Michigan's URC Alliance Vendor Profile Report

IRIS INSTITUTE FOR RESEARCH ON INNOVATION & SCIENCE

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 (University of Michigan, Wayne State University, and Michigan State University). This section shows such spending at the national level, including expenditures to minority-owned, woman-owned, and small businesses. The Industry Revenue Analysis section breaks out research-related vendor spending by industry sector. See note at the bottom of this page for important information about the data underlying this report.

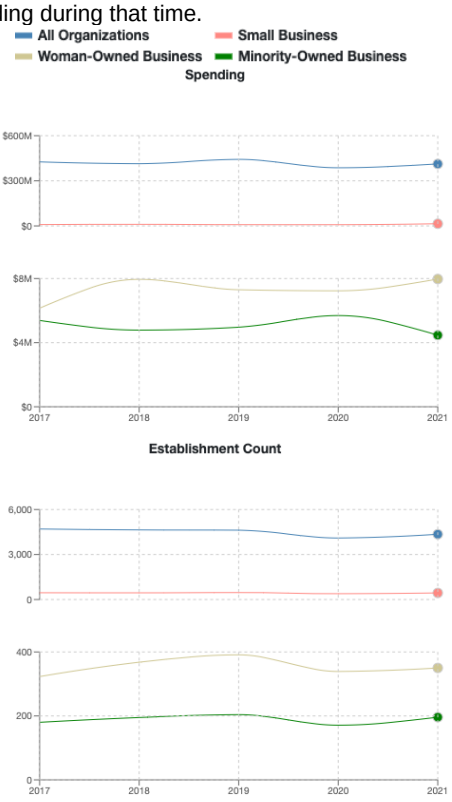
About the Data

- This report is created by linking data submitted by URC universities with business directory data from Bureau Van Dijk'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 universities' data.
- As a result, this report accounts for 69% of vendor organizations and 68% of research-related spending on goods and services contained in URC universities' data submitted to IRIS.
- More information is available in the Methodology section.

Highlights

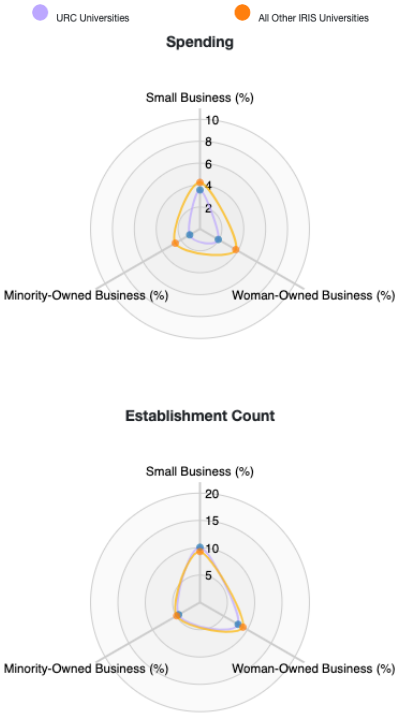
- URC universities spent **$3.13B** in research funding with **10,716** vendors and subcontractors across the U.S. between **2017** and **2021** .
- **1,256** vendors were small businesses.
- **1,069** were owned by minorities or women.

From **2017** to **2021**, this report matched **$2.08B** in research spending from **URC universities** to specific vendors and subcontractors. Of that amount, **$51.31M** matched to **1,256** small businesses across the country. **1,069** minority- and woman-owned businesses received **$53.46M** in research spending during that time.



In **2021**, **URC universities** spent **$14.67M** with **439** small businesses; **$7.97M** with woman-owned businesses; and **$4.47M** with minority-owned businesses. A total of **437** woman- 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 universities 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 68% of the total vendor and subcontractor spending of URC universities. Data were excluded when spending went to businesses outside the United States or to individuals. Data that could not be matched to Bureau van Dijk'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.

This report was issued in March 2024.

BUREAU VAN DIJK

Top Industries Receiving Michigan's URC Alliance Research Spending by Revenue

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Many businesses do work in multiple industries. This section uses Bureau Van Dijk'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 universities' 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 universities' data in constant 2023 dollars.This section also shows the amount of research spending received by minority - and woman - owned businesses, and by small businesses.

- The top five industries receiving research spending from URC universities between **2017** and **2021** , as measured by individual business revenue, were
  - Educational Services
  - Health Care and Social Assistance
  - Manufacturing
  - Professional, Scientific, and Technical Services
  - Administrative and Support And Waste Management And Remediation Services
- In the Educational Services industry, **38** businesses that received **$667K** of research spending from URC universities were small businesses; **14** that received **$3.2M** were minority-owned businesses; and **16** that received **$1.31M** were woman-owned businesses.

Industry NAICS Title	Total Funds Recieved (2017-2021)
Educational Services	$708.87M
Health Care and Social Assistance	$494.67M
Manufacturing	$268.96M
Professional, Scientific, and Technical Services	$204.58M
Administrative and Support And Waste Management And Remediation Services	$62.69M
Public Administration	$51.01M
Other Services (except Public Administration)	$49.25M
Wholesale Trade	$47.12M
Construction	$29.54M
Finance and Insurance	$21M
Information	$14.28M
Transportation and Warehousing	$12.91M
Retail Trade	$9.9M
Accommodation and Food Services	$7.37M
Real Estate and Rental And Leasing	$7.13M
Arts, Entertainment, and Recreation	$3.69M
Management of Companies and Enterprises	$3.25M
Agriculture, Forestry, Fishing and Hunting	$1.69M
Utilities	$984K
Mining, Quarrying, and Oil And Gas Extraction	$134K

The data on this page represent a portion of the total research spending of URC universities 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 68% of the total vendor and subcontractor spending of Michigan's URC Alliance. 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 Bureau van Dijk'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- and woman-owned businesses; and whether these figures change from year to year. Data include both federal and non-federal research expenditures.

HOW TO UNDERSTAND THE RESULTS

The Vendor Profile Tab

This section provides an overview of the 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- 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 Bureau van Dijk'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

This section displays spending organized by industry employment, showing the direct impact of the dollars your university spends on the workforce in those industries. The spending shown represents the total period of time covered by your university's data, converted to real 2023 dollars. You can also compare the earnings and number of employees in companies supported by your university's research spending to the national average. To get an approximate estimate of the number of jobs outside the university that are directly affected by your research spending, multiply the number of establishments in an industry by the average number of employees at those establishments. 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. The spending displayed represents the total period of time covered by the records sent by your university through 05-08-2023, converted to real 2023 dollars. 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 Bureau van Dijk. 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 Bureau van Dijk. (No personally identifiable data about individuals are shared with Bureau van Dijk.) 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 BvD 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 Bureau van Dijk 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 Bureau van Dijk.

Matching To Bureau Van Dijk's Orbis Dataset

For this report, metrics obtained from Bureau van Dijk's Orbis dataset are based on data Michigan's URC Alliance submitted as of 2023-11-15. 81% or 31,586 of the 39,231 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 $3.13B of Michigan's URC Alliance' spending. Within the spending identified as occurring with U.S. vendors, 98% or $3.07B of the spending went to organizations rather than individual people. This included 15,566 organizations. Algorithms at Bureau van Dijk 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. 69% or 10,716 of these U.S. organizations, accounting for 68% of spending, were matched using Bureau van Dijk's matching quality rating procedures described in the "How Reports are Created" section and are used in this report on tabs with the Bureau van Dijk logo.

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.