

Community participation in cobblestone road provision: a case study of Injibara, Amhara Region, Ethiopia

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Abstract

This study aimed at analyzing the effect of social capital on the level of community participation in cobblestone road provision. The study employed a quantitative approach. Samples were selected by using a probability sampling technique. From the probability sampling technique, the researchers used a stratified random sampling technique followed by simple random sampling for the selection of households. The survey questionnaire was administered for 368 sample respondents. Findings revealed that community participation was expressed more in financial terms. Participation in policy formulation, planning, implementation, maintenance and operation, and evaluation were not evident. The study shows that there is a strong and positive relationship between the socioeconomic status of respondents and social capital with the level of community participation. The study also found that there was poor communication and relationship among the municipality and kebele leaders that managed the project, and the community. The study concludes that bottom-up approaches, building an effective communication channel between the community, kebele leaders and institutionalization of participation in the City is essential. Capacity-building strategies are also required to promote community participation.

Keywords: Cobblestone Road, Community Participation, Impact, Social Capital

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JADS Vol 6, No. 2, Dec. 2019; DOI: <https://doi.org/10.56302/jads.v6i2.3119>

Introduction

Since the beginning, there has been always a movement from one place to the other. Free movement is a component of human rights. This right has got a guarantee in the Universal Declaration of Human Rights (UDHR). Technological advancement makes the movement of people easy. According to ECA (2009), infrastructure is a significant element in driving a country's growth and development. Especially, road infrastructure is crucial for regional cooperation and integration. In urban areas, roads generally comprise the most important part of the transport infrastructure system. It is a pillar and determinant factor for city growth, directly related to the day-to-day movement of people and freight. Similarly, Kokebe (2011) argued that road infrastructure is central to socio-economic development and poverty alleviation since economic growth, development, and people depends extremely on competent road infrastructure.

By realizing the benefit of road infrastructure in the development of the national economy, the Ethiopian government has given due attention to road infrastructure development. Cobblestone pavement has a long history in Ethiopia going 100 years back (Azeb, 2011). Cobblestone was first introduced to Ethiopia following the construction of the Ethio-Djibouti railway by French contractors. After the Ethio-Djibouti railway construction was finished, the construction could not show any progress until the starting of the engineering capacity building program in collaboration with the German Technical Cooperation of the Engineering Capacity Building Program by the year 2005. The program was started to create job opportunities and income for youth and

provide comfortable roads for Ethiopian cities (MUDC, 2012).

Community Participation is desirable in urban development works. Starting from the 1960s, the tendency to give consumers a say in different aspects of community life in the field of education, health, welfare services, and urban planning and development has increased. It is believed that community participation enables communities to contribute towards designing acceptable and user-friendly projects and make communities develop an interest in the operation and maintenance of projects. Lack of safe tenure rights, inappropriate technical standards, inflexible planning methods; time-bound project management requirements, and lack of practicable models is the potential contributing factors for the low level of community participation in urban road infrastructure development (Schubeler, 1996).

Urban Local Government Development Program (ULGDP) manual (2013) of Ethiopia stated that Cobblestone road constructions under ULGDP are expected to pass through community participation either in a direct construction by forming MSEs or in the procurement work through elected committee members. Urban road infrastructure development strategies can be successful only when there are active participation and mobilization of urban people at the local level. Community participation aims to enhance the skills and capacity of communities by promoting their participation in their development. Therefore, it is imperative and appropriate to find working strategies that can improve the level of community participation in cobblestone road works.

Social Capital which is an important idea in development studies was taken as an important component for ensuring project sustainability since 1990, (World Bank, 2009). However, incorporating social capital in community-based development works has got little attention (McGee, 2010). Recent studies on social capital argued that the process of community participation in development works can highly be influenced by social capital (Johannesson et al., 2003; Jones, 2005; Karlsson, 2005; Macbeth et al., 2004; Nordin & Westlund, 2009 as cited in Zhao et al., 2011). This study was conducted to analyze the social capital's effect on community participation in cobblestone road provision in Injibara town of Amhara Regional State, Ethiopia.

Problem statement

Injibara Town Municipality office started participatory planning and implementation approach for cobblestone road provision and other related urban development works in 2004 E.C. Based on the evidence brought from the city municipality, the level of community participation on the cobblestone road provision has been increasing through time. Existing evidence show the presence of community participation from the planning up to the construction stage of the cobblestone road project, but it is not enough to conclude that the level of participation is enough and appropriate. Due to this, in the past seven years, the cobblestone road provision has been facing extreme delaying of completion. The quality of those built cobblestone roads is also poor in some areas. The Town administration is confronting with the growing demand for cobblestone road provision from different areas (Injibara Town Annual Report, 2017).

Low road coverage is the reason for low mobility and health problems. The low level of community participation in cobblestone road provision leads to low cobblestone road coverage. This also leads to other socio-economic and environmental problems.

In the last seven years, the municipality was trying to incorporate community participation in cobblestone road works. Community participation in cash is the most commonly known form of participation in cobblestone road works. Every year a huge amount of cobblestone is stored in one dumping site and also surplus cobblestone is left uncollected in finished cobblestone road sites. It is caused by poor management systems accompanied by low community participation. There is no check and balance system developed for the residents. So, this problem has to be solved.

In Ethiopia, few studies concerning cobblestone road provision were done in recent years. Most of them focused on the economic, transportation, and social impact of cobblestone road provision. The relationship between community participation and cobblestone road provision is little researched. A study conducted by Melesse (2015) had tried to address the challenges of community participation on the effectiveness of cobblestone road projects; however, the study did not discuss the issue of the role of the community in the provision of cobblestone road projects well. A study by Meskerem (2015) also tried to research the procedures and problems for urban road infrastructure provision. A study by Samson (2012) as well focused on the actors in road provision and the contribution of the community for it. In all the above studies we

could not find any relationship analysis between socioeconomic statuses with community participation level and also social capital with community participation level.

Additionally, no research was done on the issue of community participation in cobblestone road provision in Injibara town. Therefore, the above problems motivated the researchers to conduct this study on community participation in cobblestone road provision and forward possible solutions that can narrow the gap between the demand for and supply of cobblestone road provision in Injibara town. The objective of this paper was analyzing the impact of social capital on community participation level on the cobblestone road provision.

Literature review

Jerry (2004) defined community as a group of people who have been able to accept and transcend their differences regardless of the diversity of their backgrounds. This creates a platform to communicate effectively and openly to work together towards goals identified for their shared benefit. The theory of community participation called “a ladder of citizen participation” which was introduced by Sherry R. Arnstein in the year 1969 in America. Arnstein explained that this classification is necessary to reveal the manipulation of people in the grab of community participation projects by authorities and policyholders. The ladder has eight rungs each matching to a different level of participation, that is, manipulation, therapy, informing, consultation, placation, partnership, delegated power, and citizen control.

The rungs at the bottom of the ladder are the ones with minimum citizen participation

or non-participation and include manipulation and therapy. Informing, consultation, and placation occupy the middle rungs of the ladder and edge between manipulation at the bottom and citizen control at the top and is called tokenism where the people are permitted to participate only to the extent of voicing their views but have no real say that matters.

The last three rungs, partnership, delegated power, and finally citizen control at the top of the ladder are termed equal to citizen power and this is where true and meaningful participation takes place. This categorization of the various types of people involved is vital in clarifying the mix-up between non-participation and true citizen power also to identify the real reasons behind participatory projects, which are often used by critics as a shortcoming of the concept of participation (Arnstein, 1969). The theory is relevant to the study where there is manipulation done by local authorities and local leaders about community participation development projects funds which lead to communities' loss of interest towards participation in development projects.

Wattam (1998) defined community participation as the empowerment of citizens to manage the utilization and distribution of resources and production capital in society for their living. Wattam's (1998) classification of community participation.

Passive participation: People participate by living in the area of the project. They may be told what is going to happen or has already happened but will have no other input.

Participation for material incentive: People participate by being paid for labor in food or cash, for a pre-determined project.

Participation by resource contribution: People participate by contributing a resource such as labor or money, to a pre-determined project.

Participation by consultation: People participate by being consulted on Projects where the majority of the decisions have been made, their view may/may not be considered.\

Interactive participation: People participate by joining with external professionals in the analysis of their situation, developing action plans, and determining common projects.

Spontaneous mobilization: People participate by taking their initiative independent of external professionals to change their situation.

Strategies to participation for infrastructure development

1. Process-based strategies: process-based Strategy takes the entire process of infrastructure management as their frame of reference. The basic objective is to improve the efficiency, demand responsiveness, and accountability of infrastructure service management through a general decentralization of delivery processes.
2. Functionally-based strategies: employs the functional structure of the infrastructure system as the frame of reference for organizing development inputs. The main objectives of this approach are first to designate areas of responsibility within which each stakeholder may pursue particular interests and exercise capacities, and second to establish effective collaboration between these various domains.
3. Area-based strategies: Rather than a social group, a particular residential area constitutes the frame of reference for development efforts.

- Community-based strategies: The main objectives are to support the local development of infrastructure services; enhance community groups' capacity to manage service development; and enable these processes through appropriate changes in the legal, technical, and policy context.

Community participation is influenced by different factors and social capital is one of them. The impact of social capital on the level of community participation is discussed by different intellectuals. Social capital incorporates several perspectives on social relations (Macbeth et al., 2004). Sociologists, philosophers, and political scientists like Bourdieu (1986), Coleman (1988), Putnam (1993), and Ostrom (1999) conceptualized Social Capital in different ways.

Social Capital is an important idea in development studies. Since 1990, it was taken as an important component for ensuring project sustainability (World Bank, 2009). But incorporating social capital in community-based development works has got little attention (McGehee, 2010). Recent studies on social capital argued that the process of community participation in development works can highly be influenced by social capital (Johannesson et al., 2003; Jones, 2005; Karlsson, 2005; Macbeth et al., 2004; Nordin & Westlund, 2009 as cited in Zhao et al., 2011). Hounslow (2002) and Woodhouse (2006) find that building a community's capacities depends on Social Capital. Relationships and social networks describe Social Capital, which indicates the importance of connecting the concepts of community participation with Social Capital. The way of using an individual's resources using the technique is affected by relationships with, and trust in others. Trust can determine the level of capacity of the community (Balint,

2006). Differences in power had to be taken into account and identified whether or not they are effectively contributing to improving the participation in meetings and training for capacity building (Chu, 2003, as cited in Wong, 2007). To be able to view relationships, networks, and competencies of the community from different perspectives for the analysis, the researchers used the 'synergy' views developed by Woolcock and Narayan (2000). The researchers explain social capital as a combination of bonding, bridging, and linking types. Bonding social capital developed by relationships in similar network members.

Bridging social capital denotes outward-looking individuals of a community that creates associations across social and ethnic groups and henceforth the establishment of new ideas and outlooks (Gittel & Vidal, 1998). Communities with high bridging social capital can serve as an accelerator for small businesses to emerge and advance (Karlsson, 2005). Linking social capital denotes associations among individuals and institutions throughout all power gradients. They are often relatively weak ties but have significant outcomes (Woolcock, 2001; Szreter & Woolcock, 2004).

Operational definition of variables

Social capital: contains themes of associations, networks, and abilities in addition to its related concepts of trust and power and it is the complex and immaterial resources of a community (Stone, 2001)

Community Participation: Participation in cobblestone road provision includes, planning, programming, monitoring, implementation, operation, and maintenance in the form of partnership between government and the community

members, which may be endorsed in the framework of programs for improving road quality. The indicator used in this research is several people participating in key activities such as construction, maintenance, planning in cobblestone road provision within a year. The researchers used the operationalization of social capital at the household level developed by Samson (2004).

The density of membership: Expressed as membership of household head in several associations. It indicates the presence of both bonding and bridging social capital. Having more participation in different local associations builds a sense of community due to the possible learning effect through information diffusion and social capital accumulation (Baland and Platteau, 1997; Pender and Scherr, 1999).

Active Participation: Associations following a democratic system in decision making, are more likely to be effective than others in employing community-oriented activities (Grootaert, 1999). The local association is expected to be a significant factor to have community development. A household member who is active in local association's activities is more likely to develop and attain generalized trust (Putnam, et al., 1993; Fukuyama, 1995) and reciprocity, which can reduce transaction costs and manages community development.

Trust variables: Trust is considered as a good lubricant in given cooperation. It also minimizes the transaction cost between people and hence liberates resources. Instead of having to invest in monitoring, other individuals can trust them to act as expected. The act of trusting someone engenders reciprocal trust. Trust has three types: the trust we have in individuals that

"we know" is called 'particularized trust' (Fukuyama 1995); and the trust we have in those "we do not know," but the trust arises because of our confidence in a known social structure, is called 'generalized trust' (Knack and Keefer, 1995). The third type of trust is the trust that we have informal institutions, which is called 'confidence in the institution' (Hardin, 1999; Putnam, 2000). All trust variables of the household have been taken in the analysis of the willingness of the household to be engaged in a partnership for community development through their local association.

Reciprocity: Reciprocity and exchanges also increase the sense of community and solidarity. There are two types of reciprocity (Putnam, Leonardi and Nanetti 1993; Coleman, 1990): specific reciprocity and diffuse reciprocity. Specific reciprocity is expressed as simultaneous exchanges of items of roughly equivalent value and diffuse reciprocity, refers to a continuous relationship of exchange that at any given time may not be returned, but is sure to be repaid over time and balanced. Again, this contributes to the development of long-term obligations between people, which can be a central part of achieving positive outcomes. Norms of reciprocity, which entail mutual aid, are reliant on social networks. Bonding networks that connect persons who are members of a certain group or association can ensure specific reciprocity (Putnam, Leonardi, and Nanetti, 1993). Bridging networks that link persons who are diverse sustain diffuse reciprocity (ibid.).

Conceptual framework

The foregoing discussion has given the base for our theoretical framework. First, actors of the community should be self-motivated and also be networked formally



and informally. Consequently, we expect that a higher level of membership in local associations and trust build in community and confidence in governmental institutions will increase participation in community development.

Research methodology

Stratified and simple random samplings among probability sampling techniques were employed in this study to select representative household heads to survey. This study considered the entire population as heterogeneous in various dimensions. Thus, the stratified sampling technique was used to stratify the population into four strata based on their location. Then a total of 350 sample households were selected proportionally from the four strata; homeowners and renters were selected by

Table 1: sample frame and size

No	Kebele	Population Size	Sample Size	Sampling Technique
1	Kebele 01	2,427	97	Simple Random Sampling
2	Kebele 02	2,284	91	Simple Random Sampling
3	Kebele 03	1,808	73	Simple Random Sampling
4	Kebele 04	2,236	89	Simple Random Sampling
5	Total	8,755	350	

Source: Injibara Town Administration Finance and Economic Cooperation Office, 2011

using a simple random sampling technique. Injibara Town Administration is composed of 4 *kebeles*. Table 1 below, illustrates the total population of the study areas and the sample size selected from the entire population.

Data gathering instruments

The study was undertaken using primary and secondary data. Primary data is collected from the samples through observation and questionnaire.

Data analysis

After the collection of raw data on the field was completed editing, coding, and recording of the data on a tabular form is started. Those collected data that were not complete and probably having an effect on the output of the study were neglected from the sample. To get meaningful information from the collected samples, SPSS version 22, was used. The data were analyzed through simple statistical methods like percentages and cross-tabulations to facilitate meaningful analysis and interpretations of the research findings. Community participation is analyzed as a function of social capital and the household's socio-economic characteristics. Indicators of the level of trust and networking and reciprocity were used to measure social capital. Thus:

$$W_i = (SC_i, D_i, H_i, \dots, e)$$

Where 'SC' denotes social capital variables (trust, reciprocity, and networks), 'D' denotes demographic variables (sex of the head of the household), and 'H' denotes household characteristics (age, household size, income level, education level, marital status, occupation, length of living)

$$W_i, SC_i, D_i, H_i, V_i, V_i, N_i \in [0, 1]$$

A Logistic Regression Analysis, which is a statistical technique for predicting a dependent variable with one or many independent variables, was also employed. The basic difference between a Logistic Regression Model and Linear Regression Model is that the outcome variable in

logistic regression is binary or dichotomous; it allows for identifying the direction and magnitude of change in the probability of Y occurring given a unit increase in X. Thus, Logistic Analysis computes the change in the probability of an event occurring, given a unit increase in the value of independent variables of interest (Hosmer and Lemshow, 1989). Thus, the dependent variable "level of participation" was coded as:

$$W_i = 1 \text{ If the household is participating}$$

$$W_i = 0 \text{ Otherwise}$$

The logistic regression model is given by the function:

$$W = e^{(\beta_0 + \beta_1 SC + \beta_2 D + \beta_3 H + \dots)}$$

For instance, 'W' would be the probability of the household to participate, whereas 1-W is the probability of not participating. 'β' is the vector of coefficients, and 'SC', 'D', and 'H' are the independent variables.

Results and discussion

Backgrounds of respondents

Regarding the educational status of respondents, Table 2 depicts that about 94% of the total respondents were attending formal education at different levels. Literate people are more expected to have more awareness about the practice of community participation in road infrastructure development than those who are not. The age group of the respondents was composed of middle-age respondents in the age group between 36-45 takes a major share which represents 125 (35.71%) of the total sample respondents, followed by age group between 26-35 which accounts 92 (26.29%) of the respondents. While the remaining 61 (17.43%) of the respondents were found between 46-55 age group, 40 (11.43%) of the respondents were found above 56 age

group, 32 (9.14%) of the respondents were found between 18-25 age group.

Out of the total 350 respondents, 137 (39.14%) were having a household size of 1-4 people, 157 (44.9 %) were having 5-7 members and 34 (9.7%) also have 8-10 family members, 22 (6.3%) were having above 10 household members. This shows that the majority of the respondents have 5-7 household size. The large population needed large demand for infrastructure provision and labor force which directly implicate cobblestone road infrastructure provision. Therefore, this large amount of household size wants usage of cobblestone road infrastructure to create a good environment of living in the Town.

Out of 350 respondents, representing 279 (79.71%) of the total sample respondents had been in the area for four years and above. This implies that the largest share of the total respondents lives for long years in the town. This means that they had various experiences on the trend of community participation and cobblestone road infrastructure development. The data collected from them is very relevant and valid. The remaining 71 (20.29%) respondents had been in the area for 3 or fewer years. As the table shows, out of the total 350 sampled respondents, 152 (43.43%) participate while the rest 198 (56.57%) did not participate in cobblestone road works.

As shown in Table 2 above, males are household heads in almost equal ratio with little difference (1.4%) and majorities (83.4%) of them are between thirty-six and forty-five of age. 142 (40.6%) of the respondents earn between 4,000 (about \$133) and 8,000 Birr (about \$266) monthly, while almost 82% of them are graduates of higher institutions of learning, which implies

Table 2 Socioeconomic, demographic and housing characteristics of respondents in the study area

Factors	Frequency (n 350)	Percent (%)
Gender		
Male	180	51.4
Female	170	48.6
Age		
18-25	32	9.1
26-35	92	26.3
36-45	125	35.7
46-55	61	17.4
Above 56	40	11.4
Family Size		
1-4	137	39.1
5-7	157	44.9
8-10	34	9.7
Above 10	22	6.3
Level of Education		
No formal Education	21	6.0
Elementary	22	6.3
Secondary	21	6.0
Certificate	22	6.3
Diploma	79	22.6
Degree	174	49.7
Masters and above	11	3.1
Marital Status		
Single	77	22.0
Married	236	67.4
Widowed	17	4.9
Divorced	20	5.7
Living period		
1-3 years	71	20.3
4-7 years	63	18.0
8-10 years	44	12.6
Above 10 years	172	49.1
Employment Status		
Government Employee	120	34.3
NGO Employee	51	14.6
Private Sector Employee	72	20.6
Self-Employee	107	30.6
Unemployed	120	34.3
Income		
Below 2,000 birr	36	10.3
2,001-3,000 birr	45	12.9
3,001-4,000 birr	81	23.1
4,000-8,000 birr	142	40.6
Above 8,000 birr	46	13.1
Participation		
Yes	152	43.4
No	198	56.6

In this study, the researchers discussed the **network, trust, and reciprocity** dimensions only. The civic engagement dimension of social capital is not part of the research. The reason for excluding it from the research is to manage the scope of the study. In Ethiopia, there is a strong traditional mutual help and these mutual help manifests itself also in collective action, often undertaken for the betterment of the community (Koehn and Koehn, 1973 cited in Samson, 2004). Table 3 below presents the result of the logistic linear regression participation level of the household for the cobblestone road construction in the town as the dependent variable and social capital aspects as the independent variable. Most of the social capital variables showed direct and significant effects on the participation level in cobblestone road provision.

member of a local association), which enables a diversity of individuals within the locality to become connected. The informal network (through individual relationships) was not considered in the study. To collect important data related to formal networks, respondents were asked about the density of membership (to be engaged in several associations shows bonding and bridging social capital. In this research it is hypothesized that the more the household is participating in different local association the higher the tendency to be part of collective action in his/her residence.

The second component of formal networks is active participation. In this research, respondents were asked different questions to get their idea on their participation level in local associations. It is hypothesized that a member of a household who is active in the local

Table 3: Model summary and coefficients of social capital predictors of participation

Dependent Variable	Community Participation				Remarks
	Independent Variable	Standardized coefficients		df	
β		Std. error			
Constant					
Social Capital Dimensions					
Density of membership	3.201	0.527	1	0.000**	Significant
Active Participation	2.983	0.275	1	0.000**	Significant
Reciprocity	8.080	0.824	1	0.000**	Significant
Generalized Trust	5.606	0.041	1	0.000**	Significant
Confidence in local Institutions	3.932	1.421	4	0.006*	Significant
Model Summary					
Number of Observation	350				
Log-Likelihood	0.000				
Chi-square	0.000				
R ² (Nagelkerke)	1.000				
Significant level	0.000				

Note Dependent variable: participation in cobblestone road provision.

*Significant predictors (p < 0.05)

**Significant predictors (p = 0.000)

Network

Under this study, the emphasis was given to formal networks (in terms of being a

association is more very probable to have generalized trust and reciprocity.

Table 3 above shows that both density of membership ($\beta=3.201$; $P<0.001$) and active participation ($\beta=2.983$; $P<0.001$) have a positive and a significant impact on the community participation level. The result is in support of the hypothesized assumption made earlier.

Trust

In this research, trust is classified into **generalized trust** (the type of trust we build on those people that we do not know or know little which arises based on our confidence in the social structure) and confidence in governmental organizations (**Institutional confidence**). Since the issue is more focused on society level in this research **particularized trust** is not part of the research. To know about **generalized trust** in this research, the respondents were asked their view about the general trust level in the locality with questions like “Generally speaking, would you say most people living in this locality could be trusted or that you can’t be too careful in dealing with people”.

To know about the **institutional confidence** of the residents on different governmental institutions, the respondents were asked about their level of confidence towards different institutions such as municipality council, municipality officers, city administration leaders, and city administration officers. By doing so, it is found that **institutional confidence** has a positive and significant impact on the community participation level ($\beta=2.983$; $P<0.01$).

Reciprocity

Reciprocity is classified into two (Putnam *et al.*, 1993). The first type of reciprocity is Specific reciprocity, is expressed as simultaneous exchanges of items of

roughly equivalent value; and the second is diffuse reciprocity, refers to a continuous relationship of exchange that at any given time may not be returned, but is sure to be repaid over time and fully balanced. This relationship trend can create a stable relationship between people and also builds trust. Norms of reciprocity is a factor of social networks. Particularized reciprocity can be sustained by bonding networks that connect individuals who are members of a certain group or association (Putnam *et al.*, 1993). Generalized reciprocity is sustained through bridging networks that connect diversified individuals (Putnam *et al.*, 1993). Based on these two relationships we can have a hypothesis that a better score of reciprocity in a household would favor a collective action.

To know about the reciprocity pattern of the households of the study area questions like whether a household does a favor to their neighbors in the recent 6 months or not, do a household will ask help from their neighbor in a state of need were asked. The logistic regression analysis shows that reciprocity has a positive as well as a significant effect on the community participation level. ($\beta=8.080$; $P<0.001$). The output is compatible with the hypothesis developed earlier. The general impact of the social capital community participation level is expressed by ($\beta=1.560$; $P<0.001$). This implies that overall social capital has a significant and positive impact on community participation level. The findings reveal that social capital has a positive and significant impact on the level of community participation. The three dimensions of social capital have a different level of influence on the participation level. Reciprocity ranks first followed by trust and network.

Conclusion

Social capital, one predictor variable for community participation, has three dimensions. These are network, trust, and reciprocity. The hypothesis is the more social capital society has the more tend to participate in community works. The network dimension of social capital is measured by the density of membership and active participation. Studies by Balland and Platteau (1997), and Pender and Sherr (1999) revealed that the one with a high density of membership has a good community participation level. Also, active participation in the community through different mechanisms can improve generalized trust and reciprocity which reduces the transaction cost for community participation (Grootaert, 1999; Putnam *et al.*, 1993; Fukuyama, 1995b). The regression analysis result for the density of membership and active participation shows that the existence of a strong network among people and the municipality can serve as a lubricant to speed up community participation in any development work of the municipality.

The second dimension of social capital; i.e., trust is also classified into generalized trust and institutional confidence. Balint (2006) argued that trust can determine the performance of community capacity. The regression analysis result for both generalized trust and institutional confidence shows that the more you trust your locality and government institutions, the more you feel comfortable and happy to participate in communal works.

The third dimension of social capital, reciprocity, is classified into specific and diffused reciprocity. In both types of reciprocity, there is a sense of giving and take. The hypothesis is that the more the

reciprocity level, the more tendency to participate in communal works. The act of reciprocity increases the sense of community and solidarity (Putnam, Leonardi & Nanent, 1993; Coleman, 1990). When people develop an exchange of items among themselves for long times, they develop a strong relationship and people think as a community. Then they will be active in community works. The regression analysis produces the same result as that of the hypothesis. So, in all the above listed three dimensions of social capital has a direct and positive impact on the level of community participation.

Recommendation

Acknowledging the importance of the social capital of the society and using it as an input for the day to day work of the municipality is important. The network, trust, and reciprocity dimensions of social capital have a positive impact on the level of community participation. Therefore, when the municipality plans the cobblestone road project it has to know how the society is networked, the level of trust among the community, and the level of reciprocity. Based on this data, the municipality has to develop a strategy that maximizes community participation. Among the strategies reviewed in the literature, Area-based strategy is the appropriate one.

Reference

- Arnstein, S.R., 1969. *A Ladder of Citizen Participation*. *Journal of the American Institute of planners*, 35(4).
- ANRS, Urban Development Housing and Construction Bureau, Community Participation Guideline, 2007.
- Azeb, N. 2011. *Contribution of Cobble Stone Enterprises to Urban Household Food Security: The Case of Gulele Sub-city, Addis Ababa.* MA thesis, School of Development Studies, AAU, Addis Ababa, Ethiopia.
- Baland, J.M., and Platteau, J.P., 1997. *Wealth inequality and efficiency in the commons*

- Part I: the unregulated case. *Oxford Economic Papers*, 49(4).
- Balint, P.J., 2006. Improving community-based conservation near protected areas: the importance of development variables. *Environmental Management*, 38(1).
- Bourdieu, P., 1986. "The Forms of Capital." *Handbook of Theory and Research for The Sociology of Education*. JG Richardson. New York, Greenwood, 241(258).
- Chu, K.Y., 2003. *Collective Values, Behavioural Norms, and Rules: Building Institutions for Economic Growth and Poverty Reduction* (No. 2001/98). Wider Discussion Papers//World Institute for Development Economics (UNU-WIDER).
- Coleman, J.S., 1988. "Social Capital in the Creation of Human Capital." *American Journal of Sociology*, 94, pp. 95-120.
- _____. 1990. *Foundation of Social Theory*. Cambridge: Harvard University Press.
- CSA, Population Survey, 2007.
- ECA, 2009. *Africa Review Report on Transport*, viewed 28 November 2018. http://www.un.org/esa/dsd/csd/csd_pdfs/csd-18/rims/African Review Report Sum.pdf
- Fukuyama, F., 1995a. Trust: The social virtues and the creation of prosperity.
- _____. 1995b. Social capital and the global economy. *Foreign Aff.*, 74.
- Gittel, R. and Vidal, A., 1998. *Community Organizing: Building Social Capital as A Development Strategy*. Sage Publications.
- Grootaert, C., 1999. *Social Capital, Household Welfare, And Poverty in Indonesia*. The World Bank.
- Hardin, R., 1999. Do we want to trust in government? *Democracy and trust*.
- Hosmer, D.W. and Lemeshow, S., 1989. *Applied Logistic Regression*. New York: Jhon Wiley & Son.
- Hounslow, B.E.T.T.Y., 2002. Community Capacity Building Explained. *Stronger Families Learning Exchange Bulletin*, 1(1), Pp.
- Injibara city Administration Economic Cooperation Office Report. 2017
- Jóhannesson, G.P., Skaptadóttir, U.D. and Benediktsson, K., 2003. Coping with social capital? The cultural economy of tourism in the north. *Sociologia Ruralis*, 43(1).
- Jerry, L.H. 2004. *Seven Community Definitions, Group Dynamic and Community Building*, Viewed 10 December 2, 2018, http://www.community.com/comm_definitions.html
- Jones, S., 2005. Community-based ecotourism: The significance of social capital. *Annals of tourism research*, 32(2).
- Karlsson, S.E., 2005. The social and the cultural capital of a place and their influence on the production of tourism—a theoretical reflection based on an illustrative case study. *Scandinavian Journal of Hospitality and Tourism*, 5(2).
- Knack, S. and Keefer, P., 1995. Institutions and economic performance: cross-country tests using alternative institutional measures. *Economics & Politics*, 7(3).
- Kokebe, Y. 2011. *Urban Road Infrastructure and Provision Management*, unpublished book Adama, Oromia, Ethiopia, viewed 29 October 2018 <http://www.infrastructureafrica.org/system/files/WB147-AIATT-CH10.pdf>.
- Macbeth, J., Carson, D., and Northcote, J., 2004. Social capital, tourism and regional development: SPCC as a basis for innovation and sustainability. *Current Issues in Tourism*, 7(6).
- McGehee, P., 2010. Self-compassion and psychological resilience among adolescents and young adults. *Self and Identity*, 9(3).
- Melese, K. 2015. *Assessment of community participation on the cobblestone road project: the case of Addis Ababa Bole Sub-city Woreda 17*
- Meskerem I. 2015. Community Participation in Urban Infrastructure Development: Experience from Bishoftu Town, Oromia National Regional State.
- MUDC. 2012. *Manual for Community Participation in Procurement and Construction of Cobblestone Roads under ULGDP*, 3rd ed., Addis Ababa, Ethiopia.
- Nordin, S. and Westlund, H., 2009. Social capital and the life cycle model: The transformation of the destination of Åre. *Turizam: međunarodniznanstveno-stručničasopis*, 57(3).
- Ostrom, E., 1999. Social capital: a fad or a fundamental concept. *Social capital: A multifaceted perspective*, 172(173).
- Pender, J.L. and Scherr, S.J., 1999. *Organizational development and natural resource management: Evidence from central Honduras* (No. 581-2016-39372). <http://dlc.dlib.indiana.edu/documents/dir0/00/00/04/67/>
- Putnam, R.D., 2000. *Bowling alone: The collapse and revival of American community*. Simon and Schuster.
- Putnam, R.D., Leonardi, R. and Nanetti, R.Y., 1993. *Making democracy work: Civic traditions in modern Italy*. Princeton University Press.
- Samson, K., 2004. *Social capital for synergic partnership: development of poor localities in urban Ethiopia*. CuvillierVerlag.
- Samson, T. 2012. *The role of community participation in urban road infrastructure provision in SNNPRS- The case of Bonga Town*.
- Schubeler, P., 1996. *Participation and partnership in urban infrastructure management*. The World Bank.
- Stone, W., 2001. Measuring social capital. *Research paper*, 24.
- Szreter, S. and Woolcock, M., 2004. Health by association? Social capital, social theory, and the political economy of public health. *International Journal of Epidemiology*, 33(4).
- ULGDP manual, 2013. Operational Manual.
- Wattam, M., 1998. *Community Participation in Rural Transport Infrastructure*, IT Transport Ltd. Viewed 29 November 2018.
- Wong, S., 2007. *Exploring 'unseen' social capital in community participation: everyday lives of poor mainland Chinese migrants in Hong Kong* (Vol. 2). Amsterdam University Press.
- Woodhouse, A., 2006. Social capital and economic development in regional Australia: A case study. *Journal of rural Studies*, 22(1).
- Woolcock, M. and Narayan, D., 2000. Social capital: Implications for development theory, research, and policy. *The World Bank Research Observer*, 15(2).
- World Bank, 2009. The developmental state is dead—long live social capital? *Development and Change*, 30(1).
- Zhao, W., Ritchie, J.B. and Echtner, C.M., 2011. Social capital and tourism entrepreneurship. *Annals of Tourism Research*, 38(4).

Acknowledgments

The researchers would like to express their gratefulness to all respondents and the officials of Injibara Town Administration for their collaboration. We would also like to thank ECSU for the financial support for the research.