

## **Reviewer's report**

**Title:** Network-based social capital and capacity-building programs: An example from Ethiopia

**Version:** 1 **Date:** 14 April 2010

**Reviewer:** Sae Takada

### **Reviewer's report:**

This study examines the development of professional relationships in a cohort of Masters students and their mentors at a university in Ethiopia, and its positive association with informational and functional resource exchange.

#### **- Major Compulsory Revisions**

1. In your methods, please explain why you only use out-degree in your contingency table analyses, instead of total degree. Is there a reason you did not include eigenvector centrality, which is a composite score that weighs in both in-degree and out-degree of an individual? This may be a more suitable measure of centrality. The use of eigenvector centrality will also add to the value of using a sociocentric study.

2. In your methods, please clarify the questions you asked the participants. Did you use one or three name generators to elicit the trainee-trainee and trainee-supporter networks: (1) "with whom do you interact for professional purposes;" (2) "from whom did you receive guidance on topic X;" and (3) "from whom did you receive tangible support?" Or were the latter two questions asked, without asking the respondent to name the particular person with whom they engaged in exchange? The way in which the methods section is written does not make this clear.

3. In your methods, please clarify whether, in measuring the trainee-supporter network, the supporters were asked to name other supporters or just trainees?

4. In your results, if all trainees had at least one connection at the end of the year, how is it that the number of average connections for the lowest tertile was 0.5? Did you use only out-going connections to arrive at this number? Please clarify.

5. In your conclusion, you mention that trainees were able to gain different resources from different types of members. Please clarify how this is supported by your results.

#### **- Minor Essential Revisions**

1. In your introduction, please be clearer in how you are defining your concepts. What definition of social capital are you using for the purposes of the research? Where does trust and obligation fit in with resource exchange? How does social

capital that fit in with your understanding of capacity-building?

2. It may be more useful to make the figures larger. At the current size, it is difficult to appreciate the size differentials of the nodes.
3. In your results, the mean number of beds and staff may not be as useful to the reader as the distribution of large versus small hospitals.
4. If the analyses are done using out-degree, I recommend that the size of the nodes also be presented in out-degree. Whichever measure you use, it would be helpful for the reader to be consistent.
5. In your discussion, the central claim you make seem stronger than what the data shows. While the number of degrees was correlated with a greater likelihood of any resource exchange, your data does not support that higher ties are correlated with more exchange. It is likely that there are one or two well-connected trainees who are providing those resources, and the trainees connected to them are more likely to receive them. This is especially plausible given the centralizing tendency of the network.
6. In your discussion, you mention factors that may enable or hinder the relationships. However, given that this is a two-year University-based program, is it realistic to assume that transportation and information technologies would greatly help or hinder these interactions?

- Discretionary Revisions

1. In your introduction, you seem to base your argument on Burt's definition of social capital, which relies on the idea of brokerage and control. Since you are talking about to argue for amplification of scarce human resources through social networks. You may know this already, but Coleman (1988) describes three mechanisms in which social relations serve as resources for individuals. First, trustworthiness and a sense of obligation to each other creates a cycle of people doing things for each other. This means that the overall usefulness of the tangible resources of the community is amplified by their availability to others when needed. Second, the social ties of individuals serve as potential sources of information. Finally, an individual's social network establishes and enforces societal norms.
2. Do you have any recommendation to improve the density and diversity of ties? Do you see any policy or health services implication of your study for similar programs in Ethiopia or in other settings?

**Level of interest:** An article whose findings are important to those with closely related research interests

**Quality of written English:** Acceptable

**Statistical review:** No, the manuscript does not need to be seen by a

statistician.

**Declaration of competing interests:**

I declare that I have no competing interests.