

Michigan's URC Vendor Profile Report

Michigan's URC

This report details the economic impacts of research spending by exploring the research-related vendor contracts funded by sponsored research projects at universities that are members of Michigan's University Research Corridor: Michigan State University, University of Michigan, and Wayne State University. The Vendor Profile tab shows such spending at the national level, including expenditures to minority-owned, woman-owned, and small businesses. The Industry Revenue Analysis tab breaks out research-related vendor spending by industry sector. See the note at the bottom of this page for important information about the data underlying this report.

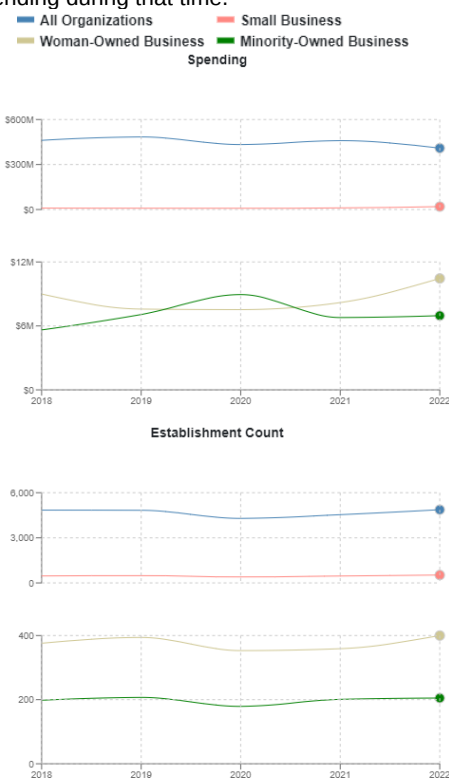
About the Data

- This report is created by linking data submitted by URC with business directory data from Moody's Orbis dataset, and data from the Bureau of Labor Statistics.
- This report excludes payments to entities outside of the U.S., and some of the Orbis data could not be matched to vendors in URC' data.
- As a result, this report accounts for 71% of vendor organizations and 74% of research-related spending on goods and services contained in URC' data submitted to IRIS.
- More information is available in the Methodology section.

Highlights

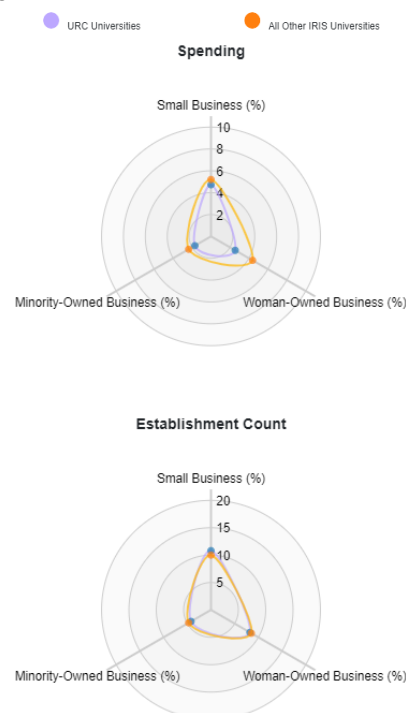
- URC spent **\$3.11B** in research funding with **11,227** vendors and subcontractors across the U.S. between **2018** and **2022**.
- **1,371** vendors were small businesses.
- **1,156** were owned by minorities or women.

From **2018** to **2022**, this report matched **\$2.25B** in research spending from **URC** to specific vendors and subcontractors. Of that amount, **\$56.94M** was matched to **1,371** small businesses across the country. **1,156** minority-owned and woman-owned businesses received **\$68.38M** in research spending during that time.



In **2022**, **URC** spent **\$19.34M** with **527** small businesses; **\$10.46M** with woman-owned businesses; and **\$6.96M** with minority-owned businesses. A total of **492** woman-owned or minority-owned businesses sold goods and services to the universities to support research.

These charts include percentages of spending and counts of establishments.



The visualizations on this page represent a portion of the total research spending of URC that was used to purchase goods and services from vendors or subcontracts and include both federal and non-federal research expenditures. The matched data used in this section account for 74% of the total vendor and subcontractor spending of URC. Data were excluded when spending went to businesses outside the United States or to individuals. Data that could not be matched to Moody's Orbis dataset are also excluded. The identities of the businesses in this report have been masked. Negative spending values indicate refunds from universities to vendors, or other similar transactions.

Top Industries Receiving Research Spending from IRIS

Member Institutions by Revenue

Many businesses do work in multiple industries. This section uses Moody's Orbis data to classify businesses into a primary industry based on the revenue they bring from activities in that industry. The data displayed in this section thus emphasize the effects that URC' vendor spending and subcontracts have on the economic bottom line of companies in a particular industry. The spending shown represents the total period of time covered by URC' data in constant 2021 dollars. This section also shows the amount of research spending received by minority-owned and woman-owned businesses, and by small businesses.

- The top five industries receiving research spending from URC between **2018** and **2022** , as measured by individual business revenue, were
 - Educational Services
 - Health Care and Social Assistance
 - Manufacturing
 - Professional, Scientific, and Technical Services
 - Construction
- In the Educational Services industry, **38** businesses that received **\$2.48M** of research spending from URC were small businesses; **17** that received **\$12.19M** were minority-owned businesses; and **21** that received **\$2.31M** were woman-owned businesses.

Industry NAICS Title	Total Funds Received (2018-2022)
Educational Services	\$879.21M
Health Care and Social Assistance	\$512.65M
Manufacturing	\$278.26M
Professional, Scientific, and Technical Services	\$187.93M
Construction	\$50.19M
Public Administration	\$41.09M
Administrative and Support And Waste Management And Remediation Services	\$38.65M
Wholesale Trade	\$38.58M
Other Services (except Public Administration)	\$36.37M
Finance and Insurance	\$25.02M
Information	\$15.37M
Transportation and Warehousing	\$13.51M
Retail Trade	\$8.75M
Real Estate and Rental And Leasing	\$7.12M
Accommodation and Food Services	\$6.95M
Management of Companies and Enterprises	\$2.65M
Arts, Entertainment, and Recreation	\$1.67M
Agriculture, Forestry, Fishing and Hunting	\$1.5M
Utilities	\$1.06M
Mining, Quarrying, and Oil And Gas Extraction	\$134K

The data on this page represent a portion of the total research spending of URC that was used to purchase goods and services from vendors or subcontracts and include both federal and non-federal research expenditures. The matched data used in this section account for 74% of the total vendor and subcontractor spending of URC. Some additional spending is not displayed in this visualization because it could not be matched with NAICS codes. Data were excluded when spending went to businesses outside the United States or to individuals. Data that could not be matched to Moody's Orbis dataset are also excluded. The identities of the businesses in this report have been masked.

Vendor Profile Report Methodology

Details on how the reports are created, what they show, and the process of matching different datasets

INTRODUCTION

The IRIS Vendor Profile Report demonstrates the economic impact of universities' research spending by describing the industries, geographic areas, and types of businesses that receive contracts and subawards for goods and services through research grants. The report shows the dollars of research funding spent; the number and types of establishments receiving research spending, including small businesses and minority-owned and woman-owned businesses; and whether these figures change from year to year. Data include both federal and non-federal research expenditures.

ABOUT THE DATA

This report includes data from members of Michigan's University Research Corridor (URC) that have reported to IRIS the relevant data for calendar years 2018-2022: Michigan State University, University of Michigan, and Wayne State University.

HOW TO UNDERSTAND THE RESULTS

The Vendor Profile Tab

This section provides an overview of the economic impacts of research spending by describing the direct expenditures of your university's research funding to outside vendors and subcontractors. This section shows such spending at the national level, including expenditures to minority-owned and women-owned businesses, and small businesses. Selection of Research Spending or Establishments affects both the line graphs and the radar chart. Yearly spending, including both vendor spending and subawards, is included on the line graphs for every year for which your university has sent complete data. Spending is displayed separately for women-owned businesses, minority-owned businesses, and small businesses, using the designations made in Moody's Orbis data. When using the radar chart, the user must select an individual year to display. The radar chart shows how the percentages of all research spending that your university spends with small businesses, minority-owned businesses and women-owned businesses compares with all other IRIS universities with these types of businesses in that year.

The Industry Revenue Analysis Tab

The sunburst display shows spending organized by industry, using NAICS codes (see below for a description of NAICS codes). In this visualization, NAICS codes are assigned to multi-establishment firms based on the NAICS of the establishment(s) with the largest revenue. Thus, this display shows the impact of the dollars your university spends on industries, as characterized by their most typical revenue stream. You can view spending by NAICS industry sector, sub-sector, or group. It is important to note the spending numbers we report for each industry do not include expenditures to establishments/firms that were not matched. Please see the Data Matching section below for more detail on the data underlying this report.

HOW THE REPORTS ARE CREATED

This report is constructed by linking the vendor and subawardee data your university supplies to IRIS with business directory data (a dataset called Orbis) from Moody's. Prior to any data linking, vendor and subawardee names for individual people are suppressed by IRIS. Name standardization is used to correct common data entry errors in vendor names. Quality rules, such as requiring the disambiguated vendor name to be correct and the date of the transaction to be reasonable, are applied. To link to Orbis data, a file of vendor and subawardee names and addresses are submitted to Moody's. (No personally identifiable data about individuals are shared with Moody's.) Their matching procedures link your university's vendor and subawardee names and address data to their database, testing each potential match and giving it a quality rating of A-E, with A being the highest quality and E being the lowest. In this report, IRIS uses all matches with a grade of "A" or "B", which Moody's reports as an average match across all fields of 85% or better. IRIS also uses a subset of records that have received a "C", "D", or "E", rating. In order to determine whether or not these records should be included, vendor names and location information are compared against the returned name and location using a token-sorted Levenshtein distance. If the match score for each field exceeds our threshold, the match is verified and included in the report. In addition, unmatched records indicating subawards or purchases larger than \$1 million were reviewed by IRIS staff. These records were matched to businesses when IRIS staff found additional information on company names or locations that could be used to overrule the automated match guidelines. The data retrieved from these matches includes measures of industry (NAICS) based on revenue. All spending metrics are expressed in 2023 real dollars.

NAICS Codes

The North American Industry Classification System (NAICS) is a system for classifying establishments (individual business locations) by type of economic activity in Canada, Mexico, and the United States. Its purposes are: (1) to facilitate the collection, tabulation, presentation, and analysis of data relating to establishments, and (2) to promote uniformity and comparability in the presentation and analysis of statistical data describing the North American economy. NAICS is used by Federal statistical agencies that collect or publish data by industry. For this report, NAICS codes are used to classify businesses according to the types of economic production in which they participate. The codes are organized into levels beginning with broad industry sectors to more specific groupings. The first two digits of a NAICS code represent general categories of economic activities. Nested within the two-digit codes, a third digit represents the subsector. Nested in turn within that, a fourth digit represents the industry group. IRIS matches payments to vendors and subawardees at the four-digit NAICS level.

NOTE: For this report, we use the 2022 NAICS codes for the first time. The codes are revised every five years. The retail and publishing sectors saw some of the most significant changes in the latest revision. A summary of the differences between the 2022 and 2017 codes can be found at <https://www.bls.gov/sae/additional-resources/details-on-the-conversion-to-the-2022-north-american-industry-classification-system-naics-from-2017-naics.htm>

Data Matching

IRIS links your vendor and subaward data with the U.S. Census Bureau and Moody's data resources to return summaries by year, North American Industry Classification System (NAICS) code, and business ownership. We hope this information will help you understand the results in your report. Matching vendor and subcontractor information to business data is a multi-step process that starts with the vendor and subawardee name and address information submitted by universities.

Upload And Data Cleaning

In the first step, a university uploads data to IRIS. Next, IRIS standardizes the names and addresses of vendors and subawardees, creates a list of unique vendors / subawardees, and removes the names of all individual people from that list. For this report, IRIS also imposes a requirement that the vendor or subawardee be in the United States. IRIS performs these data cleaning steps every time we prepare for the next step, matching to data sources.

Matching

In this step, the list of standardized names and addresses for your university's vendors and subawardees is matched to Orbis and Moody's.

Matching To Moody's Orbis Dataset

For this report, metrics obtained from Moody's Orbis dataset are based on data URC submitted as of 2024-05-15. 81% or 31,360 of the 38,602 unique U.S. vendors and subawardees in participating universities' data on that date were identified as being in the U.S., accounting for 96% or \$3.11B of Michigan's URC' spending. Within the spending identified as occurring with U.S. vendors, 98% or \$3.05B of the spending went to organizations rather than individual people. This included 15,797 organizations. Algorithms at Moody's matched the vendors and subawardees on participating universities' list of U.S. organizations to their Orbis dataset, using name, street address, city, state and zip code. 71% or 11,227 of these U.S. organizations, accounting for 74% of spending, were matched using Moody's matching quality rating procedures described in the "How Reports are Created" section.

LIMITATIONS

Only vendors and subawardees with U.S. addresses are included in this report. This is done to ensure a consistent basis across all metrics, since some metrics, such as NAICS codes, cannot be applied to spending in many other countries. A vendor address in administrative records may be a firm's out-of-state billing address rather than the address of a local establishment that provided a service. To the extent that this occurs, local spending will be underestimated because the spending will be attributed to the out-of-state billing address. We continue to work to improve the quality of matching and data production in order to address these limitations.

CITATION

Vendor Profile Report, Institute for Research on Innovation and Science (IRIS), August 2024