What risk factors can explain project outcome?

The data available : WB Project DB + IEG Ratings

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Motivation: what accounts for project success?

About 75% to 80% of projects are rated moderately satisfactory or better.

Known variables only explain 12% of the variation between projects.

Motivation: what accounts for project success?

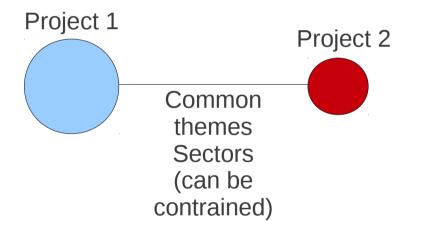
Let's use an **inductive** approach to discovering the determinants of success: group similar projects together and look for successful vs unsuccessful groups

A start : group projects by sectors and themes.

Relevant data : projects / amounts / sectors / themes / outcome ratings

Let's put our hands in the data!

Creating the network



Visual encoding

Size: amount

Color: outcome rating

→ satisfactory : blue

→ unsatisfactory : red

Results

~8000 projects / ~5M edges

CYCLONE RECONSTRUCTI TELECOMMUNICATIONS SAL II

TELECOM REHAB.

PREINVESTMENT FUND TECHNICAL ASSISTANCE

POPULATION II POPULATION I

SARAJEVO AIR POLL. CNTRL

SINGAULI SUPERTHERMA WAPDA VI-KOT ADDU

DFC/SME SNI IV (DFC)

IND. IV (FOUNDRY) PETROCHEMICALS I

LIQUIFIED PETROL-ENE PETROL. I (DAQING)

EMRGNCY SOC. FND II

LIVESTOCK I WATER MANAGEMENT II

Taunsa Barrage Emergency Rehab. & Modern

AP FORESTRY **EDUCATION 1**

ECONOMIC RECOVERY EDUCATION VI TZ-Emergency Power Supply (FY04) RY-POWER III

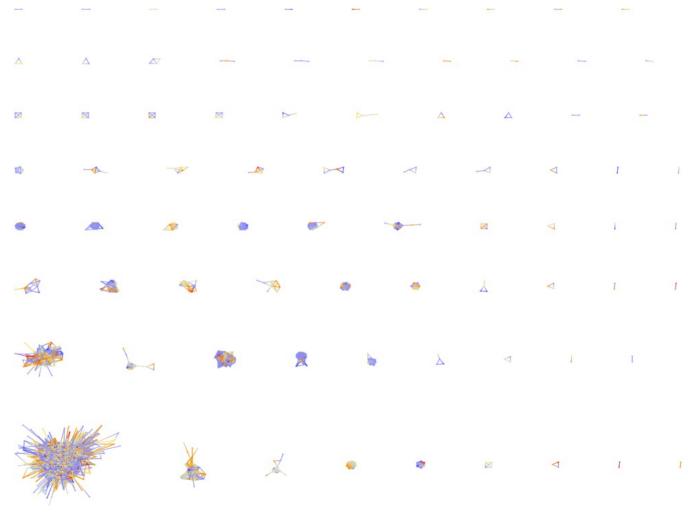
NORTHERN HIGHWAY

URBAN SEWERAGE I WATER SUPPLY I HOUSING DEVT M.P. URBAN

MBR IRON ORE MAROC PHOSPHORE EXPANSION

Results

~8000 projects / ~700k edges



Results

Clusters of projects around themes/sectors → variety of outcomes

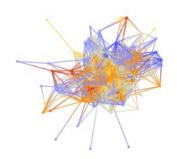








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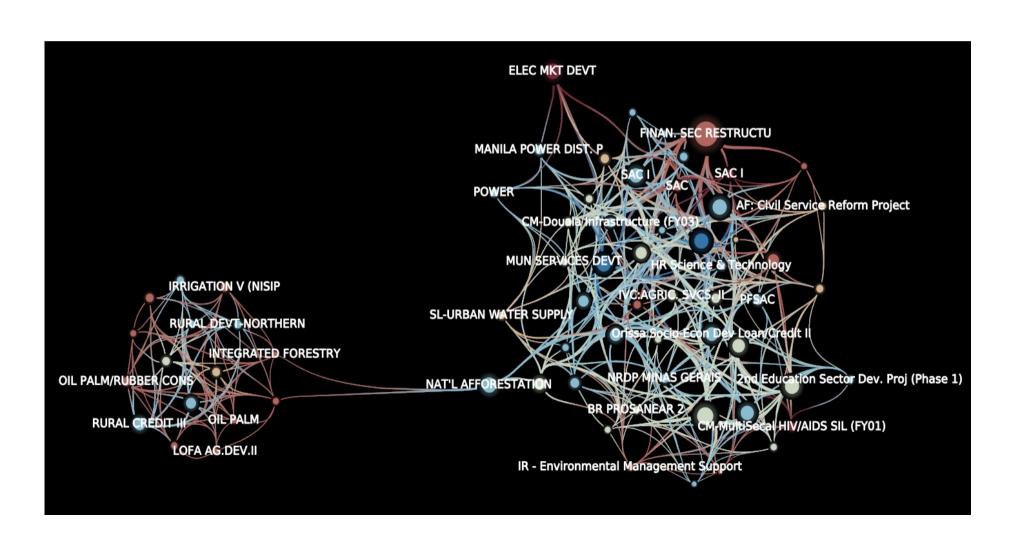




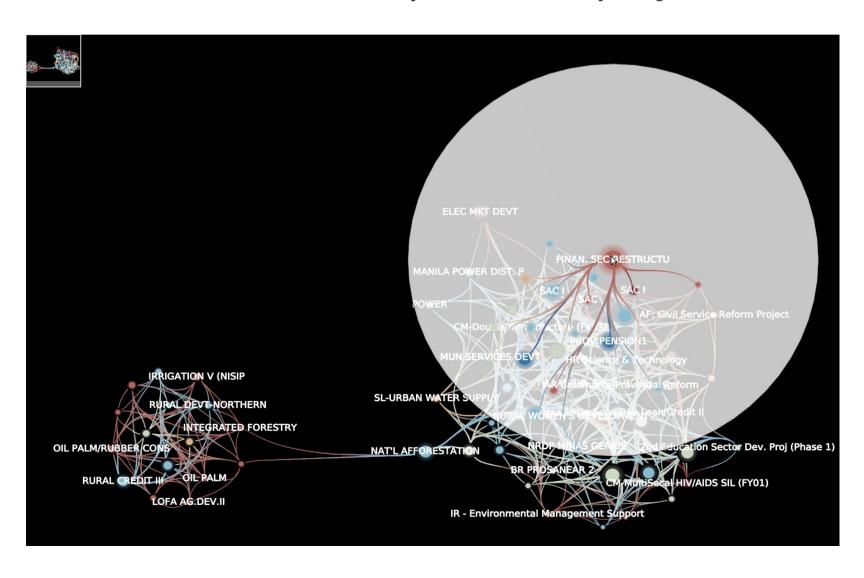




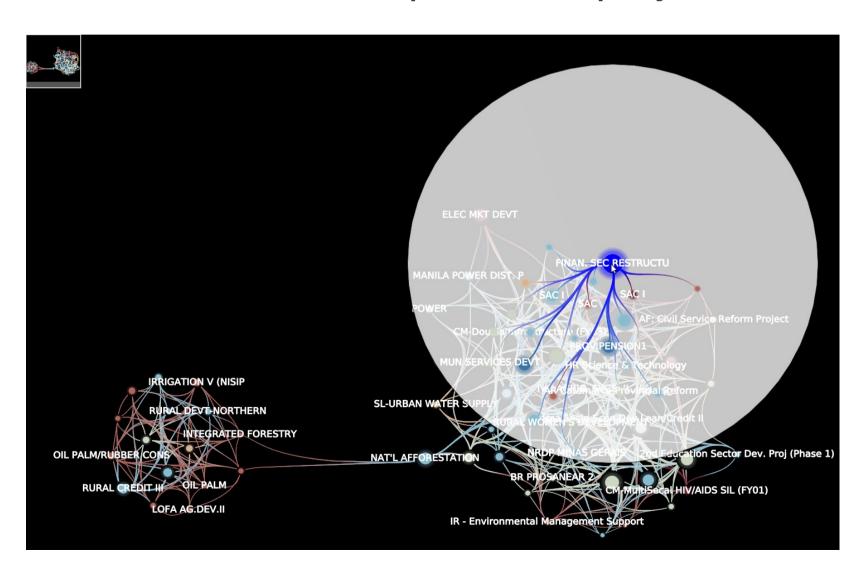
Focus on one example



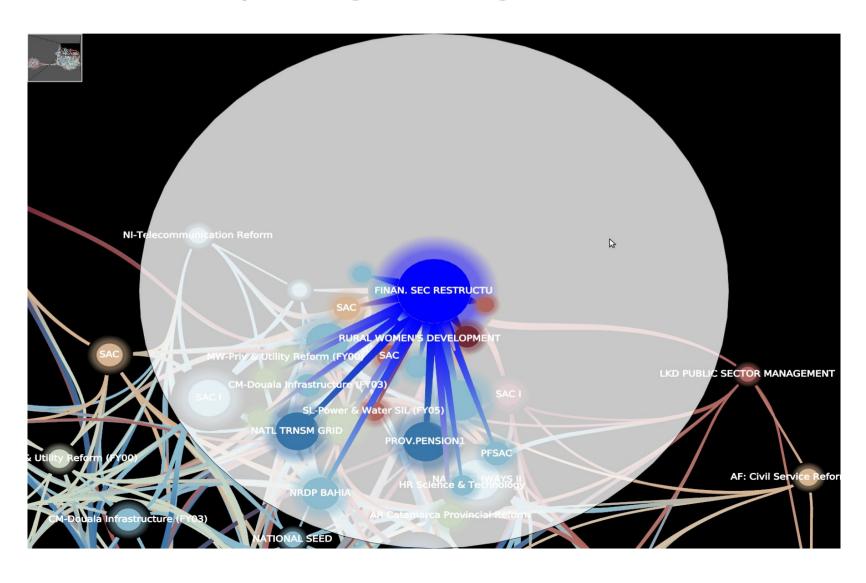
Interest on a particular project



Interest on a particular project



Exploring its neighborhood

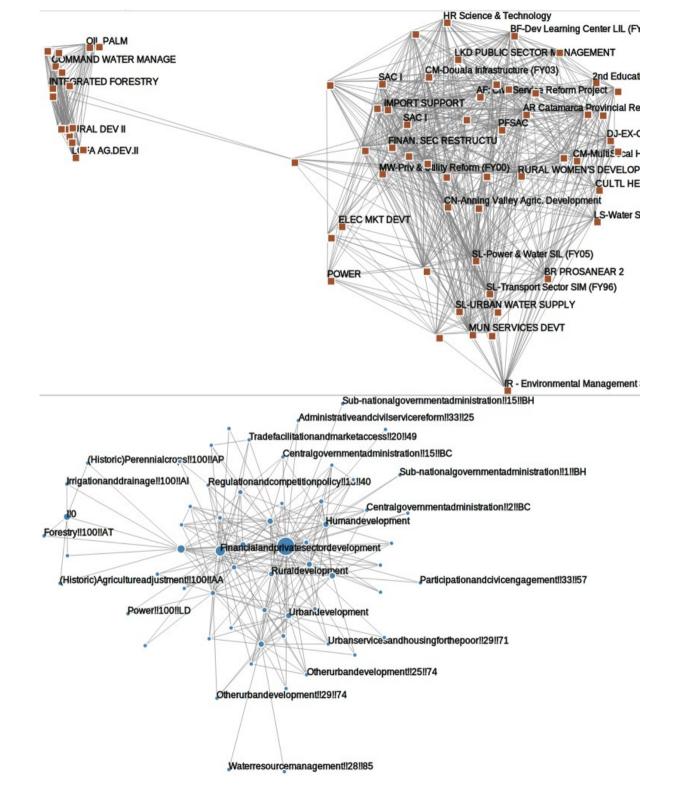


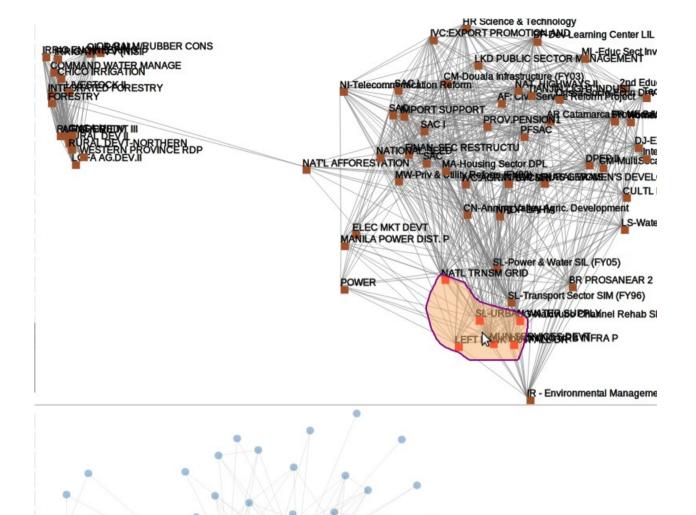
Understanding

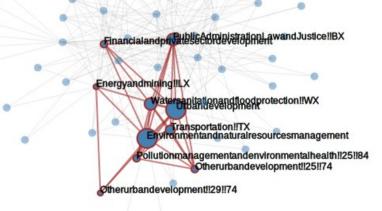
What lays behind a set of similar projects?

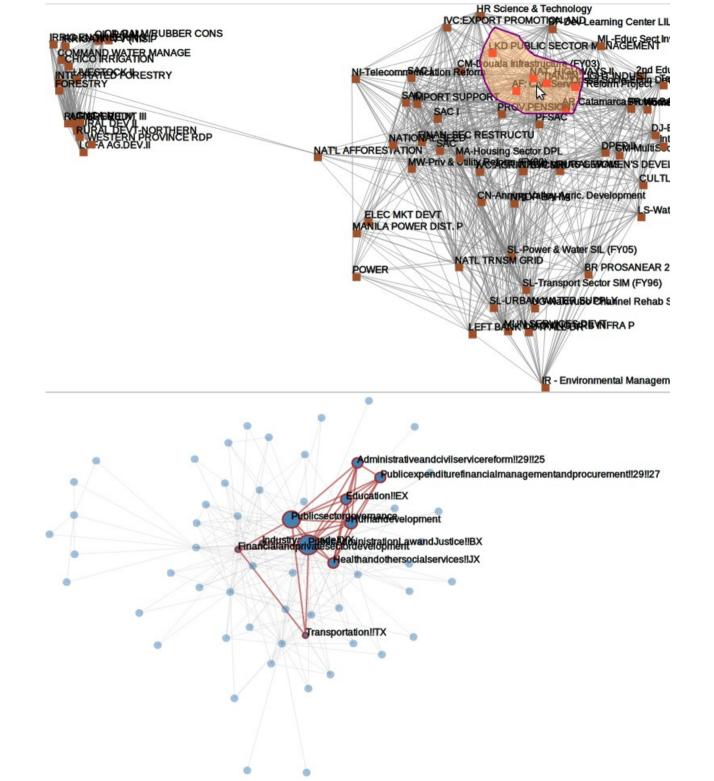
Exploration to find the common factors between projects

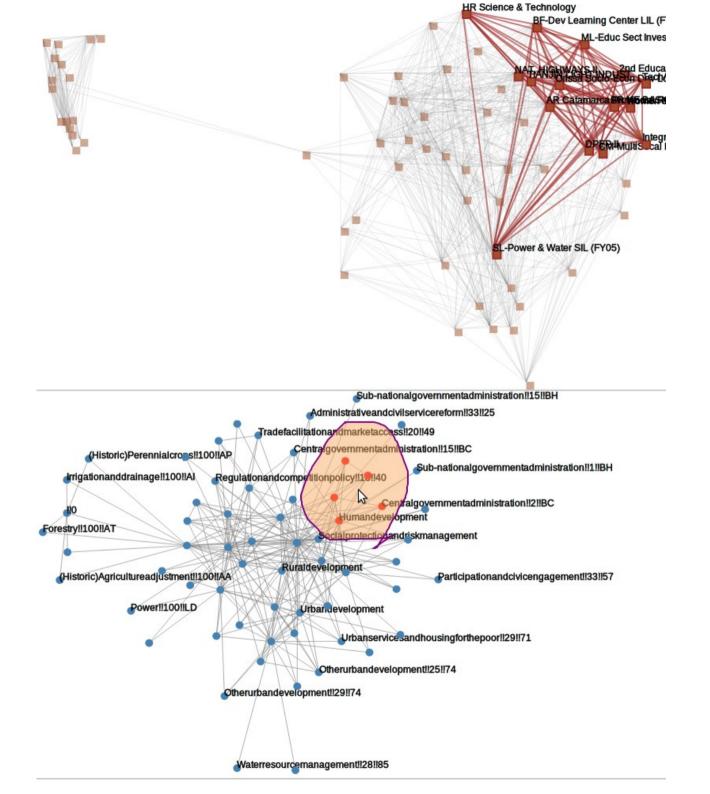
2 networks : Projects **vs** Themes and sectors











First iteration of the **back and forth process**:

- need of experts for in-depth analysis
- identify subgroups of projects with similar outcomes
- extend the set of characteristics
- refine the measures of connectedness (people/social network, semantic analysis of objectives)

we've paved the way for exploratory research!

Tools:

```
Tulip (c++/python) http://tulip.labri.fr
TulipPosy (javascript/python/d3.js) – https://github.com/renoust/tulipposy

→ contributors are welcome!
```

Data:

IEG Performance Rating :
 http://data.worldbank.org/data-catalog/IEG
WB Project API :
 http://data.worldbank.org/data-catalog/projects-portfolio

People:

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