

With whom are you doing?: Applying network analysis to measure intrahousehold resources allocation, bargaining and interactions.

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Abstract

Motivation

One empirical research issue inspired this paper: the empirical estimations of economic models like the household bargaining models or the collective household models request data, namely bargaining and power data, which usually are not easily available.

Aim of Research

The main goal of the paper is apply a methodology based on social network analysis to calculate Centrality, Cohesion and Mutuality indicators inside the household, in order to obtain measures which could be applied in empirical studies of collective household behaviour.

Theoretical Background

Network methodology and measures are already applied by economists for example to labor market analysis and job search. The author argues that these measures could be extended and used in intrahousehold allocation resources (time and money) and interactions between members.

Data Base

The main micro database used are Diary, Individual Questionnaire and Household Questionnaire from Portuguese Time Use Diary 1999 (sample: 9.000 individuals) carried out by National Office of Statistics according Eurostat guidelines. Other microdatabases which complement the study are the European Community Household Panel, 8 waves 1994-2001 and SHARE Survey of Health, Ageing and Retirement in Europe.

Methodology

The network inside each family is identified based on the detailed information obtained from time use survey ' questions "with whom" are you doing (several activities: working at home, travelling, shopping, studding, watching TV, etc) and the time spend on that activity. With the original micro files is possible to match the members of the same family and combine their answers. (**) The micro data include information about existence of mutual help in certain activities for example between spouses.

Illustrating: Eve declare she receives help from Adam on gardening; Adam declares he receive help from Eve on child care. If persons of the same household family are matched is possible test the influence of economic, demographic and also networking variables on the decisions and behaviors.

Returning to the Eve and Adam example. Is possible to fill a matrix Adam x Eve, signaling the fluxes of help and after using network analysis and measures. There are other elements which could complement

the network measures of centrality, cohesion and mutuality. For example, there is one question on the survey about "Does your husband/wife help you when ...(several activity: preparing meals, caring children, helping children study etc.)

Complementary, it is also possible to test from ECHP data (Panel data 8 years 1994-2001 for Portugal available if also available for Belgium, Denmark, Germany, Greece, Spain, France, Ireland, Italy, Luxembourg, Netherlands, Austria, Finland, Sweden, UK.) networks external to the household. It includes questions about speaking with neighbour (How many times did you speak with...). However, in this case you have only the communication flow in one way. Questions: Q_PR003: "How often do you talk to any of your Neighbours"; Q_PR004: "How often do you meet friends or relatives not living with you, whether here at home or elsewhere?"; Q_PR002: "Are you a member of Any club, such as a sport or entertainment club, a local or neighbourhood group, a party etc.?"

Expected Results

The following measures will be obtained and could be included on economic collective models and compared with usual bargaining measures as relative wages. The central agent of the household (centrality measures according different aspects and algorithms), the grade and type of cohesion in each family and family categories (cohesion measures) the mutuality inside the family (for example between members of different generations, siblings or between both members of a couple).