Social Network Capital and Academic Careers

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Social Network Capital and Academic Success

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Introduction

The relationship between economic performance and various forms of capital underpins a major portion of mainstream economic theory and applied economics. Human, physical, and financial capital represent important factors in the production of goods and services. The label “capital” implies characteristics such as investment, a stream of returns on investment, accumulation, maintenance, depreciation, and transfer. Recently, social capital or social network capital (SNC) has received increased scholarly attention in the literatures in economics, sociology, and business. Limited analysis, however, has been directed at the role of SNC in the academy.

We hypothesize that academic success at the professional level is determined by the stock of human capital (HC) and SNC, and the value flows emerging from these stocks. We view SNC as a complement to HC, increasing the productivity of HC while holding all other factors constant. An analysis of SNC’s importance to academic career success should extend the academy, as well as other large organizations (i.e., research laboratories, government agencies) with similar organizational structures and incentive systems.

There have been few attempts to analyze the role of SNC in universities. Most current research has focused on (i) support networks within a department or college, (ii) networks within a single discipline across multiple universities, (iii) relationships with administrators, or (iv) gender differences. A significant portion of those studies have been conducted at relatively smaller, non-research 1 universities. We find little emphasis in the literature on comparing and contrasting SNC across academic disciplines. Comparisons across academic disciplines are limited as well.

Research Design

We designed a mixed-methods analysis to capture the importance of SNC in academic careers of faculty at the College of Agriculture and Life Sciences (CALS) at the University of Arizona. The population of re-campus faculty (138) across twelve departments was stratified by rank, gender, district, and academic area (i.e., biological, physical, and social sciences). A stratified random sample of 100 faculty was generated, with 51 faculty completing both the questionnaire and the interview. This final sample reflected the general population of CALS faculty for every year. After receiving confirmation that the faculty member would participate in the survey, a questionnaire was mailed to the faculty member at least one week before the scheduled interview. At the interview, the researcher and the faculty member reviewed together the responses to the questionnaire, exploring the importance of SNC in their careers. All interviews were audio-taped to supplement the notes taken during the interview period. The duration of the interviews ranged from 45 minutes to 2 hours.

Respondents were asked to weight the importance of HC and SNC factors that have contributed to their academic careers. A select number of the factors are:

- **Human Capital**
  - Academic Training
  - Creative Ability
  - Work ethic
  - Research area (family topic)
  - Ability to obtain external grants
  - Teaching/Advising Ability
  - The non-academic community

- **Social Network Capital**
  - Relationships in other academic disciplines
  - Faculty and students
  - Government agencies

Faculty also asked to weight the importance of their investment activities in developing and maximizing their HC and SNC.

- **Investment Activities**
  - Prioritizing funds for research
  - Keeping current in literature
  - Developing and teaching new analytical and/or general courses
  - Improving technical skills and techniques
  - Learning new technical skills and techniques
  - Availability of funds from employer
  - Regular attendance at professional meetings
  - Regular attendance at specialized research meetings

The information from the interview was organized by common themes to identify convergent and divergent trends in the faculty responses. This information also was tabulated to show weights across rank, academic area, and gender. Other questionnaire data was utilized in the following multiple regression model:

\[
\text{SNC/HC} = f (\text{academic experience, Bank, Scientific area, External job experience, Gender})
\]

where the dependent variable is the relative importance of SNC in the academic career. Based on the literature, we hypothesized the following signs on those explanatory variables:

**Explanatory Variable** | **Expected Sign**
--- | ---
Full Professor | +
Associate Professor | -
Assistant Professor | -
Biological Sciences | +
Physical Sciences | -
Social Sciences | +
Years of Experience | +
Previous external work experience | -
Gender (being a man) | -

**Preliminary Results**

**Qualitative Analysis**

- Work ethic, ability to obtain grants, and creativity were the most important HC factors.
- Research grants are predominant determinants for junior faculty promotion. Assistant professors are more focused on teaching, associate professors on relationships, and full professors on teaching and research.
- Assistant professors place greater importance on relationships with their mentors, while associate professors emphasize their relationships with peers and colleagues.
- Work ethic is the most important HC factor for both genders.
- Men give relatively more weight to creativity, teaching and advising, while women faculty give more weight to training and improving their skills.
- Women give relatively more weight to business relationships, while male faculty members place more importance to their colleagues.

Among the CALS faculty, business relationships are more important for biological scientists. SNC with governmental agencies is more important for physical scientists.

The ability to obtain grants and contracts contributes to both HC and SNC.

**Quantitative Analysis**

Our quantitative preliminary analysis explores the relationship between the relative importance of SNC (i.e., SNC/HC) to academic rank, discipline area, experience, and other non-academic employment. Our estimations are:

**Explanatory Variable** | **Estimated Sign**
--- | ---
Full Professor | +
Associate Professor | -
Biological Sciences | -
Physical Sciences | -
Social Sciences | +
Years of Experience | +
Previous external work experience | -
Gender (being a man) | -

We found that for all faculty, the relative importance of SNC increases at a decreasing rate over the number of years served in the academy (Figure 1).

**Conclusions**

- SNC and HC are complementary inputs in the academic production process, but details of that relationship are highly individualistic and context specific.
- Faculty indicate that SNC behaviors as “capital” and that it can be transferred from the private to governmental sectors to academia.
- SNC is important for success in academic careers.
- Both HC and SNC require an investment of time.
- HC is increased in an organizational environment that promotes the building of SNC and vice versa.

**Suggestions for Further Analysis**

- Explore the ability to obtain external grants and contracts in SNC and not in HC.
- Explore the relationship between salary and possibly other resources of academic and the relative importance of SNC.
- Analyze a large sample of faculty across colleges, universities, and regions of country.
- Perform an analysis of faculty social circle analysis within the academy should be investigated.

**Selected Literature (Education)**


For further information

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