

The Economic Impact of Research at the University of North Dakota: Fiscal Year 2005

The University of North Dakota received approximately \$80.6 million in grant and contract awards in fiscal year 2005. Input-output analysis indicates that the economic impact of these awards on Grand Forks County, the State of North Dakota, and the North Central Census Region was a staggering \$162.78 million in economic output, 1,584 jobs, and almost \$31.5 million in local, state, and federal taxes.

Report Commissioned by the Office of the Vice President for Research

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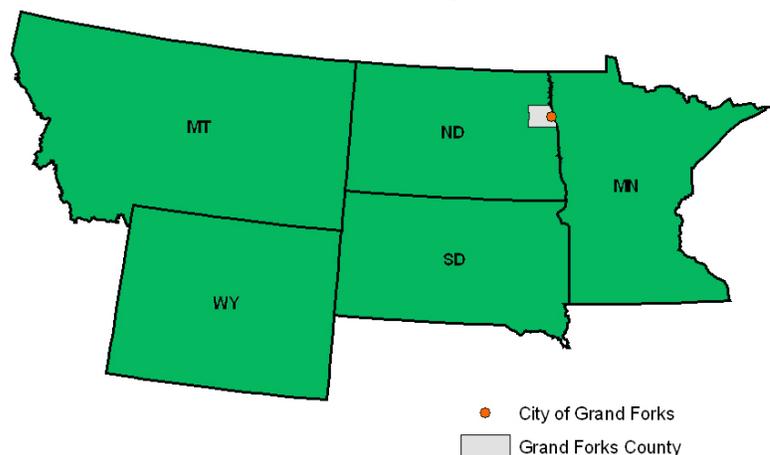


This report provides estimates of the economic impacts of the approximately \$80.6 million in sponsored research occurring at the University of North Dakota (UND) during fiscal year 2005 (FY05). Estimates are given for Grand Forks County, the State of North Dakota, and the North Central Census Region (North Dakota, South Dakota, Minnesota, Montana, and Wyoming), measured by the value of economic output, employment, and tax revenues.

With the exception of tax revenues, measures of economic impact are frequently categorized as *direct*, *indirect* and *induced* impacts.

The *direct* impact of the research on a region is the result of spending the available research dollars on the purchase of goods and services such as laboratory supplies or the hiring of students or technicians. The purchase of goods and services from the sponsored research creates economic activity in supporting industries which is referred to as the *indirect* impact. The *induced* impact results from purchases made by those individuals whose income has been generated by employment related to either the *direct* or the *indirect* impact of the sponsored research.

North Central Region



The Economic Impact of UND Research on Output and Employment

Figure 1 shows the relative effects of the direct, indirect and induced impacts of UND sponsored research on the economic output of Grand Forks County, North Dakota, and the North Central Region, respectively. For each dollar spent for research at UND there was \$1.46 in economic activity in Grand Forks County, \$1.58 in North Dakota, and \$2.06 in the North Central Region. Not surprisingly the economic impact was greater as the size of the study area increased. These results clearly indicate the importance of the research conducted at UND on the local, state, and regional economies.

Figure 1: Output per UND Research Dollar

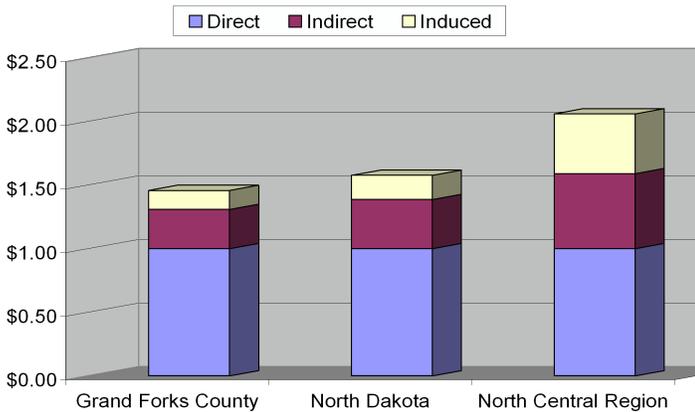
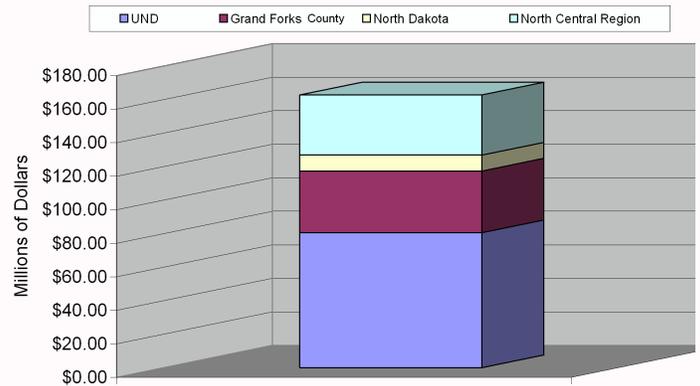


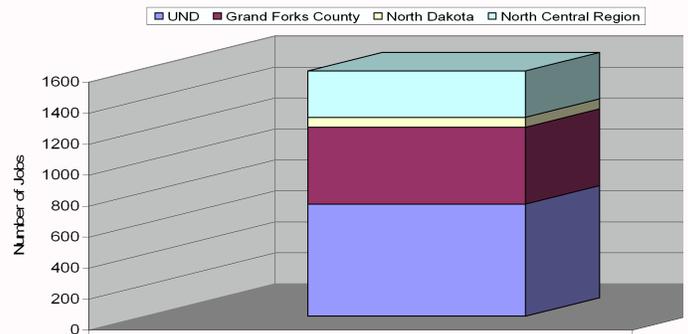
Figure 2 shows the cumulative economic output impacts of FY05 UND sponsored research across the region, beginning with the direct impact on UND. The impacts added by indirect and induced impacts on Grand Forks County, the remainder of North Dakota, and the North Central Region are shown by the heights of their respective blocks. The cumulative impact of UND research within the State of North Dakota is \$126,870,000. See Table I for additional details.

Figure 2: Cumulative Output



The estimated FY05 employment impact of UND research was approximately 724 jobs at UND, 495 additional jobs in Grand Forks County, 65 jobs elsewhere in North Dakota and 300 additional jobs outside of North Dakota within the North Central Region. These cumulative employment impacts are shown in Figure 3. The cumulative number of jobs within the State of North Dakota created by UND research is 1,284. See Table I for additional details.

Figure 3: Cumulative Employment



The Economic Impact of UND Research on Local, State and Federal Taxes

UND research expenditures are not taxable, but the estimates in Table I show that the indirect and induced impacts of FY05 UND sponsored research generated \$2.5 million in state and local tax revenues and \$15.17 million in federal tax revenues from Grand Forks County. An additional \$320 thousand in state and local taxes and \$2.32 million in federal taxes was generated outside of Grand Forks County within North Dakota. Interestingly, \$3.09 million in state and local taxes and \$8.1 million in federal taxes were estimated to have been generated outside of North Dakota within the North Central Region. The total state and federal taxes generated by UND's sponsored research was \$31.5 million. Figure 4 shows cumulative total tax revenues estimated for Grand Forks County, North Dakota and the North Central Region.

The \$80.6 million in sponsored research received by UND in FY05 is estimated to have had an additional impact of \$36.82 million in Grand Forks County, \$9.51 million in other counties within North Dakota and \$35.92 million in the North Central Region. This research is also estimated to have led to the creation of 724 jobs within UND, 495 additional jobs in Grand Forks County, 65 additional jobs in other counties of North Dakota and 300 jobs outside of North Dakota but within the North Central Region for a total of 1,584 jobs. The state, local and federal tax impact of UND research spending was estimated at \$17.67 million from Grand Forks County, plus another \$2.64 million from North Dakota and another \$11.19 million from the North Central Region, for a total of \$31.5 million in state, local, and federal taxes attributable to FY05 UND sponsored research.

Figure 4: Cumulative Tax Revenues

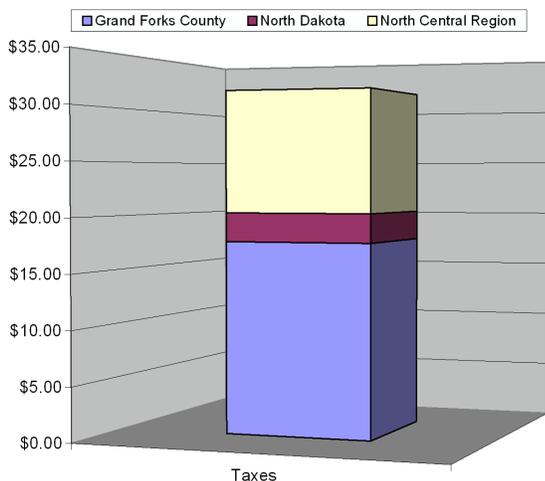
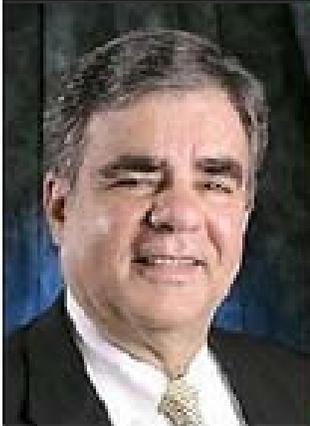


Table 1: Economic Impact Summary for Fiscal Year 2005

Impact Area	UND Research Impact	
	Output	Number of Jobs
UND	\$ 80,530,000	724
Grand Forks County	36,820,000	495
North Dakota	9,520,000	65
North Central Region	35,920,000	300
Total	\$162,780,000	1,584
	S/L Taxes	Federal Taxes
Grand Forks County	\$ 2,500,000	\$ 15,170,000
North Dakota	320,000	2,320,000
North Central Region	3,090,000	8,100,000
Total	\$ 5,910,000	\$ 25,590,000

University of North Dakota's Research Administration



Peter Alfonso, Ph.D., has been Vice President for Research at the University of North Dakota since 2002. The mission of the Office of the Vice President for Research is to serve the broad research community of the University of North Dakota, a community that is instrumental in meeting the strategic aims of the University. Research administration is centered in five offices: namely, the Office of the Vice President for Research, Grants and Contracts Administration, Research Development and Compliance, Technology Transfer and Commercialization, and ND EPSCoR. In fiscal year 2005, a total of \$80.6 million was received in sponsored program awards, and sponsored program expenditures totaled \$74.1 million.



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