



EMERALD POINTS

**COLLABORATIVE
R&D AND THE
NATIONAL RESEARCH
JOINT VENTURE
DATABASE**

A Statistical Analysis

ALBERT N. LINK



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ALBERT N. LINK

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PROLOGUE

Plato wrote in *The Republic* the following, “The beginning is the most important part of the work.” Being so motivated, I am using this Prologue to explain briefly my entrance into the research field of collaborative R&D or more specifically into the study of research joint ventures (RJVs).

My research journey began in 1985 with a research grant from the National Science Foundation (NSF). The project, titled “An Economic Analysis of Cooperative R&D Programs,” had the objective of creating a national database on formal RJVs based on public filings in the *Federal Register* in the aftermath of the National Cooperative Research Act (NCRA) of 1984. The unit of observation in the database that I created, which I named the COoperative REsearch (CORE) Database, and which I discuss in some detail in Chapter 1 of this book, was the RJV itself. Since then, I have continued to write about cooperative research and RJVs both in terms of legislative initiatives and in terms of informal firm-with-firm, firm-with-university, and firm-with-public sector research cooperation.

This book represents, to some extent, a stopping point in my research journey. In early 2014, I developed a survey instrument to collect detailed information about RJVs. My effort of testing the instrument and soliciting RJV-active firms to respond to it resulted in what I call the National RJV database (NRJVD). I had the privilege of unveiling aspects of this database at the Organisation for Economic Co-operation and Development (OECD) in Paris in 2014. Since that time, relevant data were collected and analyzed. I have published a few papers based on the NRJVD and a 2020 book titled *Collaborative Research in the United States* in which information from the NRJVD is described in some detail. This book is my swan song, so to speak, on collaborative R&D and RJVs. Emerald Publishing was kind enough to make pages available to me to explore the NRJVD descriptively and economically, and herein I am pleased to present my findings.

While I began this personalized Prologue with a quotation from Plato, I end it with a quotation from William Blake: “You never know what is enough unless you know what is more than enough.”

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LIST OF ABBREVIATIONS

ATP	Advanced Technology Program
CORE	COoperative REsearch
DOJ	Department of Justice
NCRA	National Cooperative Research Act
NCRPA	National Cooperative Research and Production Act
NIST	National Institute of Standards and Technology
NRJV	National Research Joint Venture
NRJVD	National Research Joint Venture Database
NSF	National Science Foundation
OECD	Organisation for Economic Co-operation and Development
OPEC	Organization of the Petroleum Exporting Countries
R&D	Research and Development
RJV	Research Joint Venture
SDOAA	Standards Development Organization Advancement Act
SRPs	Strategic Research Partnerships
SRS	Science Resources Studies
TFP	Total Factor Productivity

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ABOUT THE AUTHOR

Albert N. Link, PhD, is the Virginia Batte Phillips Distinguished Professor at the University of North Carolina at Greensboro (UNCG). He received a BS degree in Mathematics from the University of Richmond (Phi Beta Kappa) and the PhD degree in Economics from Tulane University. After receiving his PhD, he joined the economics faculty at Auburn University, was later Scholar-in-Residence at Syracuse University, and then he joined the economics faculty at UNCG in 1982. In 2019, he was awarded the title and honorary position of Visiting Professor at the University of Northumbria, United Kingdom.

His research focuses on entrepreneurship, technology and innovation policy, the economics of R&D, and policy/program evaluation. He is currently the Editor-in-Chief of the *Journal of Technology Transfer*. He is also co-editor of *Foundations and Trends in Entrepreneurship* and founder/editor of *Annals of Science and Technology Policy*.

Among his more than 60 books, some of the more recent ones are: *Technology Transfer and U.S. Public Sector Innovation* (Edward Elgar, 2020), *Collaborative Research in the United States: Policies and Institutions for Cooperation Among Firms* (Routledge, 2020), *Sources of Knowledge and Entrepreneurial Behavior* (University of Toronto Press, 2019), *Handbook for University Technology Transfer* (University of Chicago Press, 2015), *Public Sector Entrepreneurship: U.S. Technology and Innovation Policy* (Oxford University Press, 2015), *Bending the Arc of Innovation: Public Support of R&D in Small, Entrepreneurial Firms* (Palgrave Macmillan, 2013), *Valuing an Entrepreneurial Enterprise* (Oxford University Press, 2012), *Public Goods, Public Gains: Calculating the Social Benefits of Public R&D* (Oxford University Press, 2011), *Employment Growth From Public Support of Innovation in Small Firms* (W.E. Upjohn Institute for Employment Research, 2011), and *Government as Entrepreneur* (Oxford University Press, 2009).

His other research consists of more than 200 peer-reviewed journal articles and book chapters, as well as numerous government reports. His scholarship has appeared in journals such as the *American Economic Review*, the *Journal of Political Economy*, the *Review of Economics and Statistics*, *Economica*, *Research Policy*, *Economics of Innovation and New Technology*, the *European*

Economic Review, Small Business Economics, ISSUES in Science and Technology, Scientometrics, and the Journal of Technology Transfer.

Based on citations to his published works, he ranks in the top 10 of all global scholars registered in RePEc in a number of different fields of study in economics.

His public service includes being a member of the National Research Council's research team that conducted the 2010 evaluation of the US Small Business Innovation Research (SBIR) program. Based on that assignment, he later testified before Congress in April 2011 on the economic benefits associated with the SBIR program. He also served from 2007 to 2012 as the US Representative to the United Nations (Geneva) in the capacity of Co-vice Chairperson of the Team of Specialists on Innovation and Competitiveness Policies Initiative for the Economic Commission for Europe. In October 2018, he delivered the European Distinguished Scholar Lecture at the Commission's Joint Research Centre (Seville).

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