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(2006) that accounts for the proportion of each distinctive group represented on research teams and produces a value that ranges from 0 to 1. The closer a research team's diversity level is to 1, the higher the diversity of the team, while the opposite is true for research teams with levels closer to 0. We noticed that the majority of teams are ethnically homogeneous with the most diverse teams having a diversity index of about 0.5 (or ranging from 0.4 to 0.6). For example, preliminary results show the pattern of Hispanic and Middle Eastern male PIs leading the most diverse research teams while European females seem to be the leaders of the least diverse teams, on average. The second stage of our analysis is twofold. Firstly, we employ a negative binomial regression to analyze future grant acquisition overall and by scientific discipline. We found the team diversity to be the most important in STEM disciplines and the least crucial for grants devoted to the administrative needs. At the same time, the PI's prior grant records heavily contribute to the positive future outcomes as expected. Secondly, we evaluate publication records in respect to disparities in the research team diversity. Our preliminary results show heterogeneous effects of the team diversity across different fields of scientific research and topic subgroups. Therefore, our current research activity includes the comparison of research funding practices between various parts of the scientific community as well as the exploration of the project PI's mentoring practices and its effect on young scientists' performance in grant acquisition and publications.

Significance

The outcomes of this project can make several contributions to the scientific field. First, it can show how a team leader's ethnoracial and gender identities impacts team diversity. Considering the influence that a project PI has relative to who is included and who is left out of a project has significant implications for equity efforts within science. Second, the outcomes can reveal useful insights about the project PI's mentoring practices and how such practices inform young scientists' performance in grant acquisition and publications. Third, this study examines the processes of panel review and funding of NSF and NIH, helping these agencies to put in place preventive policies and procedures to ensure equitable distribution of funds to scientists. This study could also lead to the recommendations for restructuring of research teams and improved success rates of grants. Finally, the results of this study could reveal the ways in which team diversity impacts team productivity, creativity, and success more broadly.

[734] *Diversification vs. specialization from the perspective of research programmes: a complexity approach*

Antonio Zinilli (National Research Council of Italy), Emanuela Reale (National Research Council of Italy), Andrea Orazio Spinello (National Research Council of Italy) and Emanuela Varinetti (National Research Council of Italy).

Abstract

In the last few years, research funding instruments have become strategic issues in science, technology and innovation policy studies. This paper presents a new perspective for attempting to further understanding on the relationship between research funding policies and societal priorities through an exploratory study involving a novel dataset called EFIL – European dataset of public R&D funding instruments. The present work tackles the diversification and specialization of government research funding instruments using economic complexity approaches. The paper deepens the diversification/specialisation of ten European countries in SDGs, analysing a part of research public arena, namely the project funding instruments designed and managed by national Research Funding Organizations (RFOs) for the period year from 2016 to 2021. The results show a clear differentiation between agencies and, as a result, between countries. The SDGs instrument orientation in Norway is more diversified, and there is less overlap between the SD goals. This means that there is a clear difference in instrument orientation, as well as between agencies within the same country with distinct and well-defined policy goals. In addition, the volatility of the complexity rating, i.e. its variation over time, was observed for some countries. Other countries, on the other hand, showed little variation in SDGs over time.

[1830] *Resource Dependence Effects in Formalized Inter-organization Exchanges: The Case of University F&A Rates*

Yong In Choi (Georgia Institute of Technology) and John Walsh (Georgia Institute of Technology).

Abstract

Resource Dependence Theory argues that the resource dependencies between organizations, characterized by the degree of power imbalance and of mutual dependence, predict the outcomes of resource exchanges. A primary condition of the theory is that actors should have discretion over resource allocation. It is, however, an open question of whether and to what extent such power and interdependence effects operate in a formalized dependence relation, such as between the government and a government contractor under a highly specified set of procurement rules. While such rules are supposed to take away discretion from the actors and remove informal elements from the organizational relationship, Resource Dependence Theory, combined with prior work on informal processes in organizations, predicts