Distribution of Awards to Group III  
Number of EPSCoR Faculty in Each Funding Range:  
FY1998 - FY2000  
(Includes Faculty that Received No Award)**

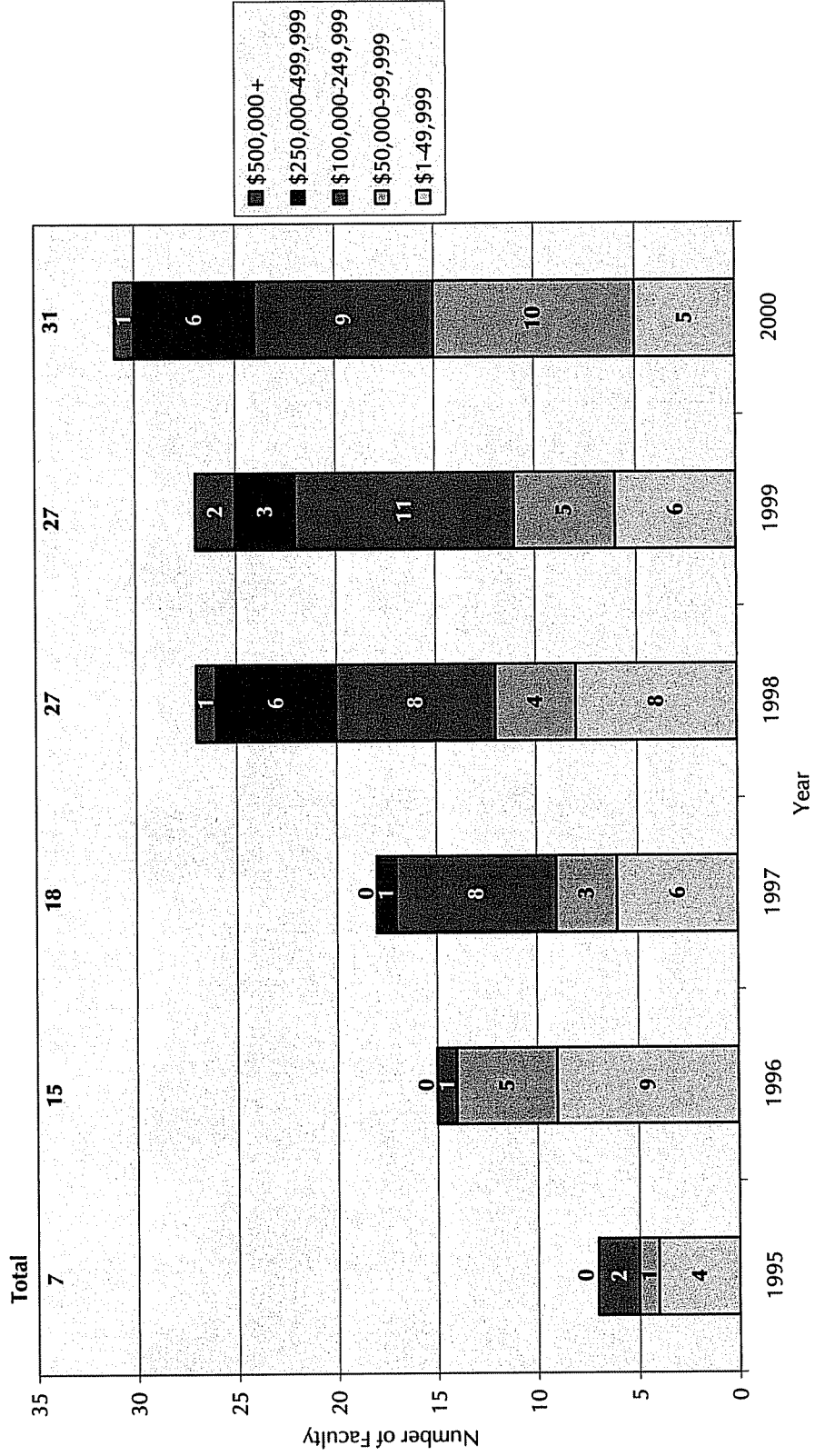


Source: KSU, KU and WSU databases, 2000.

Prepared by PRI/KU for Kansas NSF EPSCoR, April 2001.

FIGURE 21

**Distribution of Awards to First Award Group  
Number of EPSCoR Faculty in Each Funding Range:  
FY1995 - FY2000**

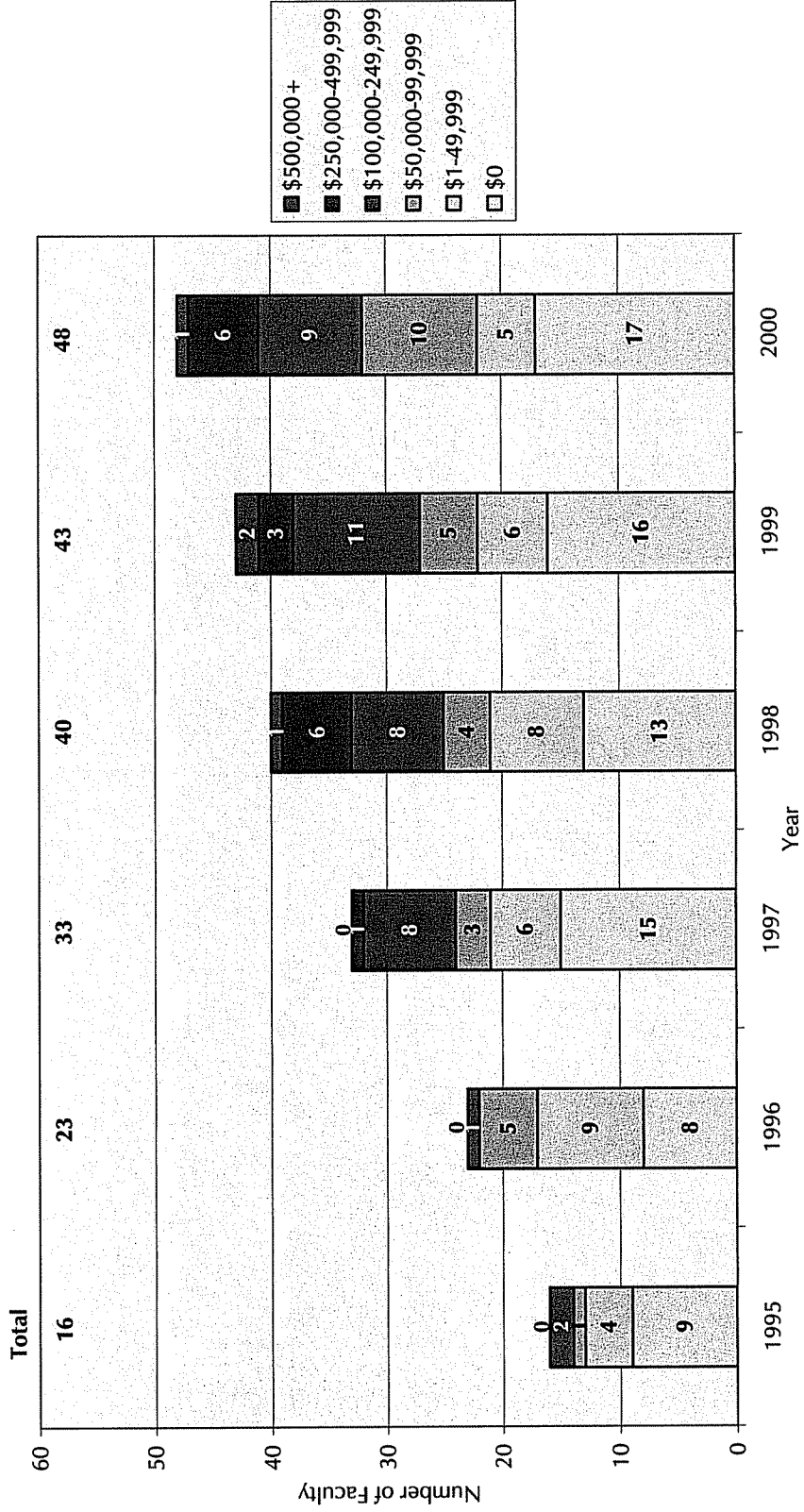


Source: KSU, KU and WSU databases, 2000.

Prepared by PRI/KU for Kansas NSF EPSCoR, April 2001.

FIGURE 22

**Distribution of Awards to First Award Group  
Number of EPSCoR Faculty in Each Funding Range:  
FY1995 - FY2000  
(Includes Faculty that Received No Award)**

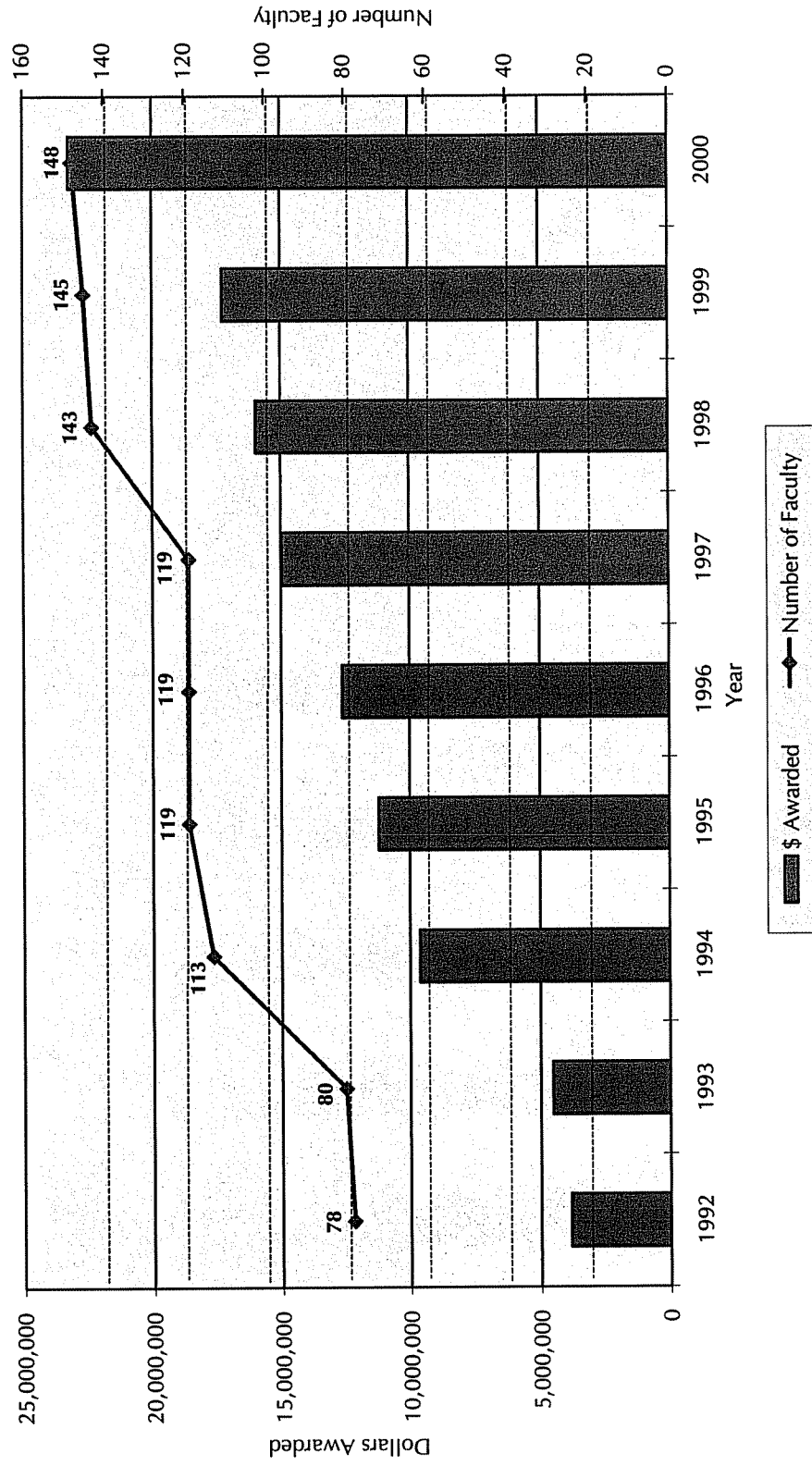


Source: KSU, KU and WSU databases, 2000.

Prepared by PRI/KU for Kansas NSF EPSCoR, April 2001.

FIGURE 23

**EPSCoR Funded Faculty at KSU, KU & WSU  
Dollars Awarded to Group I, II & III  
FY1992 - FY2000**



Source: KSU, KU and WSU databases, 2000.

## **APPENDIX A**

### **DEPARTMENTS INCLUDED IN THE DATABASE**

## DEPARTMENTS/UNITS INCLUDED IN THE DATABASE KSU

### Science

Animal Science & Industry  
Agronomy  
Biochemistry  
Entomology  
Grain Science  
Horticulture, Forestry &  
Recreational Resources  
Plant Pathology  
Biology  
Chemistry  
Geology  
Physics  
Political Science  
Psychology  
Sociology, Anthropology &  
Social Work  
Statistics  
Economics  
Geography  
Foods & Nutrition  
Anatomy & Physiology  
Clinical Sciences  
Pathology/Microbiology (Lab Medicine)  
Diagnostic Medicine/Pathobiology

### Math

### Engineering

Agricultural (Biological & Agricultural)  
Architectural  
Chemical  
Civil  
Computer and Information Science  
Electrical & Computer  
Industrial & Manufacturing Systems  
Mechanical  
Nuclear

**DEPARTMENTS/UNITS INCLUDED IN THE DATABASE  
KU (Lawrence Campus)**

**Science**

Academic Computing  
 Animal Care  
 Anthropology  
 Anthropology Museum  
 Biological Sciences  
   Biochemistry  
   Biology  
   Botany  
   Entomology  
   ~~Environmental Studies~~  
     *(now Interdispl. Environ. Studies)*  
   Microbiology  
   Physiology & Cell Biology  
   Systematics & Ecology  
 Biochem Research Service Lab  
~~Biomedical Research~~  
 Biological Survey  
 Bureau of Child Research/Life Span  
   Institute  
 Cartographic Lab  
 Chemistry  
 Child Development Lab  
~~Computer Science~~ *(to Engineering, 1994)*  
 Center for Bioanalytical Research  
 Center for Biomedical Research  
 Center for Drug Delivery  
 Center for Neurobiol & Immunology  
~~Early Childhood Institute~~  
 Economics  
~~Entomology Museum~~  
 Experimental & Applied Ecology  
 Geography  
 Geology  
 Gerontology Center  
 Herbarium  
 Higuchi Bioscience Centers  
 Human Development & Family Life  
 Institute for Public Policy & Business  
   Res *(now Policy Research Institute)*  
 Interdisciplinary Environ. Studies

~~Kansas Biological Survey~~  
 Kansas Geological Survey  
 Mass Spectrometer Lab  
 Medicinal Chemistry  
~~Microbiology~~ *(to Biological Sciences)*  
 Museum Natural History  
~~Museum Inv. Paleontol.~~  
 Natural Heritage Inventory  
 NMR Lab  
 Paleontological Institute  
 Pharmaceutical Chemistry  
 Pharmacology & Toxicology  
 Pharmacy Practice  
 Physics & Astronomy  
 Psychology  
 Science Instrument Lab  
 Sociology

**Math**

**Engineering**

Aerospace  
 Applied Remote Sensing Program  
 Architectural  
 CRINC  
 Chemical & Petroleum  
 Civil  
 Center for Energy Res/Dev  
 Center for Computer Aided  
   Systems (CECASE)  
 Electrical Engineering &  
   Computer Science  
   Engineering Management Program  
 Information & Telecommunication  
 Tech Center  
 Mechanical  
~~Space Technology Center~~  
 Tertiary Oil Recovery  
 Transportation Res. Center  
 Water Resources Institute



## DEPARTMENTS/UNITS INCLUDED IN THE DATABASE WSU

### Science

~~Curriculum & Instruction~~ (deleted in 1994)  
~~Industrial Technology~~  
Communicative Disorders  
Biological Sciences  
Chemistry  
Geology  
Computer Science  
Physics  
Psychology  
Anthropology  
Clinical Sciences  
~~Health Adm. & Gerontol.~~  
Nursing  
Dental Hygiene  
Respiratory Therapy  
Medical Technology  
~~Gerontology Ctr.~~  
Physical Therapy  
Physician Assistant  
Physical Therapist Assistant Program (added in 1998)  
Public Health Sciences (added in 1998)  
Masters of Public Health (added in 1998)

### Math

### Engineering

Aerospace  
Electrical and Computer (formerly Electrical)  
Industrial and Manufacturing (formerly Industrial)  
Mechanical  
NIAR – Shop (formerly Special Projects)  
NIAR - Wind Tunnel (formerly Wind Tunnel)  
NIAR

**APPENDIX B**

**NSF EPSCoR FACULTY**

## EPSCoR FACULTY: GROUP I

### KSU

~~Banks, M.~~ (1997)  
~~Borovik, A.~~ (1996)  
Chakrabarti, A.  
Collinson, M.  
Consigli, R.  
~~Dawes, W.~~ (1997)  
Dodds, W.  
Edgar, J.  
Erickson, L.  
Glasgow, L.  
~~Govindaraju, R.~~  
(1997)  
Jiang, H.  
Klabunde, K.  
Koelliker, J.  
Law, B.  
Lin, C.  
Lin, J.  
Lucas, M. (1995)  
Maata, E.  
~~Melan, C.~~ (1996)  
O'Shea, M.  
Rahman, T.  
Rice, C.  
Rintoul, D.  
~~Riordan, C.~~ (1997)  
Roche, T.  
Rys, A.  
Schlup, J.  
~~Schwab, A.~~ (1998)  
Seib, P.  
Sherwood, P.  
Sorensen, C.  
Wetzel, D.  
Wysin, G.

**N=26**

### KU-Lawrence

Benson, D.  
Bigelow, D.  
~~Bowman, R.~~ (1998)  
Bowman-James, K.  
Braaten, D.  
Busch, D.  
Byers, R.  
Chu, S.  
Cravens, T.  
~~Dorfmeister, J.~~ (1996)  
~~Engler, T.~~ (1997)  
Gegenheimer, P.  
Givens, R.  
Heppert, J.  
Johnson, C.  
Kuczera, K.  
Larive, C.  
~~Leimkuhler, B.~~ (1999)  
Lerner, D.  
Lunte, C.  
Lunte, S.  
Macpherson, G.  
Melott, A.  
Ralston, J.  
Richter, M.  
Shandarin, S.  
Siahaan, T.  
Sophocleous, M.  
Southard, M.  
Squier, T.  
Subramaniam, B.  
Terwilliger, V.  
Wilson, G.  
~~Wong, K.~~ (1995)

**N=29**

### WSU

Alexander, D.  
Behrman, E.  
Chaudhuri, J.  
DeLillo, T.  
Elcrat, A.  
Hamdeh, H.  
Kahol, P.  
Kuchner, P.  
~~Motavalli, S.~~ (1996)  
Papanicolaou, V.  
Singhal, R.  
Skinner, S.  
Stevenson, W.  
~~Taylor, M.~~ (1998)

**N=12**

## EPSCOR FACULTY: GROUP II

### KSU

Beeman, R.  
 Bolton, T.  
~~Borovik, A.~~ (1996)  
 Buszek, K  
 Collinson, M.  
 Conrad, G.  
 Denell, R.  
 Edgar, J.  
~~Fox, R.~~ (1999)  
 Greiger, D.  
 Guikema, J.  
 Hua, D.  
 Jiang, H.  
 Johnson, L.  
 Kambhampati, S.  
 Klabunde, K.  
 Lin, C.  
 Lin, J.  
~~Li, Y.~~ (1998.)  
 Maata, E.  
 Meng, H.  
 Rahman, T. (  
 Reay, N.  
 Rice, C.  
~~Riordan, C.~~ (1997)  
 Sherwood, P.  
 Sidwell, R.  
 Sorensen, C.  
 Stanton, N.  
~~Tordesillas, A.~~ (1995)  
 Zou, Q.

**KSU Total = 26**

### KU-Lawrence

Anthony-Twarog, B.  
 Bean, A.  
 Benson, D.  
 Besson, D.  
~~Bowman, R.~~ (1998)  
 Bowman-James, K.  
 Busch, D.  
~~Christianson, M.~~ (1999)  
 Chu, S.  
 Cohen, R.  
 Corbin, V.  
 Cravens, T.  
 Dunn, R.  
~~Engler, T.~~ (1997)  
 Georg, G.  
 Givens, R.  
 Heppert, J.  
 Huang, W.  
 Johnson, C.  
 Kuczera, K.  
~~Lai, Y.C.~~ (1999)  
 Laird, B.  
 Lan, C.  
~~Leimkuhler, B.~~ (1999)  
 Lu, X.  
 Mason, K.  
 Melott, A.  
 Nguyen, T.  
 Ruden, D.  
 Shandarin, S.  
 Squier, T.  
 Subramanium, B.  
 Suppes, G.  
 Tucker, D.  
 Wu, J.

**KU Total = 30**

### WSU

Agarwal, R.  
 Alexander, D.  
~~Arakere, N.~~ (1996)  
~~Brinkman, G.~~ (1994)  
 Burns, D.  
 Chaudhuri, J.  
 Hamdeh, H.  
 Hendry, W.  
 Hoffman, K.  
 Kahol, P.  
 Koert, D.  
 Kuchment, P.  
 McCormick, B.  
 McDonald, J. D.  
~~Metavalli, S.~~ (1996)  
~~Rajan, V.~~ (1998)  
 Schmidt, J.  
 Skinner, S.  
 Stevenson, W.  
 Twomey, J.  
~~Wollner, D.~~ (1998)

**WSU Total = 16**

## EPSCoR FACULTY: GROUP III

### KSU

Beck, Terry  
Bhandari, Alok  
Ferguson, Carolyn Gao,  
Stephen  
Garvey, James  
Hosni, M. H.  
Iwamoto, Takeo  
Jumpponen, Ari  
Ritterbush, Lauren  
Roche, Thomas E.  
Shah, Jyoti  
Sorensen, Chris  
Tang, Xiaoyan  
Todd, Scott  
Trick, Harold  
Xin, Xioa  
Zolkiewski, Michal

***N = 17***

### KU-Lawrence

Benson, David  
Bigelow, Diana  
Bishop, Ken  
Borchardt, Ronald  
Bowman-James, Kristin  
Ewing, Mark  
Georg, Gunda  
Hanzlik, Robert  
Hu, Yaozhang  
Kelly, Paul  
Larive, Cynthia  
Lieberman, Bruce  
Loudon, Catherine  
Lunte, Craig  
Malinakova, Helena  
Middaugh, Russ Olafsen,  
Linda  
Schoneich, Christian  
Squier, Thomas  
Stagg-Williams, Susan  
Subramaniam, Bala  
Urbauer, Jeff  
Vander Velde, David G.  
Williams, Todd  
Wu, Judy

***N = 25***

### WSU

Alexander, David  
Agarwal, Ramesh  
Bousfield, George  
Butnev, Vladimir  
D'Souza, Francis  
Eichhorn, David  
Ferguson, Jason  
Hoffmann, Klaus  
Hrycak, Tomasz  
Krishnan, Krishna  
Lacy, Tom  
Lankarani, Hamid  
Rillema, Paul  
Tran, Nicholas  
Tomblin, John  
Smith, Bert  
Van Stipdonk, Michael  
Wimillasena,  
Kandetage Yang,  
Charles  
Yang, Wan

***N = 20***

## EPSCoR FACULTY: FIRST AWARD

### **KSU**

*Name (Year)*

Collinson, Maryanne M. (1995, 96)  
 Johnson, Loretta (96)  
 Li, Yi (96)  
 Lin, Jingyu (96)  
 Meng, Hui (96)  
 Higgins, Daniel A. (97)  
 Jiang, Shaoyi (97)  
 Kuhn, William B. (97, 98)  
 Ratra, Bharat (97)  
 Starrett, Shelli Kay (97)  
 Sun, X. Susan (97)  
 Baures, Paul R. (98)  
 Huang, Bingru (98)  
 Muino, Pedro L. (98)  
 Smith, Paul E. (98)  
 Zhou, Jianmin (98)  
 Bhandari, Alok (99)  
 Garvey, James E. (99)  
 Trick, Harold (99)  
 Xin, Xiao J. (99)  
 Zolkiewski, Michael (99)  
 Gao, Stephen S. (00)  
 Ritterbush, Lauren W. (00)  
 Shah, Jyoti (00)  
 Tang, Xiaoyang (00)  
 Todd, Scott C. (00)

1995 = 1  
 1996 = 5  
 1997 = 6  
 1998 = 6  
 1999 = 5  
 2000 = 5

**KSU Total = 28**

### **KU-Lawrence**

*Name (Year)*

Huang, Weizhang (95)  
 Kuczera, Krzysztof (95)  
 Lai, Ying-Cheng (95, 96)  
 Mason, Kenneth (95, 96)  
 Nguyen, Trung Van (95, 96)  
 Suppes, Galen (95)  
 Besson, David (96)  
 Dunn, Robert C. (96)  
 Huang, Weizhang (96)  
 Wu, Judy (96)  
 Egan, Susan (97)  
 Nordheden, Karen J. (97)  
 Peterson, A. Townsend (97)  
 Gavosto, Estela (98)  
 Hanson, Paul R. (98)  
 Loudon, Catherine (99)  
 Hu, Yaozhong (00)  
 Lieberman, Bruce S. (00)  
 Olafsen, Linda J. (00)  
 Stagg-Williams, Susan (00)

1995 = 6  
 1996 = 7  
 1997 = 3  
 1998 = 2  
 1999 = 1  
 2000 = 4

**KU Total = 23**

### **WSU**

*Name (Year)*

Arakere, Nagaraj K. (95, 96)  
 Wollner, Debra A. (95)  
 D'Souza, Francis (96)  
 Twomey, Janet (96)  
 Madhavan, Viswanathan (98)  
 Krishnan, Krishna K. (99)  
 Tran, Nicholas Q. (99)  
 Yang, Chihdar C. (99)  
 Yang, Wan (00)

1995 = 2  
 1996 = 3  
 1997 = 0  
 1998 = 1  
 1999 = 3  
 2000 = 1

**WSU Total = 10**

## APPENDIX C

### FOCUS GROUP REPORT

*Focus Group Report Written by:*

Susan Mercer  
Interim Assistant Director, Policy Research Institute  
The University of Kansas

*Focus Groups Conducted by:*

Susan Mercer  
Interim Assistant Director, Policy Research Institute  
The University of Kansas

Luke Middleton  
Research Economist, Policy Research Institute  
The University of Kansas

Genna Hurd  
Research Associate, Policy Research Institute  
The University of Kansas

# ASSESSMENT OF THE KANSAS NSF EPSCoR PROGRAM

## Focus Group Report

The Policy Research Institute at the University of Kansas conducted three focus groups with NSF EPSCoR participants (past and present), one each on the campuses of Kansas State University, the University of Kansas, and Wichita State University. The purpose of the focus groups was to explore the impact of the EPSCoR program on the SEM infrastructure in Kansas, including the benefits and challenges of the program. Specifically, the focus groups sought to answer five important questions:

1. Does EPSCoR increase faculty research competitiveness?
2. Does EPSCoR have an effect on faculty retention?
3. Does EPSCoR increase the research infrastructure capacity?
4. Does EPSCoR increase the quality of graduate students?
5. How can EPSCoR leverage its impact?

### METHODS

Three focus groups were held in February 2001 at Kansas State University, Manhattan, Kansas; The University of Kansas, Lawrence, Kansas; and Wichita State University, Wichita, Kansas. Focus group participants included past and present EPSCoR award recipients. Each focus group included 6 to 9 participants and lasted approximately one and a half hours. Table 1 provides a breakout of participation in each group.

**Table 1**  
**Focus Group Sessions**

<b>Focus Group Participants</b>		
DATE	CAMPUS	PARTICIPANTS
Feb. 21	University of Kansas	8
Feb. 22	Kansas State University	9
Feb. 27	Wichita State University	6
<b>Total Participants</b>		<b>23</b>



Participants were recruited as follows:

- The Kansas NSF EPSCoR Program Office provided PRI with a partial list of past and present EPSCoR program participants from each of the three campuses. Listed faculty received an introductory e-mail message from the Kansas NSF EPSCoR office regarding the study. PRI contacted faculty from the list at random until either the focus group session was full (with 10 confirmed participants) or all listed faculty had been contacted. First, PRI invited faculty to participate in an e-mail invitation. If the faculty member did not respond to the e-mail invitation, then a follow-up phone call was made. Confirmed participants received a reminder e-mail message and/or phone call one day prior to the focus group session.

Each focus group lasted approximately one and a half hours. Identical questionnaires, or focus group protocols, were developed and used on all three campuses. Two PRI focus group facilitators were present at each session. In addition to leading the discussions, the facilitators took notes; tape recorded each session, and analyzed the results.

### **Contents of this report**

This report summarizes the overall findings, organizing the results by topic areas, and noting substantial differences in view amongst the three campuses. The report includes many verbatim quotes illustrating the various topics.

Care should be taken in generalizing any focus group findings, since the groups are too small to be representative of the general population.

### **GENERAL RESEARCH FUNDING ISSUES AND OBSTACLES**

Faculty at all three institutions recognized that the competition for research dollars is incredibly stiff with a small number of proposals actually receiving funding. As one individual stated, there are “too many people who want too much money.” But beyond that, they see challenges that include geographic location, recruitment and staffing, infrastructure, information flow and availability, and financing preliminary data studies.

Generally speaking, faculty considered being located in Kansas as a major challenge to be overcome. They believe the locale affects everything from faculty and student recruitment to proposal competitiveness. KSU and WSU faculty even went so far as to say that putting their institution’s name on a proposal greatly hampers its chances for funding.

*...NSF or other policy agencies will really not admit [it], but there are actually several strikes against us. One of the strikes is “Kansas,” the other is “State.” And when you are submitting a proposal, these things actually play out...particularly when you are starting out. I strongly believe that if that exact same proposal is sent*

*from MIT...[it] will be looked at from an entirely different angle than the same one from Kansas State.*

*Wichita State, when you are applying to a national agency, does not have a reputation as a research institution. So I think the first challenge we always confront when we write a proposal is to convince them that research actually can and does occur here at WSU. Obviously individual track records are important in that regard and may be the most important thing. But still, I think reviewers look at the institution and wonder, 'Is there the environment and is there the infrastructure to support the research to enable this person, no matter however good they may be, to accomplish what they're proposing to do in this project?'*

*I am a junior faculty and I'm not well known. I'm located in a place that's not very attractive for young people to come to have fun and spend several years here. This is a big problem. It is not evident when I apply for funding, but it becomes evident when I apply for renewal because if I don't get a person to work in my lab, I will not generate the data, I will not get the work done, and my project will eventually not be renewed because of that.*

KU faculty tied location to difficulties in recruiting faculty and did not list it among their challenges to securing funding. They were more concerned about basic infrastructure issues such as acquiring emergency power in Haworth Hall to prevent the loss of research during power failures. They were also concerned over the lack and quality of research space, as was KSU. WSU also had concerns over infrastructure but their issues centered on equipment maintenance and hiring research support staff to operate the equipment. One faculty member noted that he had a whole lab full of broken equipment simply because the university could not afford to maintain the equipment properly.

*Human infrastructure is the weakest component—the staff to maintain and operate the equipment. And that's an area that's really, really hard to get grant support for. The University is expected to provide that kind of infrastructure support and we struggle with that a lot.*

While staff issues, including graduate research assistants, may not be a direct challenge to securing funding, it certainly plays a role in terms of capacity to perform the work. Besides Kansas as a location, other barriers include wages and stipends paid. KU said the best wages they can offer are still 20 to 30 percent below what other comparable universities can put forward. In addition, KU cannot guarantee a student four years of support. All three institutions noted difficulties in this arena.

*It's a system that constantly feels like it's swimming upstream and never making progress.*

KU also noted that the spoken English requirement for foreign students plays into the recruitment problem.

*As far as I know, the English requirements to receive GTA status in this state are among the most stringent in the country. That puts us at a tremendous disadvantage (in recruitment)...We're cutting off so much talent.*

Getting preliminary data to enable researchers to submit a credible proposal was another obstacle to funding noted by KSU.

*Especially when you're just getting started as a researcher, you say that you can do these things, but you can't prove it until you get the money to. So start up (money) is essential.*

However, simply getting funding does not solve the problem. After a few years, they are often forced to start a new research initiative due to changing research agendas at the agency, thus requiring more preliminary data.

*Most grants are three years and if you're lucky enough to get another three years, well, after six years they're probably not interested in what you're studying anymore and you have to start all over again with another new project.*

*It's a big cycle. You have to get funding on some experiments that you propose and do them fast enough the first time out so that you can start getting the preliminary data for your renewal. So then, if you're fortunate enough to get funding, you get in this cycle where the experiments you propose, you've almost done all of them already so you can keep the thing going.*

KU faculty were frustrated by the flow and availability of information at the institutional level including the library system. They had high praise for KSU's information system and said they often use it as their source. KU faculty would like more online journal subscriptions enabling access from the laboratories.

*We are moving into a new era when information is available everywhere, except KU. K-State has everything. They have it. You can go to their server. You can get a lot of information that doesn't exist here, not to mention online journals and stuff like that that they have the day after the journal went online.*

## NSF EPSCoR IMPACT ON FACULTY

Overall, faculty experience with EPSCoR was positive and substantial. Many junior faculty credited EPSCoR with helping them ignite their research career and others stated they wouldn't be here without it. Established faculty found it useful in helping them refocus their research objectives in new areas. One person described EPSCoR as a manageable first step not only for junior faculty, but also for senior faculty who were developing new program areas. Nearly everyone agreed EPSCoR was essential to Kansas's universities maintaining research competitiveness.

*When I was lucky enough to get a First Award, it was very helpful. I used it primarily to get a graduate student and that was helpful because that graduate student, instead of being a TA, could put a lot more time into getting some research done that I used in a larger 5-year grant submission to NSF that was successful. Do I know for certainty that without the EPSCoR I wouldn't have gotten the NSF? No, of course, I have no idea. But it was extremely helpful and I would imagine it helped [with the success of the proposal].*

*I got my EPSCoR money sort of when I got my first grant, my first bigger grant. So it's hard to say it helped me out a huge amount. But of course an extra \$40,000 is always welcome. I funded a post-doc and bought supplies. It was great. I can't say that it's changed markedly my success or lack of success. But it was useful.*

Several junior faculty credit EPSCoR for their decision to take a faculty position at a Kansas institution. Without these funds, Kansas's universities would not be able to offer competitive start-up packages to promising young faculty.

*First of all, it created [my] position. Without EPSCoR, I would not be here. Basically, ... it gave me money for hardware, for computers, software. Given the kind of [research] I do, not only did it bring me here, it kept me competitive.*

*It essentially doubled the start-up offer. KU would not have been competitive without it and I would not be here. It was essential. The KU start-up funds could only be used for equipment, so I could buy a microscope that I needed, but not any slides or supplies that I needed to go with it. So the EPSCoR allowed me to get the supplies that I needed. And it helped me get an NIH grant.*

*I got a start up package here that I wouldn't have gotten at Princeton. I got at least twice as much as average and probably 50 percent more than almost anyone I know that is in my position. I got an unbelievable package for someone who is a theorist.*

*Without EPSCoR start-up, my offer would have been silly.*

*It was not part of my start up, but I knew that I would be very competitive to get one (First Award) should I come here and it certainly entered into the equation.*

One faculty member cited the First Award as one of the most valuable funding vehicles of NSF EPSCoR.

*It gives enough money for a year or two to people at a crucial stage in their career when they need those kinds of funds to develop the basis for extramural funding.*

It can also allow the investigator to fine tune his research and prepare for a new submission as one faculty member is doing now. He submitted the First Award and NSF Career Award simultaneously last year. He didn't get the Career Award but did get the First Award. So, now he's getting ready to re-submit the Career Award proposal using what he learned from the reviewers and from his First Award research to improve his Career Award proposal.

Others discussed the impact First Award had on relieving some of the pressures of getting research off the ground by taking the financial stress out of the equation.

*I knew I had my start up, but with the start-up you feel like, this is all the money you have and you have to be very careful with what you're spending it for because you don't know how long it has to last. So, when the First Award came, it gave me much more peace of mind and I knew that I could really start working without worrying about money for at least another year. And, for example, in order to work fast, I could afford to buy proteins that I didn't have to purify myself, which is more expensive, but I could get those things within days. So, I generated some data, and at the same time, I applied for the instrumentation grant and I got the centrifuge. Then I resubmitted my NIH grant. Those two parts, the data, which I believe came from the First Award, and the instrument, which also came from EPSCoR, resulted in my grant which I have now. So those were two components, which came directly from EPSCoR that resulted in getting funded. The instrument is used by other people as well. I understand that the instrument helped him (another faculty member) renew his NIH grant as well. So it's really a very very positive experience for these two components.*

*For me, knowing that it was there (First Award), it really helped me to make the decision to come here. So, kind of what it did, was give me a jump start on my project because I could get started on a lot of things that were covered in my NIH grant because it hadn't been funded. Once it was funded, I had to adjust specific aims so I could keep both for a little while. It really helped me get things going.*

For one junior faculty member at WSU, EPSCoR allowed him the opportunity to transition from post-doc at the institution to junior faculty. During his first semester as a faculty member he received his first grant and began funding students.

*That's unheard of in any other environment. So the kind of opportunity it (EPSCoR) gives a new faculty member to get a jump-start on learning how to write successful proposals and then getting support to get themselves established, I think is crucial. And I think [EPSCoR] gives Kansas a definite leg up in helping that new faculty member in becoming competitive and getting the grants their going to ultimately be required to get if they have any hope of getting tenure.*

While faculty disagreed on the level of the impact EPSCoR made on faculty promotions and tenure, all agreed it helped. The program had the largest impact on junior faculty. While most would like to think their research would have been funded anyway, they recognized that without EPSCoR, it would have been much more difficult, thus slowing their progress toward promotion.

*I have mentored two young people in my department who have had EPSCoR funding and who were promoted. Having a successful track record for funded research was clearly important to their promotions.*

More senior faculty saw the value of EPSCoR for themselves too, especially the planning grants.

*Even though I was at the associate professor level, still there's nothing that legitimizes an effort to augment your professional interests, change your field, go off in something that looks like a new and daring direction, like getting something funded. This is especially true in the sciences. So getting some resources to have that be a legitimate research endeavor for a couple of years while we tried to build research proposals was an initial step to getting my colleagues to accept that. Ultimately, it has led us to getting two major proposals funded and a third one will be funded. It has helped to seed a lot more activity than would have existed had I still been struggling with it by myself.*

Equipment grants were another component of EPSCoR that was identified by all Kansas institutions as being very important. In particular, WSU felt it was one way they could significantly improve their competitiveness in a specific area. If they have a unique or significant piece of equipment, they can make the case that it is more available for use by faculty, including junior faculty, because their departments are much smaller and therefore the resource demands on the equipment are much less. It helps make their proposals more competitive against larger universities where even a more senior faculty member might have less access to a particular piece of equipment because of the overall resource demand.

For some, equipment grants have been a way to fill a gap left by the local hospital when they stopped allowing faculty to use hospital equipment for research. EPSCoR allowed the university to purchase its own equipment so the research could continue.

One junior faculty member's experience with multiple EPSCoR initiatives illustrates the impact the program can have on an individual's success. He submitted a proposal to NIH, which then responded with two ways to improve his proposal: collect preliminary data and secure a special instrument. He then applied for and received an EPSCoR start-up grant allowing him to collect the preliminary data. At the same time, he applied for and received an EPSCoR instrumentation grant allowing him to purchase the recommended instrument, the only one of its kind in Kansas. His second attempt at the NIH grant was successful and his project is still funded today.

## NSF EPSCoR IMPACT ON COLLABORATION

Faculty at all three institutions were divided on EPSCoR's role in stimulating collaboration. Some believed the low level of funding for collaborative research was a hindrance to collaboration. One described the collaborative teams as "artificial", stating true collaboration did not occur. Instead, one institution dominated the project and thus ended up with the bulk of the research and research dollars. He argued that the collaboration should be allowed to occur more naturally. Several faculty members stated that EPSCoR had not stimulated any collaboration that either was not ongoing or would not have occurred anyway.

*I am less than enthusiastic about the very heavily enforced requirement to collaborate. Later, when the money runs out, the collaborative effort falls apart because the group wasn't well matched in the first place.*

Still, others disagreed and felt strongly that EPSCoR fostered collaboration.

*I think that really is one of the important by-products or benefits of NSF EPSCoR. It really has stimulated much higher levels of interaction among the faculty especially between institutions. I now have much more contact with and collaboration with my colleagues at KU and K-State than I had or would have had without the stimulation of EPSCoR.*

*Collaboration helps combat the competitiveness problems of going up against larger institutions with larger departments...now you've got a group that can compete against the 10 [faculty in one department] at [the University of] Illinois.*

*The way we used EPSCoR in Phase II, was to establish an electronics center here for close to half a million dollars—it's an electronics design lab here at KSU and it's got two engineers, technicians, plus they have a regular crew of double-E students who come through who can be very good. Some of those kids are quite impressive—and to fund a group in theoretical cosmology. So we're not taking money to fund our own work we're doing it to help build infrastructure, which of course, we were taking advantage of. We've probably used 40 percent of the resources in the*

*electronics design lab and also to start a program that we thought might at least be complimentary. (Note: it's a joint cosmology effort between KSU and KU).*

### **NSF EPSCoR PROPOSAL REVIEW**

Faculty disagreed on the usefulness of the EPSCoR proposal reviews.

*It seems to me the reviews are silly. I'll tell you why: because every year there is a new panel. Last year they told you 'you should have talked about that'. The next year they say, 'why did you talk about that. That's not part of this.' The reviews are not really objective. The panels that sit on them have no history.*

*In general, I think they were very helpful, even though they weren't as thorough [as agency reviews were].*

*I thought they were nice but I didn't think they were the same level of criticism that I faced at NIH. I didn't get the sense that they were quite in my field.*

However, they believed the review process was very important to young investigators because they need the specific feedback. Otherwise, they have put the effort into the proposal and received nothing in return.

### **NSF EPSCoR IMPACT ON FACULTY LONGEVITY**

Everyone agreed that they did not stay at a Kansas institution because Kansas is an EPSCoR state. On the other hand, they could see that the availability of funding, particularly through the First Award program, made it easier to stay. Once they begin a successful track record, promotions come easier and they become established at the institution. However, in some cases it makes them attractive to other institutions as well. Clearly, when a competitive offer is on the table, EPSCoR plays no role in their decision to stay or leave.

*The very fact that you have EPSCoR is a sign of institutional weakness. If you are an EPSCoR state, it means you are not competitive.*

Another person disagreed.

*No, it means historically you have not been competitive.*

*I think it's one of three things on this campus that has made the most difference, actually. Again, it's not that readily apparent. One is a research component that's grown up independent of EPSCoR. One is EPSCoR, through faculty research and infrastructure, that's sometimes difficult to see. The other is changes in the culture of this institution.*



## NSF EPSCoR IMPACT ON STUDENT RECRUITMENT

Graduate student recruitment is another area where some faculty were reluctant to give a lot of credit to EPSCoR for having an impact, even though they admitted they were able to offer research positions to graduate students with their EPSCoR funds. Still, other faculty were definitive in stating that EPSCoR plays a key role in student recruitment, either by enhancing the department's image or by providing funds for research positions.

*We have a thesis track and non-thesis track in our department. We are considering doing away with the non-thesis track because students come here and know there's research going on and they come here because they want to do research. The EPSCoR program has supported a lot of research in faculty labs that enables them to support students. I think EPSCoR has really enhanced the number of opportunities we've been able to offer our grad students.*

Overall, the problems that plague faculty recruitment apply to graduate student recruitment as well: Kansas is not a desirable location to many students and the stipends and pay are much lower here than in other locations.

*We never get our first choice, or even our third, in recruiting.*

Faculty at KSU and KU would like to see specific EPSCoR funds that target graduate student and post-doc recruitment efforts, including travel funds for site visits. By bringing them here for a visit, they believe they could dispel some of the myths about Kansas and therefore change their minds. In the long run, they believe having quality graduate students is crucial to advancing the research status of the entire state.

## RECOMMENDATIONS

Faculty at all three institutions would like to see EPSCoR funds made available to support graduate students, as outlined in the corresponding section above.

KU faculty recommended providing a writer to assist junior faculty with organizing and presenting their proposals. They stated the transition from writing research reports to writing a proposal was difficult for many new investigators.

*Fully half of grants that don't succeed have some flaw or don't have competitive science in them. But a good portion of them actually have clever ideas that are just badly put together or badly communicated. Scientists, on average, are not the best communicators.*

*Nobody tells you how to write grants.*

*If EPSCoR would provide the university with good writers who know about writing grants, I would say forget about the money, this is the best thing that EPSCoR can do. I know my science. I'm not going to come to EPSCoR or CRINC to help me develop my science. But if you can help me develop some kind of communication skill that will allow me to be more competitive in presenting my ideas to the panel, I would be eternally grateful.*

*As a young person, what you really need is often someone to sit down with you while you write those first few grants and really mentor you in that grant writing process. Because once that is learned, then it's something then that that person can go out and do.*

While neither KSU nor WSU specifically mentioned the idea of someone to assist with grant writing, one case in particular illustrates how it might be helpful: although he had received a First Award, he was frustrated because his subsequent three proposals to NSF had been turned down. He was ready to quit trying.

KSU faculty suggested EPSCoR pressure the state legislature (possibly through a lobbyist) to encourage them to change their attitudes toward basic research. They believed that is fundamental to addressing the larger issues the state faces in terms of its research infrastructure.

*I've been here for 23 years and nothing's really changed in Kansas.*

He went on to state that while EPSCoR funds are a big help, they only address the symptoms and not the cause. Others agreed and argued that Kansas lacks a long-term perspective on research. They noted that small, fundamental changes that could have been made years ago would now be paying off. Kansas, they said, is not moving forward.

WSU faculty recommended including funds for equipment maintenance, since most federal grants no longer allow this and most of their departments cannot afford the maintenance either. The results of this neglect are rooms full of broken equipment because the maintenance schedules cannot be kept.

*[EPSCoR] needs to support what they provide.*

Faculty at all three institutions noted frustration with the timeframe during which the money must be spent. However, it may be that some of these problems have been eliminated in the last year or two.

*I got a First Award and had planned to use it to fund a post-doc, but by the time I got it, it was too late to recruit and not enough time remained in the grant to fund one.*

*My First Award was a 12-month award, but [because it was awarded late] I had to use it in nine months. It limits what you can do.*

Others felt some of the grants, particularly planning grants and collaboration grants, were too small to be effective. Apparently planning grants were once approximately \$50,000 but now are \$20,000 to \$25,000.

*There are a couple of problems. First, the size of the grant is sort of small. A \$100,000 doesn't go very far when you're trying to attract an experimentalist when you're in competition with major universities. So the package is small and then the time limit in which you have to spend the money is small. You have to have a search authorized and ready to go so you can use the money during the time when it has to be spent. Flexibility is just gone. If we had more money, we could attract higher quality faculty.*

*The rules were just different then (Phase II). We're trying to do the same type of thing in Phase IV but the rules are just different. Things are just put in such small boxes that you can't do anything with multi universities. You bring in 3 universities with a limit of \$500,000 for two years and there's not much left to do anything at any given university. And there are things you really have common interests in.*

*My planning grant is \$20,000. That's just not enough to do anything. I need at least \$40,000 to fund my research for a couple of years.*

*Planning grants should be at least \$50,000 to \$60,000.*

## **APPENDIX D**

### **INTERVIEW SUMMARIES FOR KANSAS STATE UNIVERSITY THE UNIVERSITY OF KANSAS WICHITA STATE UNIVERSITY**

*Interviews Conducted by:*

Dr. Steven Maynard-Moody  
Interim Director, Policy Research Institute  
The University of Kansas

*Interview Summaries Written by:*

Luke Middleton  
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The University of Kansas

## NSF EPSCoR INTERVIEWS: Summary – Kansas State University

### **What impact has EPSCoR had in recruiting faculty?**

The impact, in the words of one, has been “huge.” However, another noted that to recruit nationally/internationally recognized faculty they really needed more money than what EPSCoR could offer.

*“The fact that First Awards and other EPSCoR funds are available to faculty taking a job [at KSU] has been a very positive factor in recruiting.”*

### **What impact has EPSCoR had in retaining faculty?**

While some departments seemed to have problems with attrition, it was certainly not felt to be the fault of EPSCoR. The staff that left had often received extramural funding as a result of their initial help from EPSCoR, but still left due to other reasons. There was no thought that EPSCoR could do more than it already is to make faculty stay.

### **Has EPSCoR increased your department’s competitiveness?**

While this subject was not dwelt on for long, the answer would be yes: many faculty members in all the departments had been successful in getting additional outside funding which they would not likely have received without the initial boost from their EPSCoR First Awards.

### **What are the thoughts about the change in EPSCoR’s priorities throughout the different phases?**

In one person’s case, the previous system, with its emphasis on collaboration, was better than the current focus. That is because the nature of his work mandated many people of different disciplines be joined together for a large project. Nevertheless, he is very supportive of the First Awards and acknowledges that given monetary constraints, the current approach may help more people overall.

Another said he saw collaborative activities as being complimentary to the current goal of helping individuals, and he would like to see the two co-exist. (However, he realized that without enough money the two could be exclusive activities.)

In summary, everyone appreciates the current system, especially the First Awards. Nevertheless, they also liked the old system, and wished there was some way to have the flexibility of both.

**Has EPSCoR helped in recruiting graduate or post-doctoral students?**

Yes it has, because for the most part EPSCoR has had flexible rules, which allow the researcher to spend the money on what he deems most important, whether it's a grad student or instrumentation. They urge that to continue.

**What has been the most important result of the program?**

*"The program was designed for the acquisition of stable extramural funding for the people involved and it has done this very successfully."*

**Do you see any inequalities in the ways the three universities are treated under EPSCoR?**

This question was only asked to one person at KSU, but he said that in his view there were no major problems with one institution getting an unfair portion of the money.

**What changes would you suggest?**

The timing of some of the grants was very difficult to work around. Spending the grant in the space of a year was very limiting. Exacerbating the situation even more was that any matching funds had to be spent during the same, short time period. This severely limited the money's usefulness.

Another problem is that moneys "were virtually never available at the start of the grant period," they always came in late. That caused this individual a lot of headaches and inefficiencies. While those interviewed realized that some of the problem is out of EPSCoR's control, anything that the Kansas EPSCoR program could do internally to expedite the funds would be extremely helpful.

Finally, a "carefully conceived and critically managed approach in trying to help mid-career people" would be helpful. It was recommended that this approach would need to make funds strongly contingent on the previous success of the mid-career faculty member. A strong review process that indicated preliminary data could be the impetus for pushing the research over the edge was also suggested.

## NSF EPSCoR INTERVIEWS: Summary – University of Kansas

### **Has EPSCoR increased the competitiveness of your department?**

It seems the main area in which KU feels it has become more competitive as a result of EPSCoR is in the recruitment of faculty. With the help from EPSCoR in the form of start-up packages and vital equipment grants, KU has been much more successful in recruiting quality faculty scientists.

### **What impact has EPSCoR had in retaining faculty?**

In some cases the equipment purchases have definitely helped retain faculty. Without EPSCoR's assistance in acquiring certain high-end equipment it is clear that some of the current faculty would not have come.

However, there is not the feeling that EPSCoR needs to fill a direct retention role. If a faculty member were considering another position it would not be practical for EPSCoR to make a monetary offer to that individual to convince them to stay. EPSCoR's role in retention is what it is already doing: helping to make the environment such that people do not want to leave.

### **How effective have the equipment grants been?**

One person felt that the area KU is lacking in the most is with infrastructure. As such, they felt the equipment grants have been invaluable in securing needed machinery and test equipment. The EPSCoR program has worked very well to bring in the physical capital needed, and they would like to see that continued.

### **What are your thoughts on the shift in emphasis from team projects to infrastructure development and faculty start up?**

The shift has been perceived positively. More and more faculty are receiving extramural funding as a direct result of their initial boost from EPSCoR.

The collaboration efforts were positive, but there seems to be a consensus that the real priority right now, at least at KU, is on recruiting quality faculty. In-as-much as the new direction of EPSCoR seems to complement that goal, they see the evolution as very positive.

The previous phase of EPSCoR was discussed as well. There were very mixed feelings about its effectiveness at KU. Some people thought the collaboration that came out of the first phase was extremely positive, and they point to interdisciplinary groups that still operate together today, long after their EPSCoR grant which initiated them ended. Others, however, had a different experience. They believe the collaboration requirements forced teams to come together that would not have done so otherwise. These teams did not work well together and really only collaborated because they had to in order to get the money. In other words, mandating collaboration did not necessarily lead to effective collaboration.

### **What has been the most important role of EPSCoR?**

*“Recruitment of quality faculty is something we’ve been able to do exceedingly well with EPSCoR’s help. Without the [start-up packages], we would have been out of the competition to begin with.”*

The amount of funded research at KU has increased steadily in the last several years, a trend which can be directly attributed to quality faculty, which the EPSCoR program has helped recruit.

*“The most important role of EPSCoR has been in giving people the ability to graduate and get long term funding from other sources.”*

### **What changes to the program would you suggest?**

Allowing more support for graduate students and post-docs would be great. A program directed at attracting and funding those students would be good. However, it was mentioned that this would not be worth pursuing if it meant less First Award funds.



## NSF EPSCoR INTERVIEWS: Summary – Wichita State University

### **Has EPSCoR had any effect on faculty recruitment?**

All agreed the EPSCoR program had a very positive impact on faculty recruitment. The impact was felt in several ways:

First, EPSCoR junior faculty start-up funds were money in the pockets of new faculty. It was aid on top of any start-up package the university offered. These start-up funds have been crucial to some departments, who feel their regular start-up packages are below par compared to KU and K-State and certainly compared to institutions outside the state. Without this extra money it is unlikely they could offer a competitive enough package to recruit quality personnel.

Secondly, the department can tell the applicant that since this is Kansas they will have access to EPSCoR First Award funds as a researcher. Granted, the faculty member will have to apply and compete for it, but most departments have a very good record of success that they can point to in such endeavors. The odds of a junior faculty member receiving a First Award grant are very good, and that is a very significant attraction.

Finally, the EPSCoR program has also had an indirect impact on recruiting, by raising the level of research activity that goes on in a department. Potential faculty see that and want to be a part of it.

*“When recruiting, we bring up EPSCoR funding early and often: the fact that it’s available and the record of previous faculty who have gotten it.”*

### **Has EPSCoR had any effect on faculty retention?**

The EPSCoR program has indeed helped in retention at Wichita State. In one department that has had a relatively high rate of turnover in the last several years the chair was able to say that no faculty member who received a First Award grant had left yet. Other departments noted similar observations.

When asked if faculty successes attributable to EPSCoR made them more susceptible to being ‘raided’ by other institutions, the response was probably not. Those researchers who received First Award or other EPSCoR money tended to stabilize at the place they were at. They felt they were successful at their present location and had an increased confidence about their future there. On the other hand, those who did not get the EPSCoR funding, specifically the First Awards, did

not seem to acquire the needed confidence, and, over time, they became discouraged and were more likely to be the ones who left.

### **Has the EPSCoR program increased your department's competitiveness?**

EPSCoR has most definitely increased competitiveness in the views of Wichita State researchers. First, they noted the indirect contribution to recruiting efforts. "A department cannot compete without quality faculty, and EPSCoR has helped get quality people." But what was felt to be most important was confidence and validity that the First Award grant gave the new faculty member.

*"The First Award gets the researcher on his feet and running, and he has a much better chance at being competitive at the national level."*

### **How many junior faculty members actually get a First Award? How successful have the First Award faculty been?**

In one department, all eligible junior faculty obtained a First Award grant. In another, the percentage was more like 75 percent. Across the board it would be fair to say that most junior faculty have gotten one.

Those that have received a First Award have been significantly more successful than those who have not received one.

*"Those that have not received the [First Awards] have struggled much more to get their career going, and that can be shown numerically."*

First Award faculty were much more likely to get independent funding at the national level later on. In most departments, this had already happened, or was expected to happen soon.

One person said the stability and confidence that a First Award brings to a researcher is sometimes as, or more important than, the money itself. It reassures them that their ideas are important and valid. At the same time, the money helps them get some preliminary data on their theories. That data is absolutely necessary to compete for national funding, but without the First Award, would not be nearly as easy to obtain.

### **Has the EPSCoR program assisted in recruiting graduate or post-doctoral students?**

EPSCoR was felt to have had a very significant, positive impact in this area. Only one department used EPSCoR funds to directly pay for a student, and the chair said "I can not say enough positive about that aspect of it, since graduate students are very difficult to come by."

The other departments, even though they were not directly funding their graduate students with EPSCoR money, were still quick to acknowledge that the program has had an effect. What has made the difference is that EPSCoR funding has allowed research to take place that grad students want to be involved in.

Instrumentation grants have also been especially helpful in recruiting graduate students. Although most departments buy the instruments for their faculty, it certainly works to attract graduate students as well.

### **How has the shift to national reviews been taken?**

*"Shifting them to outside the state has made them more fair."*

Another said he thought it was very desirable to have the same types of criteria apply to the First Awards that a researcher's future proposals will get. The shift to national reviews has accomplished that in his view.

### **What is thought about the change in EPSCoR's priorities through the different phases?**

Although some of the interviewees missed the first phase, with its emphasis on collaboration and team projects, they recognized that a natural evolution needs to take place. Almost everyone mentioned they recognized money was short and could only be allocated to a limited number of priorities. Everyone felt that the current priorities of junior faculty start-up help and infrastructure development were the most important for now.

Some interviewees were not convinced the first phase really helped increase collaboration anyway. In their experience, the collaborative efforts died off as soon as the grant was over.

**How do you feel about having the NSF EPSCoR office at KU? Do they have an unfair advantage?**

No one really felt that NSF EPSCoR was unfair. While the goal of EPSCoR on the national level was to re-direct money to the most needy areas, most did not generally see that goal as being relevant within Kansas. (Or maybe they felt it was already being met.) While it is true that WSU receives less money than KU and K-State, it's also a smaller institution. On the whole, it seemed that good science was felt to be more important of a criteria for who should get the money than which institution was the most disadvantaged.

However, one interviewee disagreed, and felt that a redistribution goal should carry on even within the state. To him, if the intent of EPSCoR is to build research infrastructure and if after a decade of effort the infrastructure is built in the places that already had the most to begin with (KU, K-State), then a problem exists. His personal feeling was that that the gap between WSU and the other universities has widened as a result of the EPSCoR program. In other words, the program does not redistribute within the state. He did not necessarily claim that was a bad thing, but he did feel it was somewhat self-contradictory.

**What has been the most positive impact of EPSCoR?**

The areas of faculty recruitment and start-up probably tied as the most positive impact of EPSCoR. The EPSCoR program was seen as crucial in not only attracting quality faculty but also in helping those faculty become successful in their research.

*"The EPSCoR program has been very helpful in demonstrable ways to faculty recruiting. It used to be a lot harder to convince people to come here. EPSCoR carries the day in recruitment efforts."*

*"The greatest strength has been that it provides a bridge for faculty members to get other funding. The EPSCoR program has worked very well in doing that."*

**What are the limitations to the EPSCoR program? What suggestions for change do you have?**

One person mentioned an idea that had come up before, which was an effort to bring students and faculty from the smaller colleges around the state and involve them in the research being done at the three research institutions. He thought it was a good idea, but realized the reason it may not have been adopted was a lack of funds.

For another, the limitation to the program was in getting and providing for doctoral students.

One of the problems seen with First Awards was a timing issue. This was brought up repeatedly in the focus groups and was mentioned in these interviews. Money has to be spent in a very short time period (1 year.) That severely limits the activity that can be funded with that money and it makes it hard to do effective planning. One department chair said the money could have been used much more efficiently and productively if they had more time to spend it.

One complaint involved the RFP process. Sometimes EPSCoR will send out an RFP, but after the proposal has been sent in, the submitters will hear that on reflection, EPSCoR has changed its mind or direction of focus. This is not a small inconvenience, given the tremendous time and effort that goes into writing a proposal. This particular person recommended that EPSCoR think a little more in advance about what they want to do. If they still want proposals on an "iffy" research project perhaps they should ask only for letters of intent rather than a complete proposal.