

Benchmarking MTU Research Administration

The National Association of College and University Business Officers (NACUBO), KPMG Consulting, and the Society of Research Administrators International recently cooperated on a study benchmarking university sponsored programs administration¹. A number of metrics described in this study are given below as benchmarks for sponsored research administration at MTU. Some given in the report are not presented due to difficulty in calculating MTU's comparable metric. The benchmarks are divided into three areas: 1) Sustaining or enhancing sponsored projects activity and funding; 2) Containing the costs and improving the efficiency of sponsored projects administration; and 3) Improving administrative services to faculty. For comparison and unless noted otherwise, the MTU values reflect FY00, the last complete year of record. In every case below, MTU is compared to all public institutions in the survey (ALL), Carnegie Research 1 institutions (R-1), and Carnegie Research 2 institutions (R-2). The Carnegie classification system has changed since the survey a year ago, but MTU aspires to reach a classification equivalent to the R-1 institutions, while we are currently more like the ALL institutions in terms of our level of research and graduate activity.

A. Sustaining or enhancing sponsored projects activity and funding.

1. Number of proposals submitted per total faculty FTE.

	<u>MTU</u>	<u>ALL</u>	<u>R-2</u>	<u>R-1</u>
Excluding KRC and IMP	0.97	0.65-1.09	0.64-1.12	0.80-1.20
Including KRC and IMP	1.43			

This metric reflects the breadth and intensity of faculty proposal preparation. The MTU value excluding KRC and IMP is more reflective of faculty activity. The number is higher for institutions with faculty from many units involved in proposal submission as well as institutions with a high fraction of faculty active in proposal submission. MTU's value indicates that our faculty are comparable to those at Carnegie Research 1 institutions in terms of proposal development activity.

2. Percentage of faculty working as active investigators

<u>MTU</u>	<u>ALL</u>	<u>R-2</u>	<u>R-1</u>
59.7%	32.2-52.8%	35.9-55.2%	37.4-53.7%

This metric also indicates the breadth and involvement of faculty in proposal development. The MTU value is taken as the ratio between faculty who have served as Principal or Co-Principal Investigators over the last two years. As can be seen, a greater proportion of MTU faculty are involved in proposal development than even the Carnegie Research I universities in the survey.

¹ Kirby, W.S. and P.G. Waugaman. 2000. Performance benchmarking in sponsored programs administration: Results from the 1999 Nationwide data collection. Presented at the 2000 Society of Research Administrators National Meeting, St. Louis, MO. (<http://www.srainternational.org/cws/sra/benchmark/results1999.pdf>).

3. Sponsored projects dollars per total faculty FTE

<u>MTU</u>	<u>ALL</u>	<u>R-2</u>	<u>R-1</u>
\$65,718	\$38,215-\$85,394	\$34,070-\$85,555	\$66,815-\$130,316

This metric indicates that the average research dollars per faculty FTE at MTU is less than at Carnegie Research I universities, reflecting the common perception of “more money per faculty member at research intensive institutions”. MTU has not had a great deal of success in attracting large block grants for research. The typical MTU researcher is a single investigator or involved in small collaborative projects. MTU also does not have a large cadre of soft-dollar research faculty and staff who are writing proposals, consulting with and advising graduate students, etc. Coupled with the higher levels of proposal submissions and percentage of faculty working as investigators, the lower level of this metric probably reflects the relative immaturity of the overall MTU research effort.

4. Sponsored programs funding growth over five years.

<u>MTU</u>	<u>ALL</u>	<u>R-2</u>	<u>R-1</u>
17.5%	3.2-10.4%	2.8-7.3%	4.7-9.5%

The MTU value above compares the awards to date in FY01 to the awards to this date in FY96 and reflects the upswing in FY01. Comparing FY00 to FY95 results in a compound annual percentage growth rate of 9.4%. The end of this period reflects the semester transition period at MTU, but MTU is clearly in the upper ranks of universities in the compound growth rate of sponsored research programs.

5. Number of new awards as a percent of number of new proposals submitted.

<u>MTU</u>	<u>ALL</u>	<u>R-2</u>	<u>R-1</u>
46.4%	55.7-76.7%	55.4-78.9%	52.9-73.9%

MTU has a lower proposal funding rate than other institutions. This is consistent with the third metric reflecting a lower funding level per faculty FTE, even though a large number of proposals are submitted. Again, this probably reflects the maturity of the MTU research program.

To summarize, the MTU research program is characterized by high levels of proposal submissions and participation of faculty in sponsored research, as well as a high level of compound growth of funding received over the last five years. MTU has lower levels of research funding per faculty and a lower percent of new proposals funded than many institutions. In combination, these metrics reflect the relative immaturity, but vibrant nature, of the MTU research program.

B. Containing the costs and improving the efficiency of sponsored projects administration.

1. Number of proposals submitted per central sponsored projects administration

<u>MTU</u>	<u>ALL</u>	<u>R-2</u>	<u>R-1</u>
94.0	54.4-115.6	47.0-102.0	72.3-140.9

This metric describes the number of proposals processed per FTE in sponsored program administration. MTU's value is in the upper end of the ranges for all public universities and Carnegie Research 2 universities, and in the lower middle of the range for Carnegie Research 1 universities. There are indications that larger institutions tend to be less centralized in their sponsored program administration, with work supporting proposal submissions being done at academic unit levels instead of centrally as at smaller institutions.

2. Number of central sponsored projects administration FTE per \$10MM funding

<u>MTU</u>	<u>ALL</u>	<u>R-2</u>	<u>R-1</u>
2.68	1.06-2.66	1.71-3.79	0.70-1.77

MTU is in the center of the range for Carnegie Research 2 universities and has greater values of this metric than all public universities or Carnegie Research 1 universities. Again, this is partially impacted by the decentralization of sponsored program administration at larger institutions. MTU's value, though, is also reflective of the lower level of research funding received per faculty FTE than other institutions.

In summary, MTU's central research administration is processing a relative large number of proposals per FTE, but MTU is receiving a relatively low level of funding per sponsored program FTE. This is consistent with the relatively high level of proposal submissions and the relatively low level of funding per faculty FTE.

C. Improving administrative services to faculty

1. Number of funded principal investigators per central sponsored projects administration FTE

<u>MTU</u>	<u>ALL</u>	<u>R-2</u>	<u>R-1</u>
33.8	21.5-46.4	20.0-41.2	28.6-50.9

This metric reflects the number of faculty assisted per central sponsored program administration FTE. MTU falls in the center of the ranges for all public and Carnegie Research 2 universities and at the low end for Carnegie Research 1 universities, again reflecting the tendency toward decentralized sponsored program administration in larger institutions.

D. Summary of Benchmarking

This benchmarking clearly demonstrates that the MTU faculty is very active in research and compares very favorably with Carnegie Research I institutions in terms of proposals submitted per FTE and the proportion of faculty active in research. MTU's funding level per faculty FTE is lower than most

institutions in the benchmarking survey. Similarly, MTU's sponsored programs administration is very efficient for the number of proposals submitted, but does not compare as well when efficiency is evaluated in terms of the amount of funding received.

MTU has not had great experience in the administration and conduct of large, multimillion dollar grants. There are some exceptions, such as CenCITT and KITES, but the relatively small amount of funding per faculty FTE and the relatively low proposal success rate both indicate the fact that MTU's research program is still in its early stages of maturity. MTU's research is mostly characterized by younger investigators working on single investigator projects or projects involving small teams of investigators.

MTU's sponsored program administration is typical of smaller institutions, in that it is largely centralized. At larger institutions, academic units provide more of the support for pre-award proposal processing and there is relatively less central administration of these functions. This factor is indicated in several of the benchmarking metrics where the Carnegie Research 1 institutions are notably more efficient than Research 2 and other institutions. This is partly due to economies of scale, but the decentralization of sponsored programs administration is a major factor.

These results indicate that there is a great deal of potential for growth in the MTU research effort. As the MTU research effort matures, the funding per faculty FTE should increase. The level of activity of MTU faculty is high and has been increasing rapidly. This supports the conjecture that a vibrant research program is underway at MTU, and indicates that we need to take administrative steps to support this program and foster its maturation.

E. Suggested Actions

To improve our efficiency related to Carnegie Research 1 institutions to which MTU aspires, the major single factor seems to be the relatively low level of research funding received per faculty FTE at MTU, especially relative to the high levels of proposal submission activity. There are a number of steps that can be taken to address this issue. One that is currently underway is to address the development and operation of research centers and institutes. MTU has a number of such units, but they are structured in a haphazard fashion and are not always perceived as beneficial within their associated academic units.

Another step that could be taken is to increase the number of soft-dollar research faculty and research scientists/engineers. These individuals can take on largely autonomous research supervisory roles, with activities in proposal development and submission, graduate student advising and consultation, and at least some level of involvement in graduate and undergraduate instruction. Such personnel can contribute greatly to the apparent research productivity per faculty FTE, and are characteristic of the research enterprise at Carnegie Research I universities. MTU needs to review policies related to these positions and implement changes that will foster the growth of this important cadre of individuals.

Another characteristic of institutions with active, efficient research programs is the decentralization of sponsored project administration. There are several individuals across campus that assist faculty and researchers in their units with proposal preparation and submission, but this is not widespread. Most of these individuals are supported by sponsored project funds or facilities and administrative costs returned to PIs and academic units. MTU needs to examine mechanisms for increasing the number of such personnel in academic units and methods of assigning such people increased administrative responsibility. It will be especially important to support faculty in the development and administration of larger grants.