Project Title: Linked NCSES Data for Evidence-Based Policy: Measuring Early Career Success and Modelling the Academic Research Supply Chain

Awardee: University of Michigan

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Award Type: R&D

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Abstract:

We propose two new data linkage projects to support research and reporting while expanding ongoing efforts to integrate NCSES data products with the Universities Measuring the EffecTs of Research on Science, Innovation & Competitiveness (UMETRICS) dataset maintained by the Institute for Research on Innovation and Science (IRIS). Project 1 will develop and validate individual level linkages between (a) UMETRICS and the Early Career Doctorate Survey (ECDS), (b) the ECDS and Survey of Earned Doctorates (SED) and (c) the ECDS and scientific outcome data about patenting and publication. Together, these linkages will enable cutting edge research to examine the role of collaboration, funding from multiple sources, productivity of various types, and features of graduate training on early career success in academia. This work will integrate with and expand ongoing research to link UMETRICS to the SED and Survey Doctoral Recipients. Project 2 will expand NCSES' ability to examine and report on new dimensions of the economic impact of research funding by integrating UMETRICS data on direct cost purchases of goods and services from vendor organizations with comprehensive open access organizational data developed at IRIS. This linkage will enable cutting-edge research and reporting on the characteristics, health and resilience of the academic research supply chain, document the role of research funding in supporting small, innovative, minority and women owned businesses. That research will also develop products that demonstrate the value of such linkages and methods to expand them. A particularly valuable extension would be to integrate UMETRICS with the Annual Business Survey (ABS) and the BERD. Such linkages will enable much more extensive analysis of the relationship between academic research funding and the innovative efforts of corporations of all sizes, but because these surveys contain Title 26 and Title 13 protected data, additional approvals will be necessary to proceed. The demonstrations of value and methods developed under this project will support the process of access. Together these two research and reporting projects will (a) result in novel findings, tools, and data products that address key NCSES needs, (b) demonstrate the value of a "mosaic" of linked restricted data assets to expand NCSES reporting capabilities in response to recent NASEM recommendations, and (c) allow engagement of the research community and other data providers in a fashion that represents a culmination of more than a decade of SES investment in the Science of Science and Science of Science Policy.