Title: SME cluster in the aftermath of a disaster: Significant Revival or Mere Survival – a case study with a social capital approach

Keywords: SME cluster, disaster, social capital, networking

Track: Small Business and Small and Medium Enterprises

Abstract:

A disaster, from the sociological point of view, is an unanticipated event presenting what is defined by the participants as an immediate threat to their physical selves and persisting for a relatively short fragment of time. This paper studies the case of a traditional cluster of small and micro enterprises producing earthen pottery in the town of Mashiko in Japan's Tochigi prefecture which is one of the 8 most popular pottery towns of Japan. The cluster suffered significant damage in the Great East Japan earthquake of March 2011. The paper explains the process of recovery of this cluster using the theoretical framework of social capital. It attempts to explain specifically what types of social capital emerged and strengthened in the cluster after the disaster.

1. Introduction

An earthquake of magnitude 9.0 followed by a tsunami struck Japan on the 11th of March, 2011 and it completely devastated regions in the eastern part of the country. Mashiko, a small town with a population of 24,000 is located about 250 kilometers from the epicenter of the earthquake and 150 kilometers from the Fukushima nuclear reactors. It is known for a very specific variety of pottery called Mashiko yaki. The town has some of the very oldest and biggest chambered climbing kilns which were all destroyed in the earthquake. Firms in the cluster suffered physical damage, broken merchandise and loss of other facilities besides kilns. The total damage came to the tune of 11million US$. However, the biggest damage was due to a sudden halt in the visitors/customers to the town, direct sales being the primary form of sales for Mashiko.

2. Background and Motivation for Research

The first Stage (2011-2012) of this research aimed at understanding whether the pattern of inter-firm joint action in a cluster changes after an exogenous shock (in this case the earthquake) and precisely what are the new forms of joint actions that emerge. This initial study reported the changes in the nature of intra-cluster collaboration through the setting up of new NPOs, new events and emergence of new platforms for interactions such as reconstruction sites indicating that the disaster was perceived more as an opportunity. The first Stage study contributed towards solving the debate in literature about SME clusters' responses to crises.

The following paragraphs clarify the motivation for the present study which constitutes the Second Stage of this research.

i. First Stage research findings were based on data collected in the relatively immediate period from 3 months to up to 18 months after the disaster (June 2011 to Sept 2012) when the momentum of reconstruction activities is likely to be very high. To make a more definite conclusion about the revival of the cluster from the crisis requires looking at the relatively medium-term and long-term horizon i.e. from a period of 2 to 4 years post disaster to begin with. The current research aims at understanding the medium-term scenario.
ii. A large amount of social science research on post disaster recovery draws significantly from the concept of social capital. This social capital perspective; specifically categorizing the post disaster activities in Mashiko into types of social capital and explaining the recovery of the cluster in terms of strengthening or weakening of a certain variety of social capital could not be attempted by the author in the first Stage on account of the distinct focus of the research on collective efficiency of the cluster.

3. Objectives

i. To study the nature of social capital in Mashiko and identify precisely what type of social capital actually strengthens after a disaster.
ii. To identify the changes in the pace of joint action in the period from one year to up to four years after the disaster.

4. Methodology

This is a qualitative study based on primary data collected through visits to the cluster and informal pre-arranged interviews of the firm owners and officials of the cluster associations. Secondary data was collected from official records, previously conducted studies, publications, journal articles, reports and the internet. In the initial stage in June 2011, due to the absence of population data to draw a sample, structured questionnaires were distributed to a random sample of 140 firms with the help of the Mashiko Tourism Association. The framing of the questionnaire was guided by prior literature review on the subject.

Periodic visits and interviews were conducted from August 2011 to March 2015 and are still ongoing. Interviewees comprise of firm owners, officials from the Mashiko pottery Cooperative Union, Mashiko Tourism Association, officials of the Mashiko Town Office, officials of the Tochigi Prefectural Policy Department, Provincial Reconstruction Division, students from the Mashiko pottery technical training center and officials from Ibaraki Transport Company. The interviews were all conducted in Japanese and then translated and transcribed in English.

5. Literature Review

Social capital refers to the connections between individuals – social networks, of reciprocity and trustworthiness that arise from them (Putnam, 2000). Social capital is not located in individual people, as is human capital, but rather is embedded in social relationships and networks between and among members of a community. These relationships can be used to guide collective action in emergency situations.

Several studies have pointed out how social capital matters significantly in the period immediately following a crisis. After disasters, individuals who are better connected with more individuals receive greater assistance than less connected people (Hurlbert, Haines, and Beggs 2000: 594). Literature has studied events like the Kobe earthquake, hurricane Katrina, Indian Ocean tsunami and all point out that disaster recovery is not only about building houses but the reconstruction of the whole community as a safer place. To mobilize each member of the community in this collective action (community development), social capital is a crucial need. A significant contribution to the field was done by Aldrich (2012) focusing on the recovery of

communities after disasters. His work explains how social capital operates after a crisis and quantitatively measures its effects in multiple settings and time periods.

Social capital- the bonds which tie citizens together – functions as the main engine of long term recovery and this engine can be strengthened through local initiatives and interventions from foreign agencies. Researchers like Nakagawa-Shaw (2004), Shaw-Goda (2004) who studied the Kobe earthquake also demonstrated that that individuals living in areas with higher levels of social capital were more satisfied with the process of town planning post disaster. For communities at large, recovery involves both population recovery and the (re)creation of bonds among neighbors; surveys have confirmed that after disasters, most survivors see social connections as critical for their recovery (Tatsuki and Hayashi 2002, 3; Tatsuki et al. 2004)

Studies done at the Disaster Research Center (DRC) in the 1960s in the US to research a number of different communities highlighted the fact that certain critically important elements in the response had no pre-response existence; this was the phenomenon called emergence which referred to the creation of new social capital. (Dynes, 2006) In a number of cases it emerges from existing social capital, but, at other times it is new in that it is created to meet new problems created by the disaster.

5.1 Classification of Social Capital

One of the systematic classifications of Social capital in the vast scholarship is the one that traces social capital in the 3 dimensions of Bonding, Bridging and Linking, which is also used as the basis for this paper.

Bonding social capital which occurs within a community of individuals such as neighbors, involves trust and reciprocity in closed networks. This contributes to the likelihood that individuals will move beyond their diverse self-interests toward mutually beneficial collective action. Bonding social capital is a necessary antecedent for the development of the more powerful form of bridging social capital (Ferguson and Dickens 1999; Warren, Thompson, and Saegert 2001), which refers to cross cutting ties and it occurs when members of one group connect with members of other groups to seek access or support or to gain information. Bridging social capital involves overlapping networks (in which a member of one group can gain access to

the resources of another group because of overlapping membership). Linking Social Capital involves ties among neighborhood residents, social relations with those in authority, which might be used to garner resources or power. Whereas bonding and bridging social capital primarily connect individuals of the same status, linking social capital takes into account vertical distance as well.

6. Interim Findings

Interviews with diverse cluster actors suggested that Mashiko being a small town, the community ties have always been very strong; residents actively participate in religious festivals, have close personal relationships with each other. The Mashiko pottery cluster that comprised of 250 firms in December 2013 with approximately 700 people is a small part of this town. Bonding Social Capital, denoted by close connections between firm owners in the cluster was strong even before the earthquake, as was understood through the interview responses. One pottery firm owner reported that "If I am firing my kiln and it runs out of gas in the middle of the night, I know I can call upon my neighbors at such times". However, since pottery is a folk art involving creativity and artistry there is limited interaction among the firms about the product, and individual business strategies; there is little inclination to discuss these with other firm owners. Also, these strong bonding ties, over the past 7-8 years were nurtured in an extremely insecure business environment due to the falling popularity of Mashiko pottery- rather pottery in general all over Japan.

In response to this rising insecurity among the existing firms, some new forms of social capital were observed in the cluster since 2010, i.e. even before the earthquake. Some examples are:

i. Touism – project envisaged in 2010 with the aim of improving the networks, links between pottery artists, gallery owners, ceramic stores, retailers and customers throughout Japan, thus strengthening Bridging and Linking Social Capital
ii. Hijisai festival –started in 2009, translated as the Earth (soil) festival Hijisai aimed to bring together not only the pottery community of Mashiko, but other activities associated with pottery- gourmet fairs, photographers, sake (alchohol) to revitalize the community of Mashiko, thus strengthening Bridging Social Capital.

With the earthquake causing severe damage in 2011, a significant increase was seen across all forms of social capital; though with varying intensity. This was triggered most importantly through the process of several NPOs being set up and people from within and outside of Mashiko working together to rebuild the broken kilns and other facilities. Some examples are:

i. MPF - Mashiko Potters Fund - to channelize external donations and provide volunteers- represented continuing strong bonding ties.
ii. MCAA (Mashiko Crafts and Art Association) – to work towards more domestic and foreign cultural interaction, to help in disaster relief operations and to improve the networking between firms- represented an opportunity to create new Bridging social capital.
iii. Data Base Project- to collect and make available firm level data, online which did not exist until the disaster- strengthened bonding ties further

The more recent interviews of 2014-15 revealed that the spirit of revival in Mashiko continues to be vibrant. For example: a month long event was held from Jan-Feb 2015 to mark the re-construction and re-firing of the damaged kiln of a very respected late pottery artist from Mashiko named Shoji Hamada, who was titled a “Living National Treasure” by the Japanese government in 1955. His kiln was re-opened after a period of 40 years (since his death) and this was possible only due to the large scale support of people within and outside of Mashiko.

Another important development in April 2013, helping towards building a different type of social capital is that of a new express bus service that connects Mashiko with the capital city Tokyo enabling tourists to easily make a day trip to this cluster as well as artists from Mashiko to visit and participate in exhibitions held in Tokyo. This bus is extremely popular as reported by Mashiko Tourism Association as well as Ibaraki Transport that runs the service. It is the most affordable and fastest means of public transport between the 2 locations. In the interviews, they stated that it was the earthquake that prompted the starting of this bus service.

The number and nature of neighborhood level NPOs created, their membership, diversity of members, overlaps in membership, their life span and activities, contribute towards making a definite conclusion about what type of social capital was created, strengthened or weakened after the disaster. Besides, the data on the changes in the total number of firms in the cluster, total

sales over the years, number of visitors to the cluster indicate whether the cluster is gradually moving towards revival or a further decline after the earthquake.

7. Contribution and Expected Conclusion:

The case in this paper presents a slightly different scenario as compared to prior sociological literature on the subject of disasters as Mashiko was neither the center of the earthquake nor the only region affected, it was one of the peripheral areas. The study is expected to vindicate previous scholars' findings of concept of "Emergence", (Dynes, 2006) which is the creation of new social capital. In many instances it emerges from existing social capital, but at other times it is "new" in that it is created to meet new problems created by the disaster. But, specifying what form "Emergence" can take in the event of such a crisis, precisely what form of Social Capital emerges, how and why is the major contribution of this research. And in doing so, the paper brings together two distinct streams of literature; clusters and exogenous shocks and disasters and social capital.

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