Report on SCB Course

Title of the course

Social Network Analysis. Introduction to methods and applications to database.

Venue

Università della Svizzera Italiana – Lugano (CH)

Date

February, 16-18 2016

Organizers

Prof. Alessandro Lomi, Dr. Benedetto Lepori, Dr. Paola Zappa

Objectives

This course aims at providing participants with an introduction to different methods of Social Network Analysis and give them the tools to apply the method to their work. The goal is to provide the participants with an understanding of the potential applicability of these methods to different types of networks and to various research questions.
The course will start with an introduction to simple descriptive methods to analyze and visualize social networks. It will then move to regression models, as widely used in spatial analysis, which try to explain the observed network characteristics from the characteristics of nodes, like their size and distance.
Finally, the course will to introduce participants to novel statistical methods for social network analysis namely Exponential Random Graph Models, which address issues of dyadic dependence and allow analyzing network structure processes like network closure (the creation of sub-groups of nodes)
In order to demonstrate the analytical value for the research policy field, the course will include demonstrations and practical exercises done by combining the EU-PRO dataset on participation to European Framework Programs with other RISIS datasets providing data on the observed organizations, like the European Tertiary Education Register.

Main results

Participants were introduced to basic and advanced concepts of social network analysis from either a methodological or a theoretical viewpoint. They were also introduced to the R software and shown how to deal with the software and run basic analysis with the R packages.
Finally, participants were taught how to run analyses on their own and how to interpret the results. To this purpose, participants were arranged in groups, according to their background. Each group was asked to analyze a different EU-PRO/RISIS dataset and to prepare and give a short presentation of the main findings. Participants learned how to manage datasets in different formats, how to formulate relevant research hypotheses concerning the network structure of these datasets and how combine different analyses.

List of participants: **see ANNEX 1**

Programme: **see ANNEX 2**

Assessment: **see ANNEX 3**

Materials: **available at** http://risis.eu/event/social-network-analysis-introduction-to-methods-and-applications-to-the-eupro-database/

ANNEX 1
LIST OF PARTICIPANTS

(paste the list)

Name	First name	Institution	Country	Email
Amez	Lucy	VUA Amsterdam	The Netherlands	Lucy.Amez@vub.ac.be
Barrantes	Lancho	Spanish National Research Council	Spain	bslancho@outlook.com
Bougas	Kastali	Technopolis	Belgium	kastalie.bougas@technopolis-group.com
Bowman	Tymothy	University of Turku	Finland	tim.bowman@gmail.com
Csonka	Laszlo	IKU Innovation center	Hungary	csonka.laszlo@penzugykutato.hu
Garcia Romero	Antonio	IE University	Spain	agr22@faculty.ie.edu
Lawson	Cornelia	University of Cambridge	United Kingdom	c.lawson@cbr.cam.ac.uk
Masso	Jaan	University of Tartu	Estonia	Jaan.Masso@mtk.ut.ee
Noroozi	Abdolreza	Shahed University, Tehran	Iran	noroozi@shahed.ac.ir
Ortega	José Luis	Cybermetrics Lab, CSIC	Spain	jortega@orgc.csic.es
Ostapenko	Nataliia	University of Tartu	Estonia	nataliia.ostapenko@gmail.com
Piro	Fredrik	NIFU, Lund University	Norway	fredrik.piro@nifu.no
Shafi	Kourosh	POLIMI	Italy	mohammadmehdi.shafizadeh@polimi.it
van Barneveld	Joost	Technopolis	Belgium	joost.vanbarneveld@technopolis-group.com
Veglio	Valerio	USI	Switzerland	valerio.veglio@usi.ch

ANNEX 2
PROGRAMME

Day 1 - February 16, 2016

09:00 - 09:30 Opening
09:30 - 11:00 Basic concepts of Social Network Analysis
11:15 - 12:30 Basic SNA techniques and measures
13:30 – 14:00 The EUPRO database to measure EU Framework Program (FP) networks: An introduction
14:00 – 15:30 Examples of FP network analyses: SNA measures and selected regression methods
16:00 - 17:30 Introduction to R, descriptive analysis
17:30 – 18:30 Organization of the laboratory

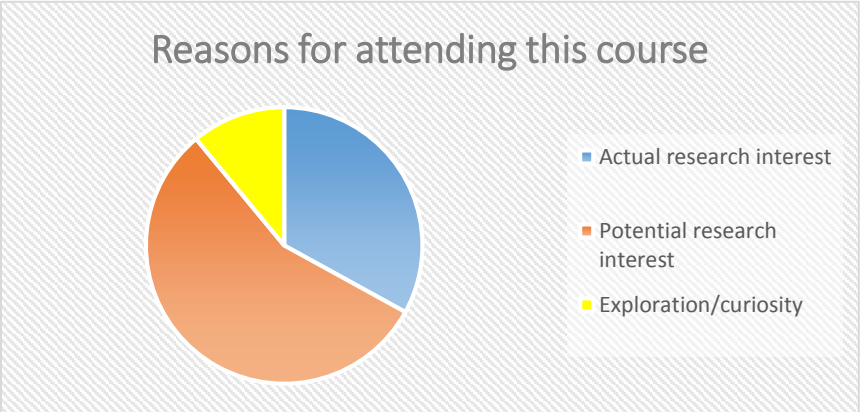
Day 2 - February 17, 2016

09:00 - 10:30 Lab on basic SNA techniques
11:00 - 12:30 Exponential Random Graph Models
13:30 - 15:30 Exponential Random Graph Models, extensions and GOF
16:00 - 18:00 Laboratory work: application of ERGM

Day 3 - February 18, 2016

08:30 - 10:30 Laboratory work. Interpretation of the results and preparation of the presentations.
10:45 - 12:30 Presentations by groups
12:30 - 13:00 Final remarks and closing of the course.

ANNEX 3
ASSESSMENT



RATINGS

Were the course objectives clearly defined?	no — rather no — rather yes — yes
Were the contents of the course consistent with the course description?	no — rather no — rather yes — yes
Has this course stimulated your interest?	no — rather no — rather yes — yes
Was the course well organized?	no — rather no — rather yes — yes
Was the course well structured?	no — rather no — rather yes — yes
Have teaching materials facilitated learning?	no — rather no — rather yes — yes
OVERALL SATISFACTION (scale 1-10)	8

BEST FEATURES	ASPECTS TO IMPROVE
Learning about exponential random network model, social networks and R	More detail on exponential random network model, with more examples and interpretations and less on the EU project database and the group's results
Lots of practical learning and application. I enjoyed the group work a lot.	Optional session with more comprehensive introduction to R for those who are not that familiar with the program.
Good presentation of the usage of the social network analysis in the research, good description of the methods, great teachers	Course was a little bit too much intensive, as the improvement could be considered the prolongation of the duration of the course for the participants to be able to read and reconsider presented material
Interesting topic, appropriate level of difficulty	I would have liked more on the drawbacks and advantages of this model compared to similar models. Second, we spent most of our time learning R