Social Capital and Reduction of Risk in Natural Disasters: The Example of the Wenchuan Earthquake

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Social Capital and Reduction of Risk in Natural Disasters: The Example of the Wenchuan Earthquake

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Disasters, risk and social capital
Social aspect of disasters

- Social aspect of disasters
  - Disasters are not only natural or technical hazards, but also have complex social impacts
  - Kreps (1984:312) defined disasters as
    - “events, observable in time and space, in which societies or their larger subunits (e.g. communities, regions) incur physical damages and losses and/or disruption of their routine functioning”

- Sociological studies of disasters
  - how to mitigate the social impact of disasters
  - disasters provide a “natural laboratory” for understanding social structure and social process

Social capital: the missing link?

- Social Capital: A social structural resource
  - Micro-level social capital
    - Resources embedded in personal network, which enables actors to get more external social resources
    - It helps people to obtain information, knowledge and social support, thus is helpful for people to achieve higher social-economic status
  - Macro-level social capital
    - Features of social organization, such as networks, norms, and trust, that facilitate coordination and cooperation for mutual benefit
    - It plays a indispensable role in promoting economic performance, making democracy work, alleviating poverty and ensuring sustainable development
Social capital and disasters

- **Micro-social capital (social networks)**
  - Social networks/associations are the basic social units that respond in a disaster
  - Social networks/capital are the most dependable resources in the aftermath of disasters

- **Macro-social capital (trust, norm and participation)**
  - Communities with good tradition of social participation and self-organizing could react more efficiently to the disaster
  - Communities with more trust recover quicker and better from disaster

Background: Wenchuan Earthquake

- On May 12, 2008, an earthquake measuring 8.0 on the Richter scale hit Wenchuan County of Sichuan province, China
- Caused 69,226 death, 17,923 missing, and 374,643 injury
- Direct economic loss around 845 billion yuan
- Rapid response of the government and society
Data

- A two-rounds survey in Wenchuan earthquake area
  - Organized by CASTED, supported by Norwegian MFA and Fafo AIS
  - Conducted in July, 2008 and 2009
  - Random sampling, which covered...
    - 26 affected cities and counties
    - 174 clusters (villages, residential committees or temporary clusters)
    - 4526 (2008) and 5549 (2009) households
  - Face-to-face questionnaire survey
  - Finished 3625 and 4037 households, a response rate of 80.7% and 72.8%
  - Aiming at providing data for policy makers
    - describing the living conditions, policy needs, the attitude and future plans of the affected population

Micro-social capital and risk reduction in Wenchuan earthquake
Networks provide social support

- Social networks provide informal support. Around 80% of the respondents got support from their networks
- “Relatives and friends” are the 2nd most important sources of support
  - They became even more important when social lives come back to normal

![Bar chart showing sources of support]

Search and rescue

- Network members are the first group of rescuers
- Our survey showed, in 2008 earthquake...
  - 94 percent of entrapped victims were rescued by relatives, neighbors and other persons around.
  - Only a very small percentage were rescued by external rescue personnel
Information

- One of the main functions of micro-social capital is that the network can facilitate information flow

- In 2008 survey...
  - around 16 percent of residents acquired information through the channel of networks
  - Networks is the third most important channel

Mental health

- Studies found that social capital can reduce the traumatic impacts of disasters

- 2008 survey showed that better mental health is related to...
  - bigger size network
  - more relatives in the network
  - NOT suffered from the loss of networks

- The results support...
  - buffering effect of networks
  - dense and homogenous networks are better in providing emotional support

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Transformation towards new types of social capital

Social participation

- People are actively participating in collective action
  - In 2009 survey, 43% of respondents had participated in patrolling, distributing materials, constructing roads/bridges in the last year
  - The proportion of social participation is rising from 16% in 2008 to 43% in 2009

- The organizer of participation changed over time
  - More self-organized in emergency time, more community-organized when come back to normal

- Graph showing the percentage of social participation by organizer from 2008 to 2009
Social trust

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- One of the most important form of social capital
- Can be divided into trust in acquaintance, trust in stranger and trust in institution
  - Highest: acquaintance; lowest: stranger
- Quite high trust in volunteers
- Trust in government: Lower level, lower trust

Change of trust

- Trust in Sichuan: 2004 → 2008 → 2009
- The earthquake has probably contributed to the accumulation of social capital in China
Conclusion and Discussion

Conclusion

- Social capital are important resources to reduce risk in disasters
- In the early phase of disasters most of the search and rescue are performed by social network members
  - Therefore, the government should focus on providing basic rescue skills to the residents in disaster prone areas as a key content of disaster preparation
- In the aftermath of disaster, social capital can...
  - facilitate the flow of information
  - provide various types of support, and
  - help to maintain the mental health of the victims
- Social participation and social trust are also pushing the recovery and reconstruction after the disaster
Policy implications

• Thus, the government should try to make full use of existing social capital in post-disaster risk management by ...
  – maintaining social networks in disaster affected areas
  – making good use of existing social network in reconstruction processes
  – realize that investment in social networks/capital is a long term one, rather than emergency policy response

• We could also build up social capital ...
  – by positive policies from government
  – by activities of NGOs
  – by promoting the participation and self-organisation of the public

Thanks