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Potential Social Capital of Bricks Maker Community and Lapindo Mud Affected Regions

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Abstract

Social capital can be asummed as a resource that arise from interactions within the community. Both among individuals and institutions that provide an emotional bond of trust, integrity, groups and social networks, the values and norms that shape the community structure. It is useful for coordination and cooperation in achieving their common goal. Importance of the cultural dimension on social capital, will greatly assist acceleration and optimization of brick maker community, especially as a determinant quality and utilization of the growing role of civil society organizations. The hope of high social capital, would make people more aware to environmental sustainability by seeking alternative raw materials of bricks by using Lapindo mud. The purpose of this study is to provide an overview of the potential social capital in the community of brick makers and the affected area of Lapindo mud. This study uses quantitative descriptive analysis. The potential of social capital in community brick makers (Mojotamping Village) is generally quite strong. Cognitive aspects of social capital have direct effect on the performance. It also has an influence on the structural aspects through integration and norms.

Keywords: Social Capital, Norm, Trust, Solidarity, Integration, Network, Groups

1. Introduction

Lapindo mudflow case is an example of development policies implementation that has been a shift in orientation. It was the development policies which tend to ignore environmental sustainability factors. It is also possible as a result of policies that exclude environmental factors as an absolute factor to consider on planning to implementation phase. Example of incorrect environmental policies that should be taken into consideration before a company gets permission to do business are: the distance of houses to explored location, standard operating procedures comply to exploration techniques, and environmental sustainability for the future (Sukesi, 2009).

Impact of mudflows sourced from wells in Renokenongo Village, Porong, Sidoarjo, East Java since May 29th, 2006. This resulted in piles of mud-gas mixed in 7 million m^3, equivalent to a distance of 7.000 km, and this number will continue to increase when the mudflow handling is not seriously addressed. Lapindo hot mud-gas besides causing environmental damage, with average temperatures reaching 60°C can also cause damage to the physical environment of communities living around the mudflow (Mintoharjo, 2000).

The environment and society are two functional relevance concepts in the context of ecology and ecosystems. Based on a different point of view, empirical study has produced a synthesis of public relations with the environment. According to the deterministic, natural environment determine the pattern of people's lives, while possibilistic thought environment as an influential factor, and the technology optimistic belief the potential of science and technology for the environment. Based on the three views, the presence of people in the neighborhoods depends on its ability levels.

Supporting environmental factors are potential empowerment. According Soemarwoto (1983), supporting environmental factors are environmental beneficials, while hindering factor is a risk for environmental. Supporting and risk of environmental factors are relative for community, but both driving force and develop the emerging technologies. Technology is the result of human engineering in the order of social life. During its development, the technology is influenced by two factors: (1) factors derived from the public, demands for the

fulfillment of the necessities of life, and (2) factors that come from outside the community, either natural or physical influences of other community.

Economic implementation of community empowerment in many countries – including Indonesia – overstate the importance role of natural capital and modern economic capital such man-made goods capital, technology and management, and often ignore the importance of social capital such as local institutions, local wisdom, norms and local customs. Although aware, economic community empowerment is designed as a part of the community development. In fact, economic development detached and not rooted in the community itself. As a result, economic community empowerment which occure in the midst of society seem strange to the people themselves, giving less benefits wich displays dualistic economy development and laden with social and economic inequality.

Indonesian people has quite a lot of social values – social capital – as the culture of mutual cooperation, sharing institutions, various forms of local knowledge possessed all ethnicities, which can be developed as part of the culture of the modern economy. Social capital has been proven by history as an important mechanism in their efforts to achieve economic growth and equity. Therefore, the economic empowerment that democracy role of social capital becomes very important to notice.

There are many definitions of social capital and still develop. James Coleman is believed to develop the first theoretical framework on social capital. Coleman (1988) defines social capital as "a set of resources that cannot be separated from the relationships within the family and in social organization community and useful for the social development of children or young generation". This definition is too narrow in the context of recent use. In a further study , Coleman (1990) re-define social capital as a productive asset and has same functions as other forms of capital; and unlike other forms, social capital cannot be separated from the relationships between and among people/individual. Putnam (1993) improves Coleman's definition of social capital by identified mechanism of social capital formation. Likewise Coleman, Putnam refers to the dimensions of trust, norms and networks as manifestation of the social capital and stressed the productive capacity of social capital can increase the efficiency of the community activities by facilitating coordination of actions.

According Rubiandini (2008), Lapindo mud in Sidoarjo is harmless to humans as below the hazard standards that set by the government. Some of the conducted research, stated that the results of tests on several samples of mud taken from several locations bursts material is containing alumina (Al_2O_3) and silica (Si_2O_3). It is suspected that the mud has some similar matter as contained in cement. Results from other studies explained mud material can be used in the manufacture of paving on the grain size and the particular curing methods and can reduce PC usage up to 60%. Then it assumed that Lapindo mud can be used as the main material of brick making.

Meanwhile, in Village Mojotamping, Sidoarjo, land degradation is occurred because almost entire community of Mojotamping Village worked as a brick maker, and the main ingredient extracted from the rice field in the village. With the Lapindo mud disaster, the government is trying to develop the Lapindo mud as an alternative raw clay material for the manufacture of bricks.

Social capital is powerful for community empowerment energy. Each of these social entities has not only typology but also values and norms configuration that determine the degree of social cohesion and collaboration within the community. This dimension will become strong influence on people's behavior and exhibit response towards each community empowerment policies made by the government. Charpenter *et al.* (2004) suggested that cooperation; trust and social capital can overcome the problem of slums in urban areas (case studies of Southeast Sulawesi). In this research, slum settlements are then transformed to healthy and clean because community participation that promotes cooperation, cohesion and confidence in dealing with problems in the slum.

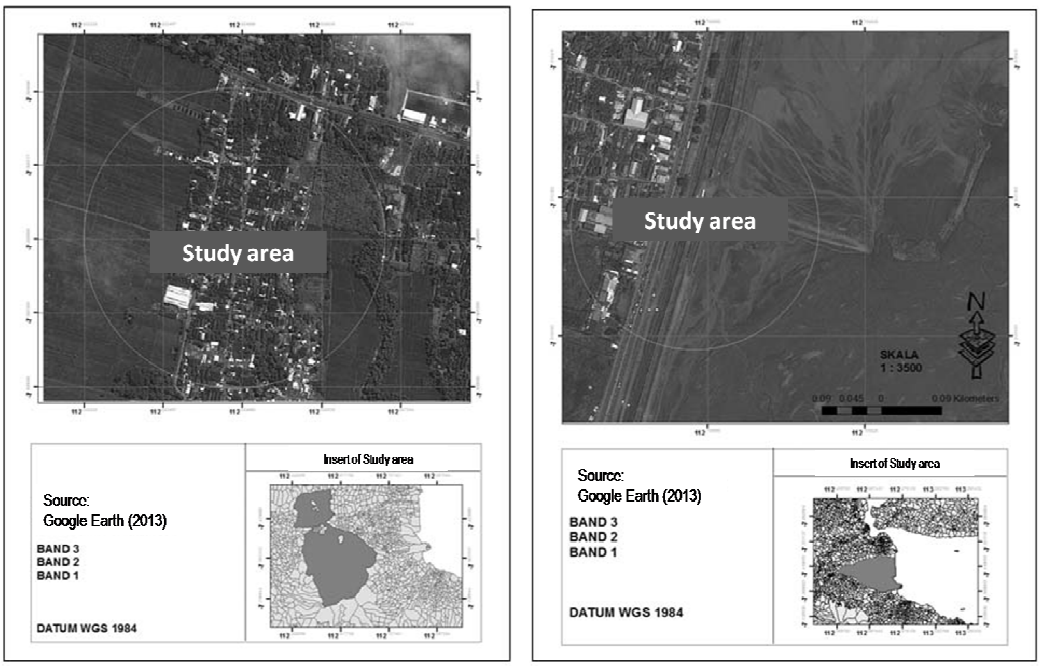
The purpose of this study is to conduct deeper analysis in a state/potential of community social capital brick makers in Mojotamping Village and affected Ketapang Village areas by the Lapindo mud. The outcomes will determine influential indicators of social capital itself.

2. Material and Methods

This research used mixed method approach – integration of quantitative and qualitative methods (Creswell, 2011). Quantitative approach was aimed to obtain description on potential of social capital in the study area, while the qualitative approach was to obtain clear description of that social capital. The study period is four months (January-April 2013) with the involvement of four field personnel to interview respondents.

2.1 Study Area

Site selection in this study using criterion-based selection method, which is based on the selection of specified criteria in order selected background or certain events, strived to achieve complete information (Tokyo, 2003). This research conducted in rural areas of Mojotamping, Mojokerto as a brick maker community and Ketapang Village, Lapindo mud affected area (Fig.1).



(a) (b)

Figure 1. Study Area (a) Brick Maker Area ; (b) Lapindo Mud Affected Area

2.2 Data Collection

Quantitative data obtained from households respondents in the research potential area of social capital of bricks maker community and mudflow affected areas. While qualitative data obtained from three community leaders who know about the problems in the brick makers community and Lapindo mud affected area. Respondent sampling technique is a method used to determine the size of the study sample based on Solimun (2002). This study used 38 indicators, so the sample is 5 x 38 = 190 respondents (village community) as research's subjects.

2.3 Data Analysis

This study used quantitative descriptive analysis; gives an overview of descriptive field data by interpreting the primary data into tabulation. This descriptive analysis aimed to gain an overview of variables studied condition, i.e. cognitive social capital and social capital in frequencies and percentages. It also to get an overview of respondents' characteristics on research objects (Sugiyono, 2008). Descriptions of variables are part of the descriptive statistical analysis. It was determined the frequency distribution that would describe the depth of norm variables (X1), trust (X2), solidarity (X3), integration (X4), network (X5), Group (X6), community empowerment activity (Y1), and economic impact of community empowerment (Y2). The frequency distribution tabulated by scores of respondents' answers.

The research data used semantic differential scales to produce 1 to 5 scores. Then to categorize the average response of respondents, scale intervals calculated from the highest score minus the lowest score divided by five. The interval obtained for the category of 0.80, thus the respondents response categories are determined based on the following scale (Table 1).

Tabel 1. Determination of Score Category based on Category of Respondents' Answer

No	Scale response categories	Score categories
1	1,00 – 1,80	Very Low
2	1,81 - 2,60	Low
3	2,61 - 3,40	Medium
4	3,41 - 4,20	High
5	4,21 - 5,00	Very High

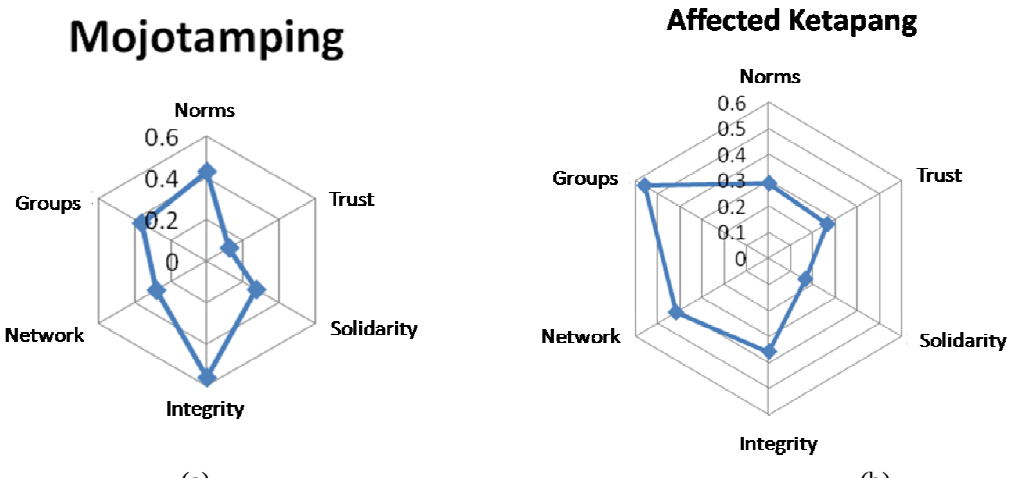
Source : Sugiyono (2008)

3. Result and Discussion

Potential social capital of brick makers' community and Lapindo mud affected communities consisted of six variables: norms, trust, solidarity, integration, network and groups. Each variable detailed into following indicators.

As explained by Uphoff (1999), Grootaert and Bastelaer (2002), an overview and capacity of social capital based on its function, which is divided into two aspects, cognitive and structural aspects. Both aspects consist of six forms social capital as the dimensions of social capital index constructor. It is assumed that all dimensions of social capital index constructors in this study have been excluded from the invalid claims. Form of social capital based on the cognitive aspect consists of norms, trust, solidarity, and integrity, while the shape according to the structural aspects of social capital consists of networks and groups.

Based on the analysis of variables descriptions – as part of the descriptive statistical analysis, result shows that the brick maker community manifests indicators of integration – the strongest indicator among the social capital variables. Otherwise, the group variable is the highest index of social capital of brick maker community. The group is formed of awareness and willingness to merge individual desires for the sake of its integrated common interest (Lawang, 2004). It means that the Lapindo mudflow affected communities have formed group/institutional membership consisted of both densities; each group has a heterogeneity (in terms of age, income, and education level). Members attendance on meeting was well organized, participation and membership donation already running and organization performance was established. So the formed group in Lapindo mud affected communities should be maintained. Scheme of social capital in communities of brick makers and Lapindo mud affected area were drawn in a hexagon (heptagon) (Fig.2).



(a) (b)

Figure 2. Heptagon Radar of Social Capital (a) Brick Makers Community; (b) Lapindo Mud Affected Area

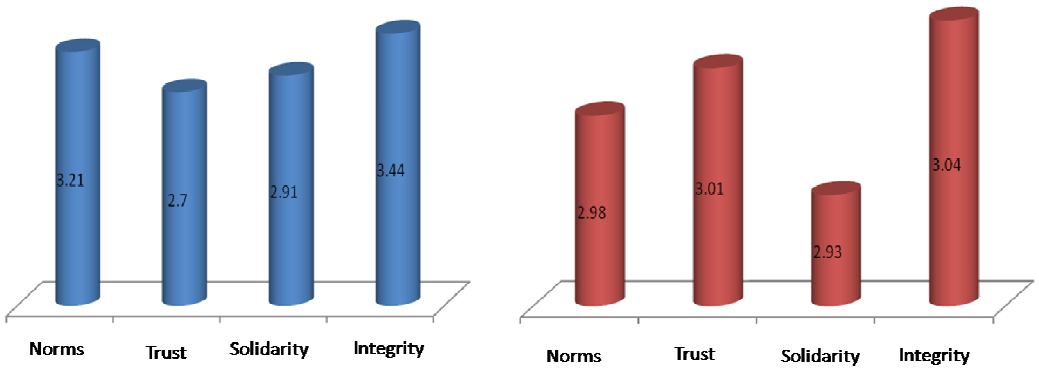
Source: Processed Data (2013)

McCabe (2010) described community's social capital in radar diagram consisted of norms, trust, solidarity, cohesion, networks and groups with integrity as the most dominant indicator. On integrity, elements of trust, solidarity and groups is unseparated unity. While Putnam (2000) argued that the relational dimension is closely

related to the concept of social capital, where one dimension is the social network – the quality and quantity of social relationships and interactions. Another common identified dimension is group. We can distinguish between social and cultural groups – membership and cultural activities or sports associations, volunteer work – and political groups - participating in the election and signature campaigns, strikes and local councils. Relational aspects of social integration also includes minimal mutual trust (Chan *et al.*, 2006). The expectation on other person's behavior is predictable and the motivation is basically had good intentions (Morrone, 2009). Radar diagram of social capital is schemed by Schiefer *et al.* (2013); social capital distinguishes between the east and west of Germany. Stands out results on western society is the network while on the east is solidarity.

Cognitive aspects of formed social capital is a mental process in the interaction between the brick makers and Lapindo mud affected area community (internalization of awareness) against the norms and values of trust, solidarity and social integration. The eventual output is ideas or expectations that lead to collective behavior also to generate collective profits (Mutually Beneficial Collective Action-MBCA). Cognitive social capital is manifested in *civic culture* and has affected properties. Therefore, social capital in this category called *predispose* (affecting). It means the influence on people who willing to do MBCA. Another property of social capital is intrinsic or unobservable category (Grootaert and Bastelaer, 2002).

Lee *et al.* (2006) suggested that rooted concept in varies different social sciences, included sociology, education, politics, economics and management, and various dimensions of social capital. Lee and colleagues showed that social capital has three different dimensions: structural, relational and cognitive. Cognitive of social capital created through communicative language, narrative and the words that affect the perception of meaning and reality in relationship. So that cognitive social capital created through face-to-face and electronic communication. Utilizing effective communication, both face-to-face and electronic, is important elements in learning process. The most dominant aspect in cognitive social capital is trust, solidarity, norms and integrity (Fig. 3).



(a) **(b)**

Figure 3. Cognitive Aspects of Social Capital: (a) Brick Makers Community; (b) Lapindo Mud Affected Area, Source: Processed Data (2013)

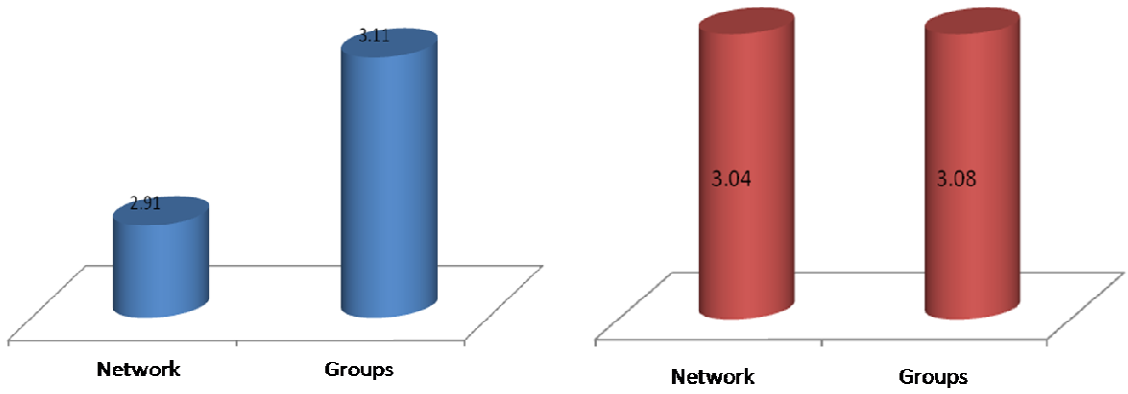
An indicator of integrity – which is a cognitive aspect of social capital – is the highest indicator on brick makers and Lapindo mud affected area communities. It indicated the ability of community's integrity is high categorized among the arise differences within community or group. The ability of community integrity with Government and Non Government Organisations (NGOs) at the emerged differences, categorized as high as well (Grootaert and Bastelaer, 2002). Ravanera (2008) showed the role of ethnic civil society on political participation, i.e. the involvement of the civil society (a measure of social capital) is getting higher. The result is the integrity of public relations in elections' vote due to sense of belonging. Generally, family's social capital (measured as trust and sense of family) was positively related to political integrity and participation.

Trust is the belief on social and economic interaction that occurs among the brick maker community, community with Government and NGOs will run as they expected (Grootaert and Bastelaer, 2002). Trust is the weakest index on cognitive aspects of the brick maker community. It still remains the lowest indices of social capital index that formed the structural aspects (Fig. 4). It is because the brick maker community has no institution that represents the community's business. It leads to individuals' competition in bricks market. Trust between people

became very low and the competition is happen regularly. Tonkiss (2004) presented that trust and social capital of a society will be very low when dealing with the public economic conditions. Government has to create a business that has the effect of economic improvement to overcome this problem. Ogilvie (2004) showed that trust in society gradually became lower because some people abuse the trust of other party. This problem occurs when many people are in the same community and livelihood.

Lapindo mud affected area shows that solidarity indicators are in the lowest social capital's level. It is the nature of solidarity sense, kinship, which manifests in sense of belonging and willingness to sacrifices, to hear and understand each other (Grootaert and Bastelaer, 2002). Low solidarity in Lapindo mud affected area because not all people involved in defending their rights towards government. Communities were receiving compensation by the government set. While there were some other people who is still disagreed to accept the determined amount of compensation. Oorschot (2004) suggested that solidarity in social capital will be very low when related to society's prosperity. Some people would accept provided welfare by the government and some other people would refuse. It is driven by the diversity of interests, groups, and social communities' it selves. Hao (2011) also found that solidarity among miners to be very low when linked with the welfare of his family and supply of natural resources are depleting.

Forms of social capital are composed according to the structural aspects of the network and group. Just as the cognitive aspect, the *output* eventually also forms ideas or expectations that lead to collective behavior in order to also generate collective profits (Mutually Beneficial Collective Action, MBCA). Structural social capital manifests itself in the form of social organization, and serves to facilitate MBCA. Therefore, social capital in this category commonly referred as *assets*. Social capital in this category has properties that observable or extrinsic (Grootaert and Bastelaer, 2002). Fiorillo *et al.* (2011) illustrated that structural social capital in the form of group and addition of the network has the function to improve public health in Italy. This study explained that with good networks, patients would also get good health care.



(a) **(b)**

Figure 4. Structural Aspects of Social Capital: (a) Brick Makers Community; (b) Lapindo Mud Affected Area, Source: Processed Data (2013)

Indicator groups in the structural aspects of social capital are the highest indicator of brick makers and Lapindo mud affected area community. The group is formed of awareness and willingness to merge individual desires for the sake of their integrated common interest. It means the group cannot be interpreted smelting physically, but also non-physical smelting (Grootaert and Bastelaer, 2002). Groups in brick maker community as informal groups (group discussion, social gatherings), while the Lapindo mud affected area is a group formed to address issues related to the Lapindo mudflow disaster. A simple model and help each other in the group and the network proposed by Bloch (2006); if social capital could enhance the cooperation between the individual groups, it would also damage it. When a group of individuals deviate together from the social norm, they have built stronger bond among themselves. They even make it easier deviation, and undermine the cooperation of holistic community.

Network is the lowest indicator of structural social capital for brick makers and Lapindo mud affected area communities. Interviews results show that the network on the brick maker community is still weak because of institutions absence that facilitates their efforts. Network is formed by natural process of each individual and current formed network is maintained. While in the Lapindo mud affected area, weak network is caused by no access to local and national governments. Assistance, communication and transparency in Lapindo mud solving problems assessed by local communities are still very low. It becomes weakness in people empowerment that uses social capital as the basic element. Macke (2010) described four elements of the social capital; identity building, power relations, evaluation process and network performance (Fig. 5). Network performance is one structural dimension and the highest peak of the existing relations of social capital.

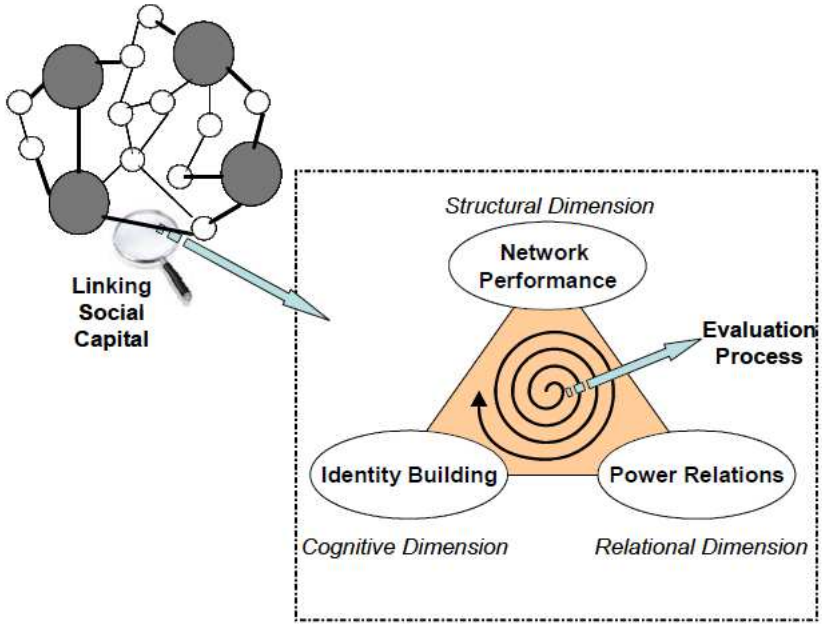


Figure 5. Relationships Element of Social Capital in Collaborative Networks
Source: Macke *et al.* (2010)

Cheung (2013) emphasized the importance of networking in social capital if the government and community eager to get successful and sustainable community empowerment. With a good social networking, both government and community will get better and a great prosperity and harmony. There is another reason why social capital is become popular in the public policy and draw attention to the benefits of capital form. It is not only achieved finance balance during the recession by government intervention, it also evokes society relationship by emphasizing the importance of the relationship between people (Arneil, 2007; Franklin, 2007).

4. Conclusion

The potential of social capital in community brick makers (Mojotamping Village) is generally quite strong. The indices that formed social capital index derived from quite strong cognitive aspect, especially the integrity index. While trust is the lowest index on cognitive aspects, even still lower compared to indices of forming social capital index derived from the structural aspects. Structurally, the index forming social capital index was also has quite strong criteria, especially the group index. Although the network index are not as high as group, but the actual network index is on the same level as the group index, which is quite strong criteria.

Cognitive aspects of social capital have direct effect on the performance. It also has an influence on the structural aspects through integration and norms. These findings suggest the process of internalizing mental or awareness affect directly to the strength of the *interpersonal relationships* structure within the brick makers community. Civic culture is basic power of social organization which served to facilitate Mutually Beneficial Collective Action (MBCA). Thus, the cognitive aspects of social capital are not only met with the structural aspects of the ideas or expectations that lead to collective behavior in order to generate collective profits.

5. Suggestion

Most effective development of social capital within the community of brick makers is develop the integrity values of the society. Networks in brick makers and affected area communities needs to be improved and be taken seriously by the government to empower communities - increased management on people's income.

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