



**SCHOOL OF GRADUATE STUDIES**

**ASSESSING THE ROLE OF COMMUNITY PARTICIPATION IN  
RURAL ROAD DEVELOPMENT PROJECT: THE CASE OF GUMMER  
WOREDA GURAGE ZONE, CENTRAL ETHIOPIA**

**M.A. THESIS**

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Development Project: The Case of Gummer Woreda Gurage Zone**

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## **ABBREVIATIONS AND ACRONYMS**

|        |   |
|--------|---|
| CCIRDP | Contribution of Community Involvement in Road Development Project |
| CD     | Community Development   |
| CH     | Community Participation   |
| CSA    | Central Statics Agency  |
| GO     | Government organization   |
| GWAO   | Gummer Woreda Agriculture office                                  |
| HH     | House Hold  |
| LCBP   | Local Community-Based project                                     |
| PRA    | Participatory rural appraisal                                     |

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## **ABSTRACT**

*Community participation plays an irreplaceable role in the effectiveness of any development project. This means that no development work at any level can be successful without community participation. Based on that, the main objective of this study is: to examine the role of community participation in road development project in the case of Gummer woreda Gurage zone. The study used a mixed research approach and method of data collection were written questionnaires, interview and document analysis. In order to collect the required data, the study used multi stage sampling technique through this at first stage clustering sampling technique second stage simple random sampling technique and at third stage stratify sample sampling technique were employed. Subsequently, the data has been collected from these 151 samples and from 9 key informants and analyzed by using data analysis methods of descriptive statistics for qualitative research and graph, percentage and cross tabulation data analysis method for quantitative research. Findings show the majority of the respondent agreed that participation of the community in the area of road development is very high and their contribution is manifested in different ways, sharing money, by sacrificing their labor and giving their time to coordinate and managed the project. On the other hand, the result of the study confirm that there are structural, economic and institutional problems that prevent community participation from being effective at the required level, and recommended that to reduce the high cost of bringing select material from distant places, the district government should work with the neighboring districts and zones to produce gravel.*

**KEYWORDS:** *Community Participation, Contribution, Factor affect, Rural Road Development Projects, Gummer wereda.*

# CHAPTOR ONE

## INTRODUCTION

### 1.1. Background of the Study

Community participation is a dynamic process that motivates people to implement projects rather than to actively receive project benefit (Paul, 1987). Goals of community engagement can include active community participation at every stage of the project, collaboration, shared decision-making and control of resources and capacity building to achieve more sustainable desired outcomes (Begum, 2015).

Community participation is the process by which a community mobilizes its resources, initiates and takes responsibility for its own development activities, and participates in decision-making and the implementation of all other development programs in order to improve their overall living conditions (Miwru, 2015). From a local economic development perspective, there is a strong reliance on local resources, leadership and institutions to address local economic crises and opportunities. Participation is increasingly one of the most debated concepts in infrastructure development (Jamal, A. & Julia, M, oct 2009).

Historically as Cornwall, (2002) clarified that in the 1970 s, „popular participation“ was reinforced by guidelines/ rules that the poor’s were included in the development project. This idea was developed by World Organizations. By the late 1980s, a conscience was made about participation in development tasks as essential and appropriate in order to safeguard the poor’s efficiency, effectiveness, and sustainability. At the beginning 1990s, Participatory rural appraisal (PRA) was perceived as an instrument to implement participation. As indicated by Barrow, Mwanakatwe, Hashi, Zerihun, & Ndisale, (2011) distinguishes the significant role that communities and non-governmental actors can react in the development process to make public service users accountable. However, CP in the planning and the budgetary process is still limited. Wodajo, Yiadom, & Asfaw, (2014) revealed that public participation in isolating the problem, implementation, and evaluation of the activity and its outcomes were still

insignificant and not a long-standing development project and avoids making every decision and activity by the state only.

Khwaja (2009) emphasized the growing demand for community participation in development projects that the road industry, which is at the forefront of economic development in today's world, must face and adapt to be unlikely in the context wider international. Active participation in local development processes and assertion of the right to participate in decisions that affect them have become a global social trend. The orientations of community engagement and the basic principles of the community engagement process that can be adopted by the South African road industry are those that change the parameters of each individual's choice

Ezekiel (2014) argues that, in Africa, community participation in infrastructure development programs is very limited. However, the road infrastructure is the main catalyst for the physical and socio-economic development of the continent, because the movement of people, labor, goods and services mainly depends on it. In traditional procurement systems, the public sector (government) takes full responsibility for the development of road projects and bears most of the risks associated with operation and maintenance. Therefore, the road infrastructure is managed as a social service for the benefit of the public. In this regard, many countries on the African continent are currently exploring ways to involve other actors in the development of road infrastructure (Sintayehu, 2020).

According to Yigzaw (2005) the Ethiopian government has been working to improve the quality of life of rural residents and increase the productivity of the rural economy to ensure that communities in rural centers contribute to national economic growth. Comprehensive infrastructure development planning plays an important role in effectively guiding and promoting the development of rural roads. But rural infrastructure often remains weak and inadequate in terms of coverage and quality. Inadequate provision of infrastructure can expose rural populations to health risks, limit productivity by reducing services, increase costs for households and investors due to property losses and increase production costs due to congestion, accidents and traffic jams. Therefore, for our country to achieve sustainable

development it is necessary to change the nature and characteristics of the economic system, to improve the way local communities participate in development activities, to achieve adequate public infrastructure and to improve the quality of services through the participation of the whole community (Sintayehu, 2020).

Before a formal rural road development program was established, the Gurage community as an institution cultivated its own history and culture to use, protect and manage its local roads through the cultural name is "Jefore". Also in the development of modern, formally established country roads, the local community played an important role prior to the construction of the 120 km gravel road from Wolkite to Hosanna, where the current paved road has yet to be built

According to Gurage zone Gummer woreda transport and road development office report, currently there is active community mobilization and invest their money, time and labor on a road development program. As the past four year from 2011-2015 the office report shows that, Community participation take a lion share of maintaining and building both earth work and gravel road installation that connect from kebele to kebele, from kebele to woreda, from kebele to main road. While the study area show that as there is huge social potential and active community participation in different developmental aspect. Therefor my study focused on the assessing the role of community participation on maintenance, new road building and management in rural road development project.

## **1.2. Statement of the Problem**

The main purpose of this study was conducted to investigate the role of community participation in rural road development the case of Gummer woreda Gurage zone. The road projects in the country provide means through which community development is attained. The rural road project to be sustained and effective, the local government should mobilize local community to maintain and build rural road project (Stieglitz, 2012).

Theory made by Mostert, (2003) tried to conclude that knowledge of participatory approaches and methods more importantly an open, transparent and outward-looking of the governments were the real challenges of community participation. Thus, the study didn't clearly indicate

what contribution has community involvement on road development. Beside these, theoretical gaps previously studied empirical research by some researchers like Legesse, (2015) on the experience and challenges of community participation in rural infrastructural development found that determinants of public participation were lack of access to information, the presence of ineffective communication; lack of interaction between woreda administer and Keble leaders; lack of awareness on the part of the community, Serbeh-Yiadam, (2014). In addition to these, researchers like Kakonge, (1996) and; J. T. Plummer, (2000) found that the key factors affecting the nature of community participation include: lack of announcement between the administrators and the people, gender, employment, education and literacy, culture and belief.

All the above studies were conducted on the challenge of community participation in road development project and the gap of these studies were did not clearly indicate what contribution has community involvement on road development. But my study has been focused on the contribution of community participation in rural road development project in Gurage zone Gummer woreda. Specifically my attention is with regarding what lock like the practice, the importance and contribution of community participation in rural road development project.

The rational of this study: the issue for rural road project which is the life line of rural development and it needs active community mobilization. Different research has been done in different area focused on urban road infrastructure but did not consider rural road development and there is no previous research conduct concerning this issue in the study area.

As Gummer woreda transport and road development office annual report from 2019-2022 indicate that, there were many roads built by local community and those communities play significant role by: contribution of money, contribute their labor, mobilize the community, and manage the project. Due to this reason the researcher`s motivated to conduct research on this issue.

### **1.3. Basic Research Question**

This study is trying to found clear and precise answer to the following basic research questions from the different sources of data.

1. Is there the practice and experience of community involvement to build and to maintain rural road development project in the study area?
2. Do people know about the importance of community participation in planning and decision making process in rural road development project?
3. What are the contributions of community in building new routes in the study area?
4. What are the factors that affect community participation in rural road development project in the study area?

### **1.4. Research Objective**

#### **1.4.1. General Objective**

The main objective of this research is to assessing the role of community participation in rural road project: the case of Gurage Zone Gummer Woreda

#### **1.4.2. Specific Objective**

The study has the following specific objectives:

1. To examine the practice and experience of community participation in building and maintaining rural road development project.
2. To investigate the importance of community participation to building new routes in rural road development project.
3. To examine contributions of the community in building rural road development project in the study area.
4. To identify factor that affect community participation in road development program in the study area.

## **1.5. Significance of the Study**

The study was conducted in Gurage Zone Gummer Woreda and it indicates the overall situation of community participation in road development. It considers the experience of community participation, the importance of community participation, contributions of the community in building rural road development project in the study area and challenges for effective community participation in rural road development and mechanisms for its improvement. Also contribute to administrative agents to plan properly for improving efficiency in infrastructure provision by using local resources and mobilizing the community. The study may important to minimize the problem that affects quality and sustainability of community based development project.

Finally it may contribute something for policy makers, planner, development practitioner, and deferent academia as well.

## **1.6. Scope of the study**

Community involvement is important to create opportunities for the community to take their part in different infrastructural development programs like road infrastructure, energy, and water management in rural areas in order to improve the project's effectiveness, efficiency, quality, and ensure sustainability. However, to make it manageable and to complete within the time frame the study is limited in analyzing the role of community involvement in rural infrastructure development specifically road development project in the case of Gummer Woreda Gurage Zone.

## **1.7. Limitations of the Study**

The researcher faces different challenges which have effect on the results of the study. These include inability to get the necessary information, lack of clearly documented information in the transport and road development sector due to poor record and documentation, lack of willingness of focal persons to show necessary data for the researcher when managers were absent, lack of willingness of the respondents to fill questioner, absence of data including rules, regulations etc. related to public Participation, shortage of equipment which facilitate

data collection process like vehicles and stationery, shortage of time to accomplish the task according to time schedule. But the researcher try to manage these challenges systematically.

## **1.8. Organization of the Study**

The study has organized into five chapters. The first chapter includes background of the study, problem statement, objectives of the study, research questions, significance of the study, scope of the study, limitation of the study. Chapter two review of related literature, Chapter three methodologies of the study, chapter four result and discussion and chapter five conclusions and recommendation.

## **1.9. Operational Definitions of Key Terms**

**Community:** - This is referring to a group of people who live in the same local geographical area and share common goals and interests in order to make a living and develop themselves, such as members of a city or town.

**Participation:** - Participation is the process by which a community mobilizes its resources, initiates and takes responsibility for its own development activities, and participates in decision-making and the implementation of all other development programs in order to improve their overall living conditions (Miwru, 2015).

**Road Infrastructure:** - denote the hard component that comprises systems of rural physical structure that are mainly laid on the ground (e.g. roads) to provide social services. In the context of this study road infrastructure mainly includes maintenance, new road building and management in rural road development project.

**Local government:**-defined as the administration of locality, a village, or town/city, a body representing the local inhabitants, has autonomy, collect revenue, and provide services to its inhabitants. In this study local government mainly refers to administration of Gummer woreda. .

## **CHAPTER TWO**

### **LITERATURE REVIEW**

#### **2.1. Operationalization and Conceptualization**

##### **2.1.1. Understanding Community Participation**

To start from the meaning of community, it is a social entity made of people or families who have the following characteristics: live in the same geographical area, share common goals or problems, share similar development aspirations, have similar interests or social network or relationship at local level, have a common leadership and tradition, have common system of communication, share some resources-water, school, etc., are sociologically and psychologically linked (Botes, L. & van Ransburg, D., 2000). Participation is a rich concept that varies with its application and definition. The way participation is defined also depends on the context in which it occurs. For some, it is a matter of principle; for others, practice; for still others, an end in itself (BANK, 1995). The Oxford English Dictionary defines participation as “to have a share in” or “to take part in,” thereby emphasizing the rights of individuals and the choices that they make in order to participate. Community participation concerns the engagement of individuals and communities in decisions about things that affect their lives. Sometimes people do not want to be involved in decision making, but it is our view that everyone should have the opportunity to do so (Canada, 2007). It occurs when a community organizes itself and takes full responsibility for managing its problems. Taking full responsibility includes identifying the problems, developing actions, putting them to place and following through. (Danny,2004).

##### **2.1.2. Contribution of Community Participation for Development Program**

According to Njunwa (2010, p. 26), the benefits of community participation include, but are not limited to, the following:-

First, community engagement empowers communities to make decisions that directly affect their lives. Community engagement helps increase citizen satisfaction with their communities

and overall development. Therefore, active community participation is essential to building a capable and responsible community. Second, community engagement creates a sense of ownership of the development process for the community itself. The development process becomes part of the community and helps the community to believe that it has its own development process. A top-down approach to the development process does not create a sense of development ownership for the community. Third, community participation ensures the sustainability and continuity of the development process. Community engagement ensures that people are aware of community work and participate in the decision-making process (planning phase) and the implementation phase. Involving people at all stages of development creates a mutual partnership between governments/donors and communities to achieve sustainable development.

### **2.1.3. Effect of Community Self-Mobilization on Roads Projects**

Mobilization is one of the basic strategies of community development (C.D). According to Imhabekhai (2009), mobilization is the process of preparing people for active service, or raising the interest and awareness of a group of people in a project that benefits them. Suppose the intended participants are not yet aware of the existence of the program, its objectives or the benefits that can be derived from it. Mobilization therefore consists of providing enough information about the content and objectives of the plan to generate people's support and participation in the plan. Abiona (2009) argues that mobilization involves raising awareness of certain issues that exist in the community and need urgent attention. Awareness can take the form of educating people about things they don't think are a problem. This means they need to be educated and informed about the problem. At the same time, the solution is in their hands because they have the capacity. Moreover, they must know and understand that if the problem is solved, there will be benefits. This type of participation will increase the efficiency of the use of available resources, for example, participation can help reduce misunderstandings or possible disagreements, thus reducing the time and energy that professionals usually spend explaining or convincing people of the benefits of the project.

Interactive participation is also cost-effective, because if rural people are in charge of a project, fewer external resources will be needed and well-paid professionals will be tied to the

details of project management. Participation thus allows more efficient use of the resources available for the project (Ngowi, 2007).

Successful mobilization depends on citizen participation to generate new ideas and resources for building roads in the community. This implies the participation of local populations in the decision-making, planning and implementation of projects. Mobilization helps encourage local people to use local initiatives to participate in community development. The active participation of people will contribute to the success of any project they undertake. Encourage mutual aid, maximize the use of human and material resources and promote community development

It is through communication that community members can participate in the mobilization process for mobilization to be effective, community members must have access to the information they need to identify and solve problems.

#### **2.1.4. Effect of Monitoring and Evaluation on Community based Road Construction Projects**

Guidance is an ongoing assessment designed to provide all stakeholders with early details on progress or delays in ongoing assessment activities. This is the supervision of the implementation phase of the activity. Its purpose is to determine whether planned outputs, deliveries and schedules have been achieved so that action can be taken to correct deficiencies as soon as possible (Khwaja, 2008).

Monitoring and evaluation (M&E) is a process that helps improve performance and achieve results Its objective is to improve current and future management of outputs, outcomes and impacts. It is mainly used to assess the performance of programs, institutions and program frameworks of governments, international organizations and non-governmental organizations. It creates links between past, present and future actions.

The monitoring and evaluation process can be managed by professionals, particularly donors funding evaluation activities, independent arms of implementing organizations, project managers or the implementation team itself and/or private companies. The credibility and

objectivity of monitoring and evaluation reports depend to a large extent on the independence of the evaluation or the evaluation team responsible. Their expertise and independence are essential to the success of the process.

The road monitoring process allows the stakeholder to ensure quality and quantity construction guidelines. However, a strong reporting strategy is needed to assess performance, quantify achieved goals, and verify that actions are on track. Quality reports will help get the message across to citizen observers and government officials. Monitoring is a short-term evaluation that does not consider results and impacts, unlike an evaluation process that also assesses long-term results and sometimes impacts. Such impact evaluations are sometimes carried out after the end of the projects, but this is rare because it is expensive and it is difficult to determine whether the project is responsible for the results observed. Monitoring and evaluation affects the implementation of road projects; the main UN agencies have a monitoring and evaluation unit. All of these agencies must follow the general standards of the United Nations Evaluation Group (UNEG). These standards relate to the institutional framework and management of the evaluation function, skills and ethics, as well as the way evaluations are conducted and reported (design, process, team selection, implementation, reporting and follow-up). The group also provides guidance and related materials to all evaluation agencies, whether they are part of the United Nations or not (Fundi, 2005).

### **2.1.5. Aspect of Community Participation and Roads Projects**

Today, local communities themselves are seen everywhere as reservoirs, social capital, opportunities and pillars of development. And it is impossible to think of local developments that exclude entire communities.

Lancaster (2002) emphasized the importance of community participation as follows: the approach contributes to the sustainable development of the project because the community itself learns to adopt and correct the changes induced by the project; the partnership or participation helps to protect the interests of those involved; people's dignity and independence are increased, i.e. they are able to acquire and do things for themselves; the community becomes aware of the implementation of the project, because it has a lot of

wisdom and skills. Participation is seen as a guarantee of success because when people feel ownership of the project and feel that it meets their needs, they get involved. This makes them ready to oversee the construction and then take care of the installation to ensure its durability. Furthermore, it is suggested that participation can empower communities by strengthening local organizations, increasing pride and initiating new activities.

Zenter (2010) reveals how community empowerment can be abused; it can become a radical veil around conservative ideas. Empowerment does not mean giving people facilities that were previously denied or inaccessible to them, or giving them skills that they lacked. In its purest form, empowerment means centralizing decision-making by concentrating power and decision-making at the highest levels of the organization. It is a structural policy in which the decision-making power is concentrated at the top of the organizational hierarchy, the level of participation in decision-making being used as the basis for different types of participation, and the key decision-making power must be transferred to the community. Making the process transparent is an effective way to encourage community participation, as it can alter the power relationship between the community and development organizations, and between interests within the community, the transfer of funds to committees is not enough to introduce community control, because the protection of the community must be against abuse. A committee hastily called to show it. Further say that accountability of the actors can be increased if information on the roles and obligations of the government is made available by the media. Colleta and Perkins, (2005).

#### **2.1.6. Challenges of Community Based Road Project**

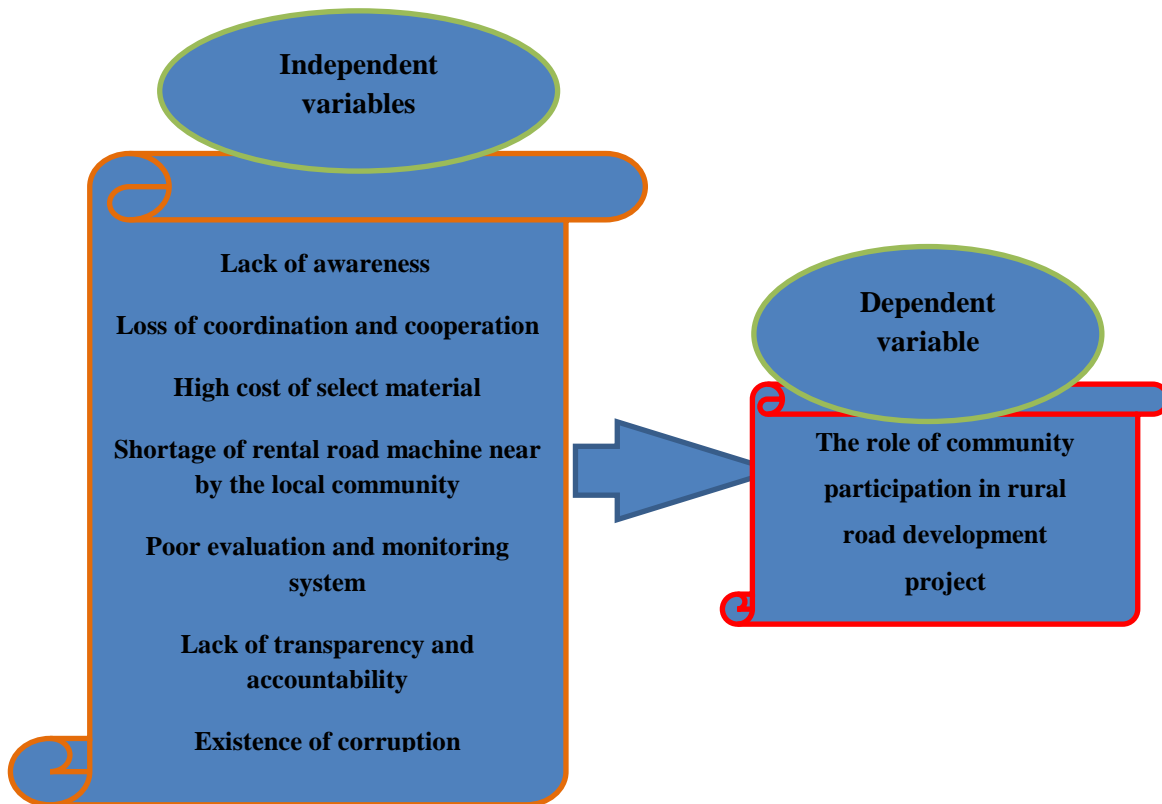
As Ekwale (2014, p. 23) argues, the current decade is intellectually marked as the decade of engagement. Many books have been published demonstrating the benefits and importance of community participation in development projects in local settings. Although the factors that limit/hinder such participation are limited in the literature, some researchers in the field have identified a number of factors that accelerate or limit community participation in development projects such as rural road development programs.

Thus, Oakley, 1991, quoted by Meskrem (2015, pp. 18-21), mentions three main obstacles to community participation, namely structural, administrative and social. Structural barriers are part of complex and centralized organizational systems that control decision-making, resource allocation and information, rather than targeting people's participation. This situation is often characterized by a "top-down" development approach. Administrative hurdles relate to bureaucratic procedures, rent-seeking codes, operating within a set of guidelines and following a blueprint approach, leaving little room for people to make their own decisions or control the process of their development. Social barriers include dependency mentality, culture of silence, domination by local elites, gender inequality and low levels of education and exposure to non-local news. Another barrier is the "standardization of approach" (Guijt and Shah, 1998, p. 5), which contradicts the original purpose of engagement, which was to move away from the constraints of planning and implementation.

In general, there are different factors influencing community development projects, as shown in the literature. There are also related issues in this research area such as: environmental factors, structural factors, political factors, economic factors, communication channels, low expert follow-up, etc.

In the process of building of the rural road infrastructure, local community play significant role and without local community involvement it is impossible to think about local development. Therefore the researcher developed a conceptual framework based on the literature and taking into account practical experiences, which is highly important and useful to identify and characterize the elements that affect dependent variable (community participation in rural road development).

Figure 1. Conceptual framework drawn by researcher



Source: Researcher 2023

## 2.2. Empirical Literature Review

Research on project success factors is seen as a way to improve project effectiveness. But various commitments to the success of the project complicate the process. When defining the success of the project, the researchers took into account the different limitations of the project from the perspective of different stakeholders. The client is seen as the main body of a construction project and receives the most attention in terms of project success, but little research has been done from the contractor's perspective. However, the relationship between client and contractor is considered one of the most important prerequisites for a successful project (Bryde and Robinson, 2005; Toor and Ogunlana, 2008). With that in mind, consider the factors that entrepreneurs believe are critical to project success. Chandan (2003) has proposed the role of community participation in road projects, asserting that civil society is inherently diverse. This is precisely because the ability of an organization to achieve its desired goals is

limited by the interests of other competing institutions. Modern society is characterized by a complex network of non-governmental organizations, professional bodies, professional associations, trade unions, housing associations, residents' associations and individuals. These myriads of NGOs sit between the parties (or movements) and the States. Basically, there is an interrelation between civil society, political society and ideology. Betel, A (2008) identifies community engagement as influencing construction projects, where professional teams provide communities with the technical knowledge needed to participate effectively by creating skills linkages. This requires a very different mindset from that which currently prevails in the professional community.

In the participatory process, it is not enough for professionals to simply announce decisions in professional terms based on professional experience and judgment; communication and reports must be translated from "professional speech" into "community English". It does not imply less complex word or sentence structures, but explains the propositions in a more understandable way. Holt (2003) argues that by linking skills, professionals work with facilitators to help communities understand their needs and define their goals in the process, communities learn relevant facts, show the consequences of specific goals, and unravel the conflicts and inequalities that may have led to their development. This is especially true when project-driven development processes (such as upgrading dirt roads) are linked to broader community goals (such as economic and social growth, urban and regional development). Cole (2009) argues that CSOs may or may not express their immediate institutional interests for a variety of reasons. They may emphasize political issues at the expense of institutional interests, as has been the case with some black unions they can even engage with the state, as some churches in South Africa have demonstrated. This does not necessarily mean that they have given up their interests. These positions may change over time due to the vulnerability of civil society to political, economic, cultural and ideological influences. Fundi (2005) argues that as community participation increases, it becomes increasingly possible to identify alternative priorities, and the ability of professionals to set these priorities and influence decision-making should be strengthened.

### **2.3. Theoretical Literature Review**

This study is based on the learning engagement theory of (Arnstein,1969). The seminal theoretical work on the topic of community engagement may have been done by Arnstein (1969). The particular significance of Aronstein’s work derives from the explicit recognition that there are different levels of engagement, from the manipulation or therapy of citizens, to counseling, to what we can now consider genuine engagement, levels of partnership and citizen control. The limits of the Arnstein system are obvious. Each stage involves a very broad category in which various encounters are possible. In this respect, at the “information” level, the type and quality of the data communicated may vary significantly. Indeed, subsequently, the levels of cooperation may reflect a more complex continuum than a simple arrangement of stages. Using a stepladder also shows that more control is always better than less. In any case, the community may not always want extensive controls, and extensive controls without base reinforcement can lead to disappointment. Since Arnstein, more and more complex theories of participation have been developed and new terms have been added. In particular, there has been a shift to understanding participation in terms of individual and community empowerment. This is due to the growing notion of citizens as consumers, in which the choice between alternatives is seen as a means of gaining power. In this model, people are accountable and therefore must be actively involved in public service decision-making. In this context, Burns et al (1994) modified Aronstein’s participation theory and proposed the militia theory. This is more elaborate than Aronstein’s ladder, with a further, more qualitative break down of some of the different levels. For example, a distinction is drawn between ‘cynical’ and ‘genuine’ consultation, and between ‘entrusted’ and ‘independent’ citizen control. The phenomena of ‘civic hype’, increasingly recognized during the 1990s (see, for example, Harvey, 1989), are incorporated at the bottom rung of the ladder. This Think of community engagement as essentially a marketing exercise where a desired end result is "sold" to the community

Wilcox’s work has arisen from the UK regeneration context and reflects a philosophical progression in thought around participation. That is that different ‘levels’ of participation are acceptable in differing context and settings.

## **CHAPTER THREE**

### **METHODS AND MATERIAL**

#### **3.1. Description of Study Area**

The study was conducted at Gummer district Gurage Zone of SNNPRG. Which is 222 km from Addis Ababa, 67 km from the Wolkite which is administrative center of Gurage Zone? ; Gummer is also one of the woreda in the Gurage zone that bordered on the southeast by the Silte Zone, south west by the Geta, on the north west by Cheha and on the north by Ehza .According to CSA (2007) it has a total population of 80,178. According to GWAO the agro climatic zone of the district is dega and the socio economy of the area is highly depend on agriculture especially, it has high potential in barley, potato, bean, wheat and pea production. Average temperature of 10-25oC and annual rainfall 918-1450mm rainfall pattern. It is located at an elevation of 1371-3169 meters above sea level (gummer Woreda agricultural office).

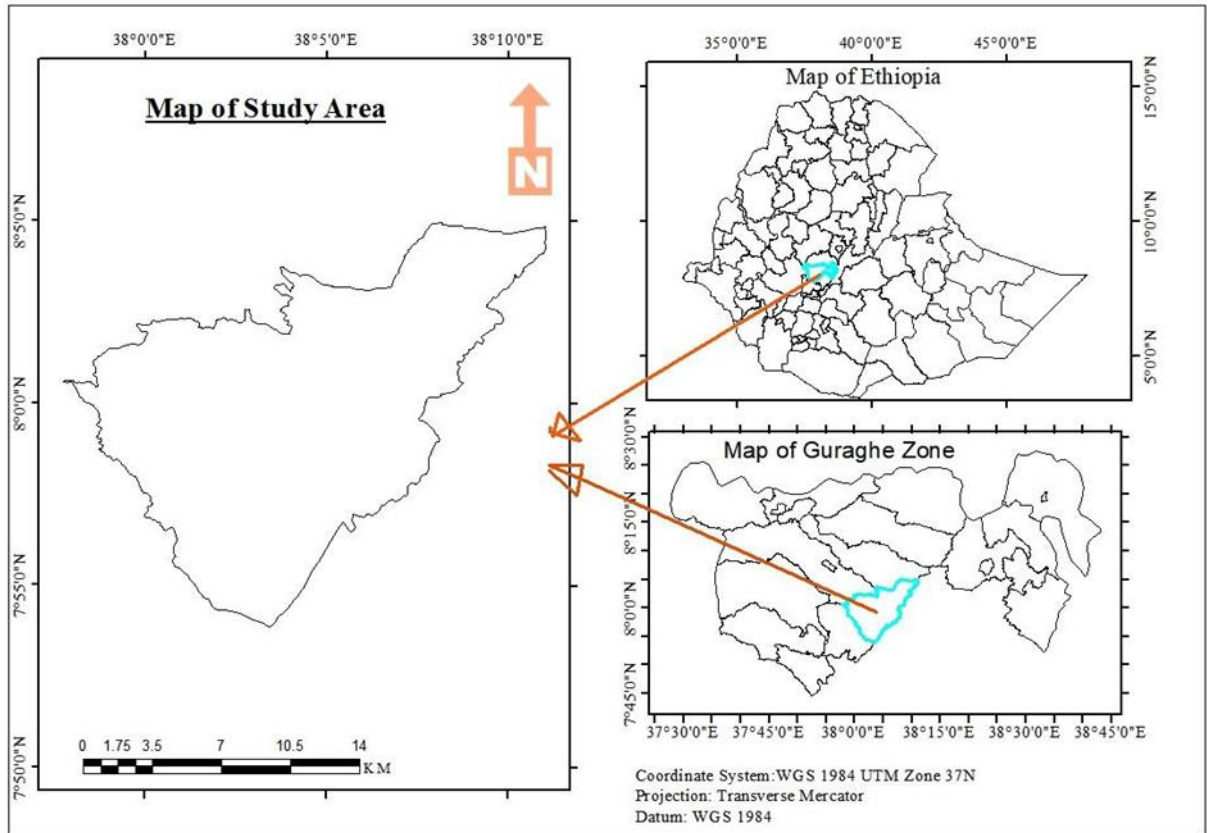


Figure 1. Map of Study Area

Source: Gummer woreda agriculture office (2023).

### 3.2. Research Design

The researcher employed explanatory and descriptive study because it is more appropriate for the problem which is attempts to: explain and describe how much the local people are engaged in local development and their contribution and existing situation of community based road development. Descriptive study is possible research design to describe the variable those are mentioned in the statement part of the study related with community based road project.

### 3.3. Research Approach

The study has employed mixed approach. The reason for combining both approaches is that, they help the researcher to get deep understanding of gaps of the study and provide a richer band that gives a wide base to the finding of the study. Quantitative methods is used the issues

to produce quantifiable and empirical data. And this study predominantly has been qualitative approach because, it is very essential so study the selected issues in depth analysis. It is better to using mixed approach to minimize the weakness of single method and ensure the validity of gathered data.

### **3.4. Data type and Sources**

#### **3.4.1. Data Type**

In order to obtaining reliable and relevant data that helped realize the aim and objectives of the research, the researcher used both primary and secondary source of data. The researcher used the various types of data were needed to collect appropriate and reliable data collection methods from appropriate sources.

#### **3.4.2. Data Source**

##### **3.4.2.1. Primary Data Source**

Primary data's were collected through using systematically prepared questions which help the researcher`s to describe the variable that affect the role of community participation in road development project in study area. The researcher used primary source especially key informants which are Woreda administrator, the head of transport and road development office, transport and road development office employees Kebele leaders, some of road infrastructure beneficiary. And semi-structured questionnaires used to gather data from households and Households are the basic source of information.

##### **3.4.2.2. Secondary data sources**

On the other hand, secondary data source were collected through review of relevant literature from different sources and formats, including books, articles and other related research and sectorial yearly reported documents.

### **3.5. Target population, Sampling Techniques and Sample Size**

The target population of the study were the member of community these who live in the study area. The target population were selected from four potential Keble's of Gummer woreda

namely Woibaregina Tirtiro 502, Essen 1200 HH, Armuam 931 HH, Zizencho 951 HH, Arekit shelko 829 HH total of 3462 HH (GWAO, 2022).

**Table 1. Target Population of the Study Area.**

| <b>Kebeles</b>     | <b>Target population</b> | <b>Sample proportion</b> |
|--------------------|--------------------------|--------------------------|
| Wolbaregina Tritro | 502                      | 14%                      |
| Essen              | 1200                     | 35%                      |
| Arekit sheleko     | 829                      | 24%                      |
| Armua              | 931                      | 27%                      |
| Total              | 3462                     | 100%                     |

Source: Adopted by the researcher

### **3.5. Sample Technique and Sampling size**

#### **3.5.1 Sample Technique**

The researcher used probability sampling techniques for house holders in order to avoid biasness and non-probability sampling techniques for key informants. Multistage sampling technique was employed in order to get the target population at the grassroots level. According to the situation of the study, the researcher prefers multi stage sampling over the other techniques to select a representative sample size. At the first stage total population of study area is categorize in to four clusters (each cluster have 4 kebele) in order to get better manageable sizes based on woreda administrative structure. In the second stage, simple random sampling technique was employed and one (1) kebele was selected from each cluster. In the third stage, from 151 of total respondents: from Arekit sheleko kebele(36) ,from Essen kebele (52), from Wolbaregina Tirtiro kebele (22), and from Aremua kebele(41) respondents were selected proportionally bay using stratified sampling technique. Secondly 12 key informants were selected from Gummer woreda administration, political leaders, and employees of transport and road development office. These key informants were selected by using purposive or judgmental sampling procedure, based on the knowledge and experience of the subject under study.

### 3.5.2 Sampling size

Generally 151 Respondents were selected as sample size and it is determined by using Yamane (1967) which is a simplified formula for the total number 3462 of target population and a tolerable precision error of 0.05.

$$n = \frac{N}{1 + N(E^2)}$$

Where: n= Number of sample taken

N= Population size

e = sampling error /level of precision. Accordingly the target population results, the following samples.

$$n = \frac{N}{1 + N(E^2)}$$
$$n = \frac{3462}{1 + 3462(0.5^2)} = 151$$

### 3.6. Data Collection Tools

The researcher employed both primary and secondary data sources. Primary data was collected from respondents to attain research objectives. And also secondary data was collected through review of relevant literature from different sources and formats, including books, articles and other related research documents. The primary data needed for the study was collected by using the following instruments.

#### 3.6.1. Questionnaires

The researcher has prepared and distributed semi-structured questionnaires and have collected administered to collect a wide range of data from the respondents. The questionnaire was prepared for those who are selected sample size (151) of house hold. The questions was

prepared in English language and translated in to Amharic language and administered by trained enumerators under direct supervision of the researcher. The administration of the instruments seriously supervises and more than half of it will be undertaken the researcher in order to minimize errors. This specific instrument helps to widen the size of the data for the study.

### **3.6.2. Key Informants Interview**

In this study, totally nine (9) key informant interviewees have participated and these key informants were selected by using purposive or judgmental sampling procedure, based on the knowledge and experience of the subject under study. These are two (2) from woreda administers, three (3) employees from transport sector, two from political leader, two(2) kebele leader, were conducted interviewees based on the knowledge and experience of the subject in the study. A semi-structured interview was conducted for those key informants to gather reliable data.

### **3.7. Data Analysis and Interpretation**

Based on the above two approaches Inferential Statistics method of data analysis has been used in order to make the analysis of the quantitative data and the researcher employed STAT software version 2013.00. Descriptive statistical methods of analysis employed to describe and interpret the practice, the contribution and the economic role of community participation in rural road development in selected kebeles. In addition, the descriptive analysis enables to analyze the relationship between community participation and improvements in infrastructure development in the study area. In this method the researcher has no control over the variables and only report of what has happened or what is happening by using simple statistical methods like, percentages and cross tabulations. On the basis of the assumed relationships between variables the data gathered through interviews are analyzed by narrating and describing the meanings and implications. In other words, data which are qualitative in nature describe, classified and concepts are connected with one another. The quantitative data has been analyzed through Inferential Statistics in which multiple regression models were used to facilitate meaningful analysis and interpretations of the research finding.

### **3.8. Ethical Considerations**

To conduct research work, first support letters will be taken from Wolkite University School of Social science and Humanity Department of Development Study conduct the study of selected areas. Then the Woreda office head will gives information and data about the sampled kebele and the researcher will goes to the study area and explain to them what the research is about, the research objectives and what is expected from them to participate.

Also, they were informed about the data obtained from them will be used for the research purpose only and confidentiality will be keep for all respondents. Besides, the researcher assured them the confidentiality of their ideas, documents, and anonymity of participants can also be keep when data will be analyze and the result will be report. Subsequently, based on their consent the interview conducted will be record.

## CHAPTER FOUR

### RESULTS AND DISCUSSION

This chapter deals with presentation and analysis of the data collected through survey questionnaire and key informant interviews. Besides, different secondary sources were accessed from road development and transport office. The data was collected through questionnaire from of the selected kebeles of Gummer werada. The key informant interviews were also conducted with the concerned department in the woreda administration and kebele. The questions which were raised in the questionnaire and key interviews are concerned with the practice of community participation, the importance of community participation, contribution, and its challenge and solutions to improve road infrastructure development. The findings of the study were mainly presented by using descriptive and inferential statistical method of data analysis.

#### 4.1. Socio-demographic Background of Respondents

##### 4.1.2. Sex of the Respondents

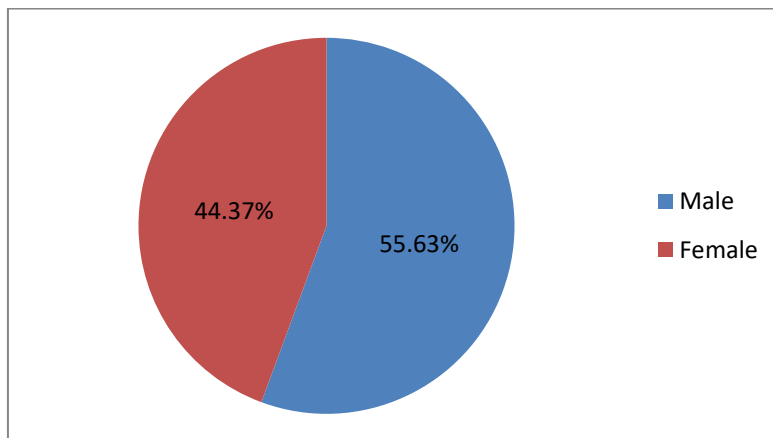


Figure 2. Sex of the respondents

Source: field survey 2023

As the figure 3 shown above indicates that among 151 sample respondents, 84(55.63 %) were Male and 67(44.37%) were Female. According to the result of the data, in rural road development projects the majority of communities who were participating in road development projects were Male. This is because of the fact that, the rural road development projects needs much labor force and in most rural areas of the households are headed by male headed.

### 3.1.3. Age Category of the Respondents

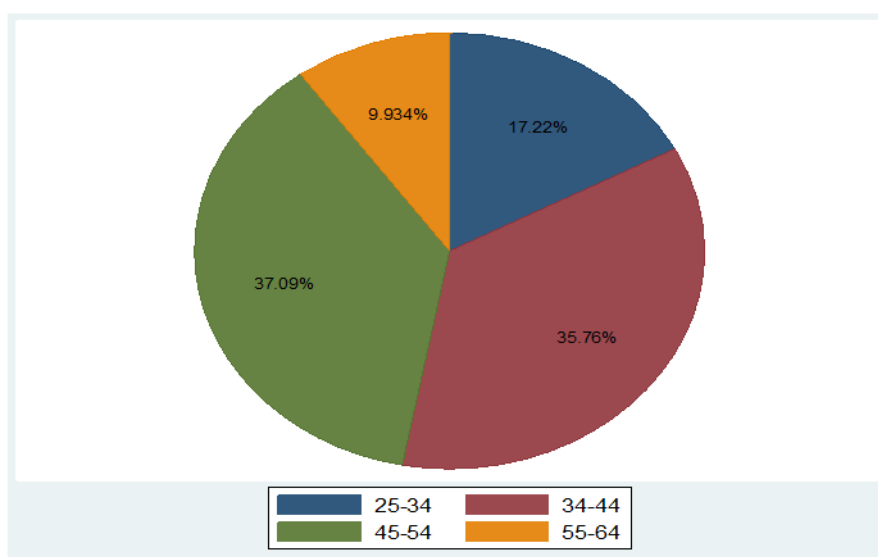


Figure 4.1.2. Age category of the respondents

Source: field survey 2023

Regarding age of the respondents, from the total of 151 sample respondents, 26(17.22%), 54(35.76 %), 56(37.09%) and 15(9.93%) were under the age group of 25-34, 35-44, 45-54 and 55-64 respectively. As the age group distribution shown the above figure 4, majority or almost above 70 percent are fall under the age category of both 34-44 and 45-54. This indicates that most of the communities who are engaging in rural road development project are productive age group and the married ones at house hold level and the teenagers were participate instead of their parents in road construction and maintenance.

### 4.1.4. Marital Status of the Respondent

Table 2. Marital status of the respondents

| Variable       | Category of the variable | Frequency | Percent (%) | Cumulative |
|----------------|--------------------------|-----------|-------------|------------|
| Marital status | Married                  | 125       | 82.78       | 82.78      |
|                | Widowed                  | 20        | 13.25       | 96.03      |
|                | Divorced                 | 6         | 3.97        | 100.00     |
|                | Total                    | 151       | 100         |            |

Source: Field survey 2023

As regard to marital status of the sample respondents, out of 151 respondents, 125(82.78%) of the respondents were married whereas the remaining 20(13.25%) and 6(3.97%) were widowed and divorced respectively. According to the information provided, the majority of the respondents who were participating in road development project were married ones at household level and unmarried were participate in rural road development project beside of their family.

#### 4.1.5. Educational Background of the Respondents

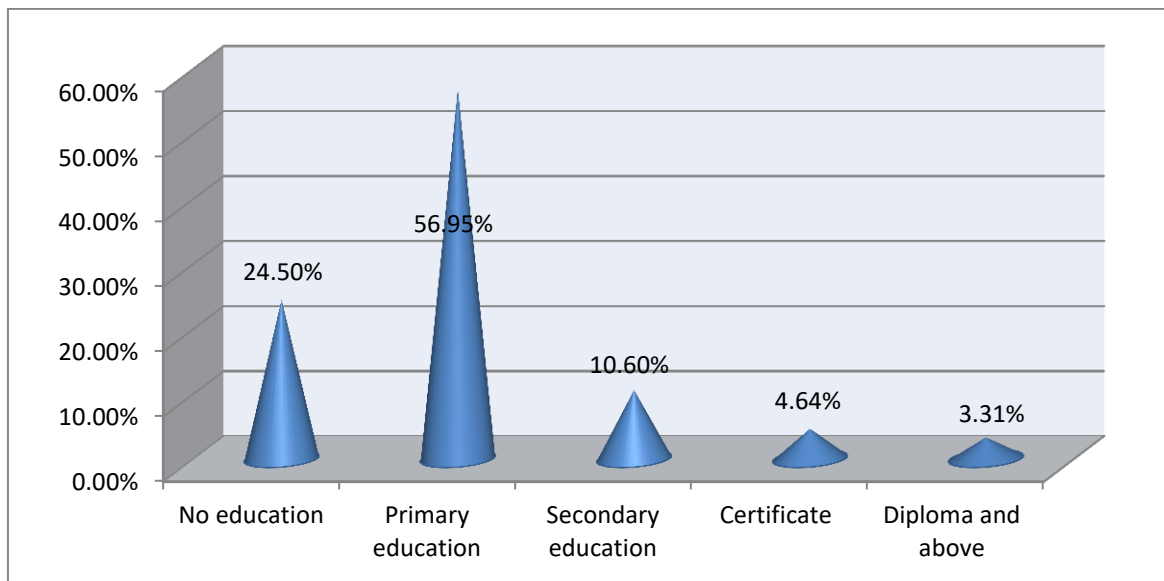


Figure5. Educational Background of the Respondents

Source: Field survey 2023

According the response received by 151 sample respondents, from the total of 151 selected sample respondents, 86(56.95%), 16(10.6%), 7(4.64%), 5(3.31%) and 37(24.5%) were who

have no educational background, primary education, secondary education, certificate; and Diploma and above respectively. The result showed that most of the respondents who were engaging in rural road development projects are those have no educational background and primary educational level. According to the collected data of the respondents' response, education has no that much significance on the engagement of rural road development project; that is, it only needs motivation and commitment.

#### 4.1.6. Occupation

Table 2. Job Category of Respondents Source

| Variable                    | Category of the variable | Frequency | Percent (%) | Cumulative |
|-----------------------------|--------------------------|-----------|-------------|------------|
| Type of Economic Activities | Agriculture              | 129       | 85.43       | 85.43      |
|                             | Employment               | 12        | 5.96        | 91.39      |
|                             | Trade                    | 10        | 8.61        | 100.00     |
|                             | Total                    | 151       |             |            |

Source: field survey 2023

Job status of the community is one of the basic issues of rural road development project. Among 151 sample respondents, 129(85.43%), 12(5.96%) and 10(8.61%) were leading their lives based/ on agriculture, employment and Trade respectively. According to the data analysis shown the below table, the majority of the respondents who were participating in the rural road development project were farmers and their livelihood is depend on agriculture. Because of this the farmers were highly participate in rural road development project to facilitating transportation access, to increase access to market linkage and agricultural productivity.

## 4.2. What Look Like the Experience of Community Involvement to Building and Maintaining in Rural Road Development?

### 4.2.1. Understanding of Community Participation

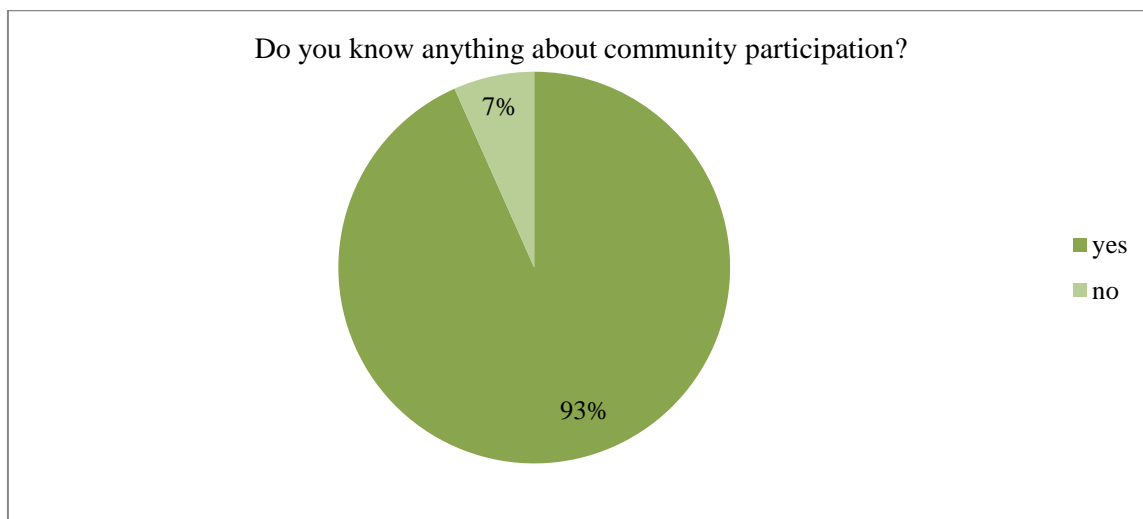


Figure 5. Understanding of community participation

Source: Field survey 2023

Majority of the respondents 140 (92.72%) said that they have understanding about community participation. while 11 (7.28%) of the respondents said that they do not have understanding about community participation. This shows that small number of the respondents have little or no clear understanding about community participation. Community participation is viewed as an end if it becomes a long-term process, the purpose of which is to develop and strengthen the capabilities of people in order to participate directly in development initiatives (Kumar, 2002, p 132) it can be said that insignificant number of the respondent have no clear understanding of what community participation is. Therefore from the above figure we can infer that majority of respondent have an understanding about community participation.

#### 4.2.2. Areas of Participation in Community Affairs

Table 3. Areas of participation in community affairs

| How do you understand community participation in the development of rural road infrastructure project? | Frequency | Percent | Valid Percent | Cumulative Percent |
|--|-----------|---------|---------------|--------------------|
| Engagement in road infrastructure  | 51        | 33.85   | 26.6          | 38.5               |
| Contributing of resources in terms of labor, material and financial,                                   | 70        | 47.15   | 67.5          | 85.0               |
| Involvement in decision making   | 20        | 19.0    | 19.0          | 100.0              |
| Total  | 151       | 100.0   | 100.0         |                    |

. Source: field survey 2023

From the above table we can understand 51(33.85%) of respondent understand that community participation as involvement in road infrastructure project, 70(47.15%) believe contributing resource in terms of labor, materials and for road infrastructure development as community participation, and the rest 20(19%) of respondents understand community participation and they take part in decision making that matters for the community. Based on respondents response community participation is different things for different individuals. This implies the respondents perceive community participation in different way and we can say the local communities have good understanding about community participation.

The interview conducted with key informant of political leader from Arekit sheleko kebele, how was performing the mobilization task about awareness creation? the political leader explained as, there was coordination among different stakeholder in different sector in order to increase individuals awareness on community participation and stakeholder used different mechanisms like organized panel discussion, short term and long term training and prepared different flyer to developed individuals understanding on the issue of community participation.

### 4.2.3. The level of Community Participation

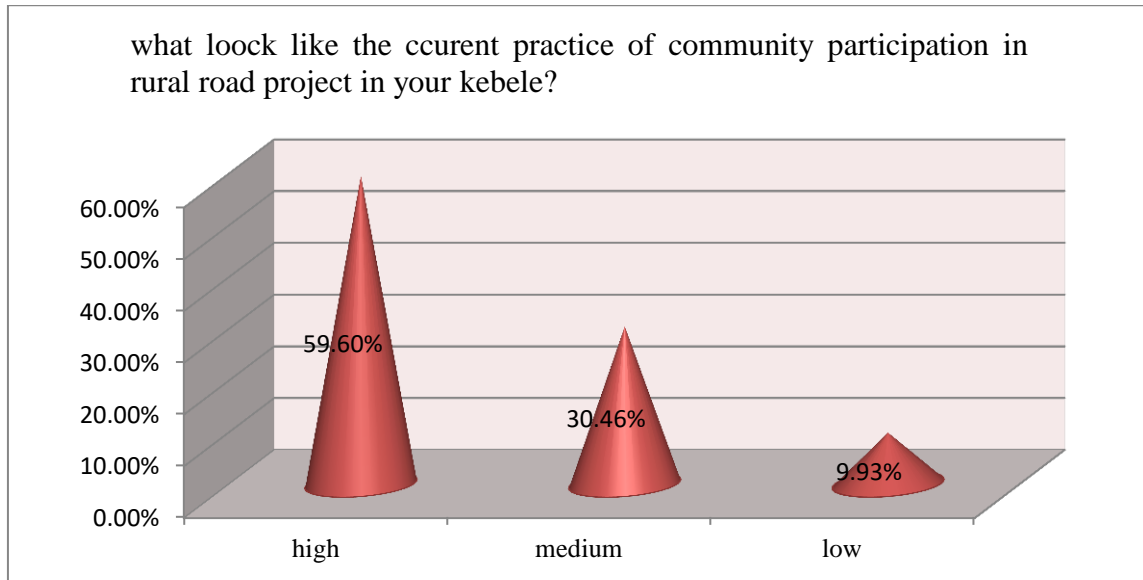


Figure 6. The current practice of community participation  
Source:-field survey 2023

The above Figure 7 demonstrates the respondent's response towards current practice of community participation in the road infrastructure development. Majority of the respondents 90(59.60%) of the total sample respondent were replied that community participation is high and increasing time to time in the road infrastructure development projects. Whereas, 46(30.46%) of the study area of residents responded that level of community participation is moderate and 15(9.93%) of the total sampled respondent were replied that community participation has been decreasing from time to time.

Similarly, the key informant interview conducted with Gummer woreda experts from transport sector also indicated that, the peoples who live in the study area have a long practice of community participation on road infrastructure development especially in the these sample kebele of the study area, the local elders and influential peoples mobilize the communities and collect money and lease construction materials from private contractors and by using local resource (gravel) and labor they try to construct roads of their section in which the local government cannot fulfill for them. And also there is a good opportunity at the study area in

which the local communities motivated to build a new way and maintain road development project by grader machine beside of woreda government with low cost.

The researcher measured level of community participation in quantitative and qualitative terms. The data shows that the researcher used different measurement tools: interview, open and closed ended questionnaires, and on document analysis to measure the level of community participation in the study area. By using these tools, the participation of the local community was measured in three dimensions in terms of individual awareness about community participation analyzed in figure 5, individual participation in community discussed in table 6 and individual contribution analyzed in table 10. Therefore the collected data concerning the three diminutions of community participation shows, there is high level of community participation in road development project in the study area.

#### **4.2.4.. Involvement of Community Participation in Rural Road Development**

Table 4. Involvement of community participation

| Do you participate in your kebele to build or maintain in rural road infrastructure? | Freq. | Percent | Cum.   |
|--|-------|---------|--------|
| Yes  | 132   | 87.4    | 94.04  |
| No   | 19    | 12.6    | 100.00 |
| Total  | 151   | 100.00  |        |

Source: field survey 2023

According to the above table majority of respondents 132(87 %) were replied as they are actively participating in their local road development project. The analysis shows that there is a potential in study area because peoples are active participants in local development issue. Lancaste (2002) emphasized participation is seen as a guarantee of success because when people feel ownership of the project and feel that it meets their needs, they get involved. This makes them ready to oversee the construction and then take care of the installation to ensure

its durability. Furthermore, it is suggested that participation can empower communities by strengthening local organizations, increasing pride and initiating new activities. Also 19(12.6%) from the total respondent are replied as they are passive or not participate in rural road development project and it has its own impact on coverage and quality in rural road development. Peoples are remaining from participation because of different reasons these are presented below as follow.

#### 4.2.5. Reason for why not attending on meeting concerning road infrastructure

Table 5. Reason for why not attending on meeting concerning road infrastructure

| Why do you not participate in your community meeting in rural road development project | Freq. | Percent | Cum.   |
|--|-------|---------|--------|
| 1. Don't know when the meetings were held  | 10    | 52.63   | 49.67  |
| 2. Not interested in attending a meeting   | 4     | 21.10   | 79.47  |
| 3. Views have not been considered  | 2     | 10.52   | 90.97  |
| 4. Dominance of the top-down approach (anti-participatory)                             | 3     | 15.78   | 100.00 |
| Total  | 19    | 100     |        |

Source; field survey 2023

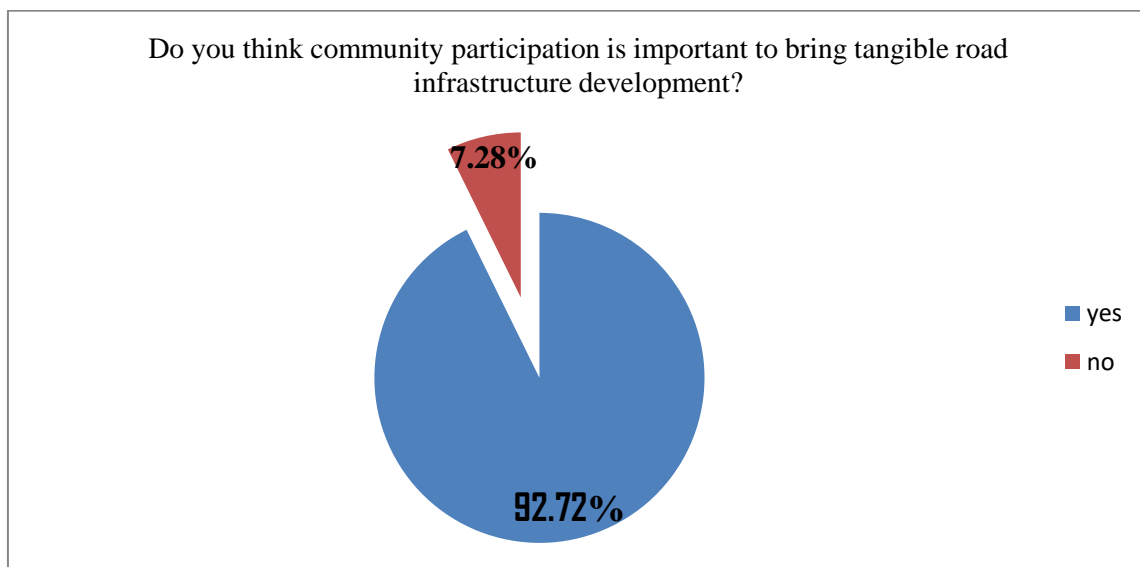
According to the above table from the general respondents 10(52.63%) of the respondents said that they are not participate on community meeting in road development project because of lack of information about where and when the meetings were held in a community. Other 4(21.10%) respondents said that they do not participation because of lack of interest to attend the meeting and the remaining 2(10.52%) of the respondents replied as they are not participant because of the undermining of individual views and the meeting follow the top-down approach (anti-participatory).

Besides, the key informants who were selected from rural road work committee from Armua kebele affirmed that individuals do not participate in rural road projects because some community leaders tend to impose their own political agendas at the expense of community-related issues. They abused the platform for campaigning for their political parties' to which they were affiliated to. Therefore, the existences of such kind of improper acts are also a factor

that obstructs the community from attending the meetings. From this it can be inferred that the type of participation which exists in the study area is fall under the second category in tokenism particularly, informing and consultation that allow the community to hear and to have a voice, but they lack power to change the status quo (Arnstein, 1969). According to David's, & K. J. Mahoney, (2005) this situation considered as Passive participation: - People “participate” by being told what is going to happen or has already happened. Participation relates to a unilateral top-down approach by the authorities.

### **4.3. Do People Know the Importance of Community Participation in the Planning and Implementation Process in Road Development Project?**

#### **4.3.1. The Importance of Community Participation**



. Figure 7. The importance of community participation

Source:-field survey 2023

The responses to the question forwarded to the survey participants regarding the role of the community in the development of road infrastructure in Gummer woreda as it indicated in the above figure 8 shows that, most of the respondents 140(92.72%) were believed that the community plays a very important role in improving road infrastructure development. While,

the rest 11(7.28%) respondents respond community participation is not important to bring tangible road infrastructure development. Therefore the survey result revealed that community involvement is highly recommended in the development of road infrastructure because the community plays a vital role in these regard.

#### 4.3.2. Decision Making Bodies

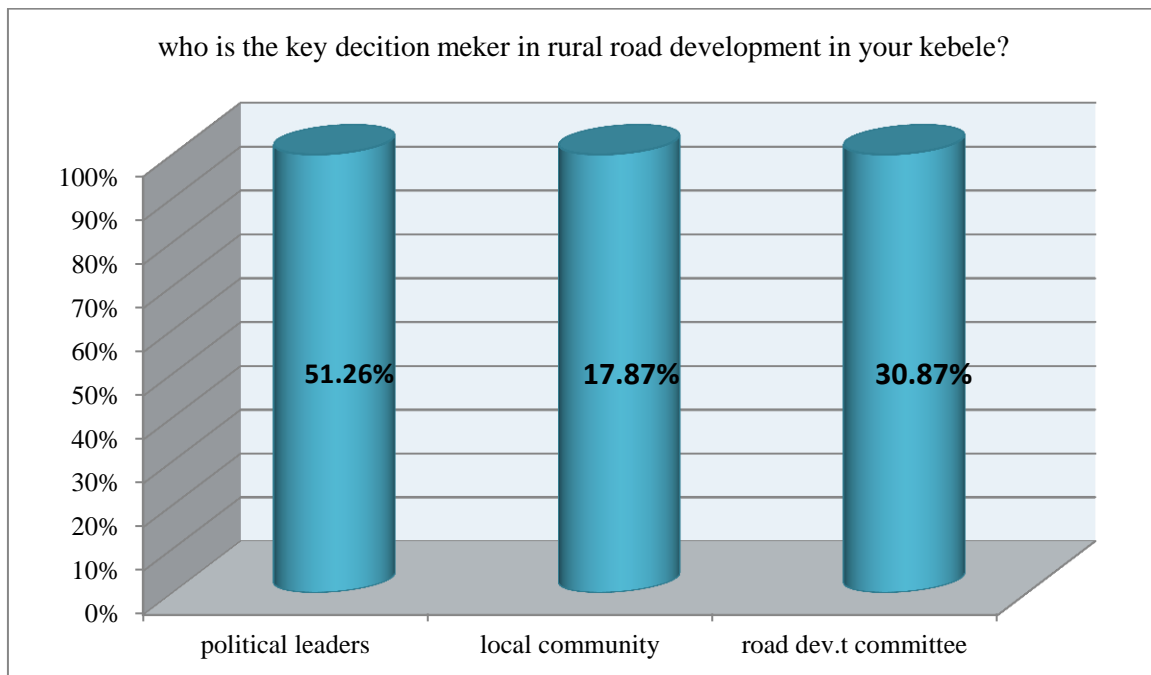


Figure 8. Decision making bodies

Source: field survey 2023

The above Figure 9 depicts the key decision makers in the road infrastructure development currently acknowledged in Gummer wereda. The chart clearly shows the dominance of the political leader's role in deciding road infrastructure development projects consisting 91(60.26%). Road development committees' involvement in decision making process is 34(21.87%). The rest respondents 26(17.87%) identified that all local community are equally involved in the development of road infrastructure projects. These clearly shows that the community had little decision making power while majority of the decision making power concerned with road infrastructure development is concentrated at the political leaders.

Community participation is about bringing people who are outside the decision making process into it. Community participation allows all community stakeholders to have a voice and option and decide on infrastructural development concerns. Their concerns were expressed particularly in relation to the community's ability to influence decisions regarding road infrastructure development. Accordingly, the respondents expressed their concerns regarding participation in decision making phase as they perceived that politicians were imposing the already made decisions (top down approach). Generally, from the above discussion we can infer that the administrative body has a major decision making power in deciding road infrastructure development projects of the study area.

#### 4.3.3. Way of Community Participation in Road Development Project

Table 6.Way of community participation in road development project

| In which stage the communities participate in road infrastructure development programs? | Freq.      | Percent       | Cum    |
|---|------------|---------------|--------|
| 1.Planning process  | 30         | 19.87         | 19.87  |
| 2. Decision making process  | 31         | 20.53         | 40.40  |
| 3. Implementation process   | 75         | 49.67         | 90.07  |
| 4. at all stage   | 15         | 9.93          | 100.00 |
| <b>Total</b>  | <b>151</b> | <b>100.00</b> |        |

Source: field survey 2023

Regarding the data obtained from survey of questioner, the majority of the respondents 75(49.67%) replied that local community are participating at the implementation phase in the process of rural road development process. Whereas 31(20.53%) of the total respondent were responded that community are participated in rural road project during Decision making process (accepting and enforcing the issue raise from planning stage through serous panel discussion before forwarding to implementation stage) and the remaining 30(19.87%) and 15(9.93) of respondents were responded that community are participating in planning process and participating at all stage of road project respectively. Therefore the result of the data show

that community is not participated at all stage of rural road project. Community engagement ensures that people are aware of community work and participate in the decision-making process (planning phase) and the implementation phase. Involving people at all stages of development creates a mutual partnership between governments/donors and communities to achieve sustainable development (Njunwa 2010, p. 26).

#### 4.3.5. Rural Road Infrastructure Access

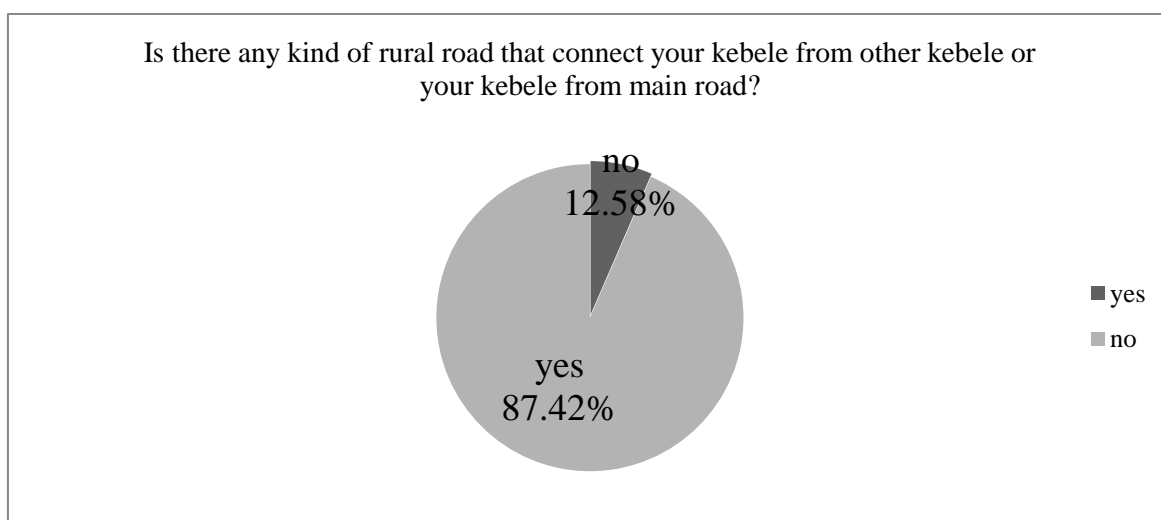


Figure9. Rural road infrastructure access

Source: field survey 2023

The analysis show that the majority of respondents said that yes these consist 132(87.42%) and 19(12.58%) of the respondent said there is no any kind of road access in their area. Therefore in most part of the study area has the roads that connect kebele from woreda and kebele from main road. But all about its quality and sustainability is analyzed as follow.

#### 4.3.6. The Type of Road Infrastructure

Table 7. The type of road infrastructure

| What kind of the road is found in your kebele? | Freq. | Percent | Cum.   |
|--|-------|---------|--------|
| 1 .Earth work completed road                   | 89    | 58.94   | 58.94  |
| 2. Gravel road installation                    | 62    | 41.06   | 100.00 |
| Total  | 151   | 100.00  |        |

Source; field survey 2022

According to the data there is no problem in the provision of access to rural road infrastructure at winter season in study area. But when we discuss about all weathered road and its quality it remain in question. The analysis of the data obtained from table 9 show that 89(58.94%) of the respondents replied as they have access to earth work completed road infrastructure that means no gravel road. Therefore based on the analysis beyond half of the study area of rural livelihood is challenged in summer season. All weathered road infrastructure is a major catalyst for the physical and socio-economic development of a country's Gross Domestic Product; as the movement of people, labor, goods and services depend mainly on it (Sintayehu, 2020).

#### 4.3.7. The Current Level/status of Rural Road Infrastructure which were Built by Community Participation

Table. 8. Current performance of rural road infrastructure which were built by community participation

| Name of Keble      | Total distance of the road in Km | Gravel cover road in Km(all weathered road) | Earth work completed road in KM(winter season road) | When the road has been built | Total cost |
|--------------------|----------------------------------|---|---|------------------------------|------------|
| Wulbaregina Tirtro | 10                               | 10  |   | 2012                         | 3,740233   |

|                    |            |           |           |               |                    |
|--------------------|------------|-----------|-----------|---------------|--------------------|
| Bercherina Mocheya | 27.3       |           | 27.3      | 2013          | 2,365800           |
| Yeshrab            | 3.6        |           | 3.6       | 2013          | 720430             |
| Burdana Denber     | 8.5        | 5         | 4.5       | 2014          | 4150941            |
| Essen              | 4.6        |           | 4.6       | 2012          | 240000             |
| Arekit shelko      | 5.6        | 3.6       | 2         | 2013          | 3842467            |
| Armua              | 14         | 6         | 8         | 2011 and 2014 | 6000,000           |
| Zizenchona Teredo  | 7          | 7         |           | 2014-2015     | 4376800            |
| Abesuja            | 4          |           | 4         | 2013          | 682800             |
| Jenboro            | 7.5        | 3.5       | 4         | 2011 and 2013 | 1665700            |
| Fetazer            | 3          | 1         | 2         | 2013          | 537600             |
| Dirbona Senen      | 2.4        |           | 2.4       | 2014          | 140865             |
| Aselecha           | 3.4        | 1.4       | 2         | 2012          | 430654             |
| Enjefo             | 1.8        |           | 1.8       | 2011          | 120000             |
| Badina Yegor       | 1.5        | 1.5       |           | 2011          | 400,000            |
| <b>Total</b>       | <b>101</b> | <b>39</b> | <b>62</b> |               | <b>283,314,290</b> |

Source: Gummer worda Transport and Road Development Office 2023

According to the data from document analysis show that in the previous four years from 2011-2015 there have been amazing community mobilizations on that of road development project. Gummer worda transport and road development office report indicate that, throughout the district kebele the local communities' expend beyond 28000,000 birr and built 101km rural road infrastructure.

Based on the document review 61.km (61%) of the total building of the road is earth work completed road (winter's road) and 39km (39%) of the total building of the road gravel road (all weathered road). Therefore according to the data analysis the local community play

significant role to improve in terms of road coverage but the issue of quality or sustainability is remain in question and it needs additional effort to improve its quality.

#### 4.3.8. Building Rural Road Infrastructure

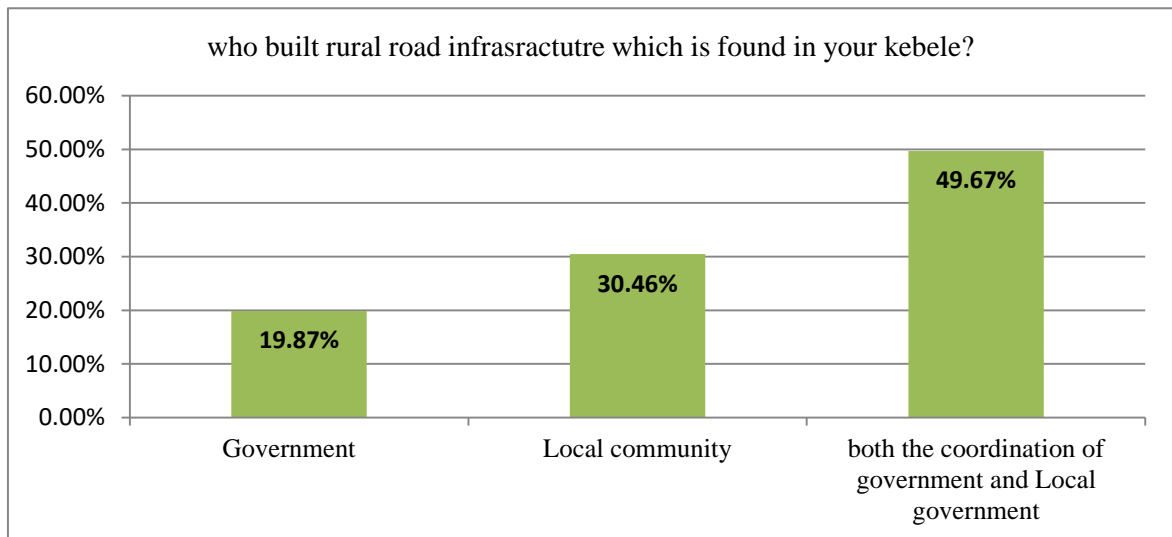


Figure 10. Building rural road infrastructure

Source: Field survey 2023

When interpreting the data gathered from survey of questioner concerning who built or maintaining road infrastructure in your locality from total respondents 75(49.65%) of respondents said that both in coordination of government and local people and 30(19.87%) of the respondents answered that as government built and the rest, 46(30.46%) of the respondent replied as local community built and maintain rural road infrastructure. In this regard, the analysis show that there is road infrastructure built by local community by itself and in coordination with government. Therefore local communities are actively participating in rural road development project in study area.

The interview conducted with the current Gummer woreda administration, the administrator explained about the role of community as the following: I am very happy that I have got the opportunity to lead this people and I have a lot of respect for this people. According to the question you asked me, it is known that the role of the community in road

development work is very high and it has replaced and minimize the government burden. In order to support and encourage this community work, the district government spent 11.5 million birr and bought a grader machine and leased it at a very low price. Generally there is amazing community mobilization in most kebeles, when the government has been in trouble and has been in different political economic and social problem at the national level, the local community have completed and graduated roads that are distance from long kilometers to the point of earth work up to covering with gravel. On the other hand, since roads are one of the things that make human life efficient and pleasant as rural community intensively worked together with the government on road construction, and the city residents and investors should pay attention to the work that the government has not done in rural area.

#### **4.4. The Contribution of Community in Rural Road Development Project**

##### **4.4.1. The Type of Contribution in Community Participation**

Table 9. The type of contribution in community participation

| What is your contribution in rural road development project in your kebele? | Freq. | Percent | Cum.   |
|---|-------|---------|--------|
| 3 Contribute money  | 101   | 66.89   | 66.89  |
| 2. Provide labor  | 30    | 19.87   | 86.75  |
| 3. Manage the projects  | 16    | 10.60   | 97.35  |
| 4 mobilized the community   | 4     | 2.65    | 100.00 |
| Total   | 151   | 100.00  |        |

Source: field survey 2023

Among the people who were asked, 101(66.89%) respondents said that they participate by donating money, and 16(10.9) of the respondents said that they participate by mobilizing the community. And, 4(2.65%) of the respondents said, they can't get tired of contributing money, they participate by sacrificing their energy and time, and the others cover 16(10.60%) of the informants replied, there contribution is managed and coordinate the project. According to this information, the majority of the people who are responsible are participating in contributing money.

The expert, who is currently the coordinator of the community participation process at the district road and transport office, was interviewed and said the following.

Now a day our community will take the lion's share in the construction of an accessible road in the rural Kebele and building both earth work and gravel road installation that connect from kebele to kebele, from kebele to woreda, from kebele to main road. In the past four year the local community has contributed beyond 28 million birr investment due to maintaining and new building of rural road development. and beyond 101 km rural road development has been built. While the study area show that as there is huge social capital and active community participation in road developmental project. Therefor the government should use and managed this huge potential of the community effectively and efficiently.

#### 4.4.2. How to Determine the Amount of Contribution for Road Project

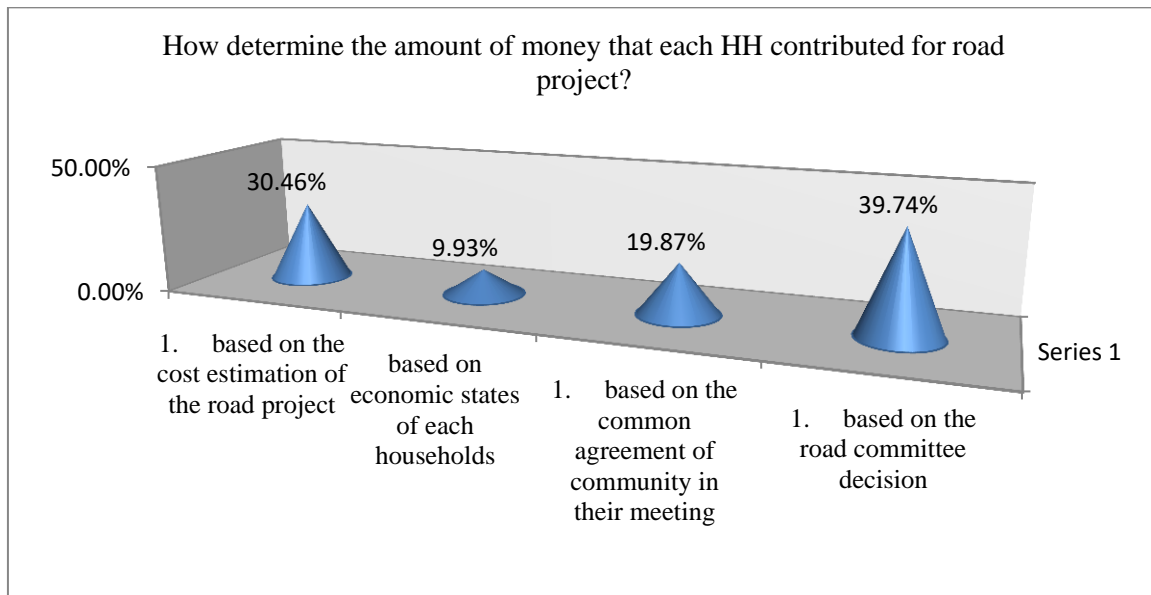


Figure 11. How determine the amount of that contribution for road project

According to the analysis from diagram 39.74% of the respondents replied that, the amount of money that each household paid for road project is determined by the decision passed through road development committee. Also 30.46% of the respondents said that, the amount of money that each household paid for road project is determined by the cost estimation of the road

project design which is prepared by road professionals. While others 19% of responded that, the amount of money is determined by the common agreement of the community in their meeting and the rest of 9.93% of the respondents said that, it is determined by economic status of each households.

The interview conducted with the key informant of political leader from Zizench Keble, asked how the resource and financial matter collected and decided by whom? And what does look like the monitoring and evaluation system? The result of interview shows that the amount of money these the farmer contributes to the road development work is determined by the decisions made by the road development committees these who elected from the community. Therefor the data shows that the amount of money that each household contributes to road work is estimated based on the decisions made by the road development committees, but it is not based on the cost estimation of the road project or it is not according to a method studied by experts.

## 4.5. Factor Affects Community Participation in Rural Road Infrastructure

### 4.5.1. Structural Factor Affect Community Participation in Rural Road Infrastructure

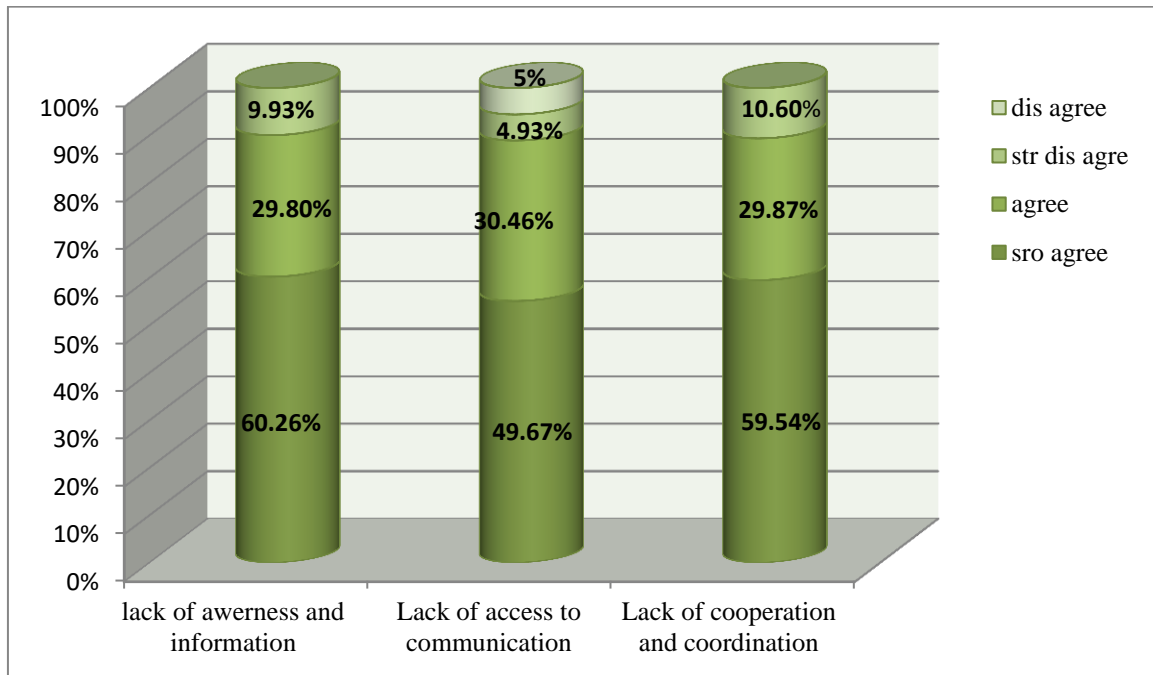


Figure.12 Structural factor affect community participation in rural road infrastructure  
Source: field survey 2023

According to the questions asked in the form of a written questionnaire about the issues that affect the active community participation in road development in the area where the study was conducted, the information given by those responsible bodies' shows that they strongly agree, agree, strongly disagree, and disagree. Among those who were asked, the reason why the community does not participate in road development is lack of awareness, lack of communication and lack of coordination. According to the question, on average, 56.49% respondents said they strongly agree, while 30% said they agree. On the other hand, 8.48% of those who responded strongly disagreed, while the rest disagreed.

According to the data analysis, among the factors that influence individuals not to participate in the road development work in the community lack of awareness, lack of communication, and lack of coordination are the main factor.

#### 4.5.2. Economic Factors that Affect Community Participation in Rural Road Infrastructure

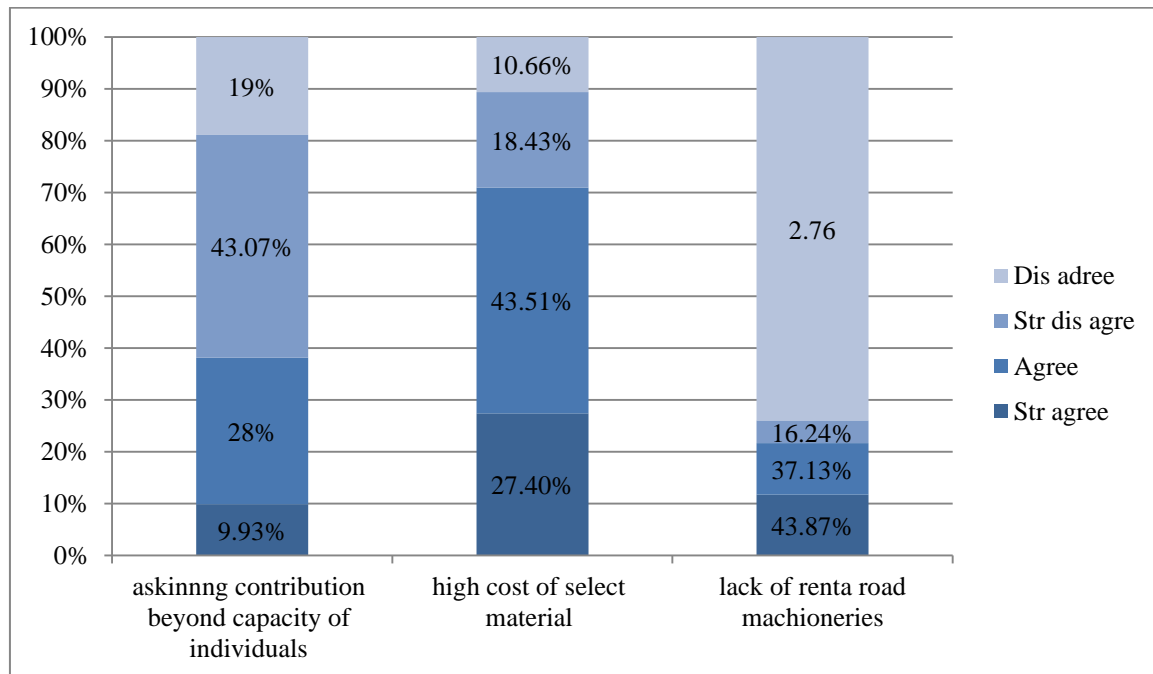


Figure13 Economic factors that affect community participation in rural road infrastructure

Source: field survey 2023.

According to the questions asked in the form of a written questionnaire about the issues that factors affect the community participation in road development in the area where the study was conducted, the information given by those selected sample from the target population said that they strongly agree, agree, strongly disagree, and disagree. Among those who were asked, the reason why the community does not participate in road development is asking the contribution beyond the capacity of individuals, lack of selected material around local community, and lack of rental road machineries. According to the question, on average, 70.91% of the respondents said they strongly agree and agreed in which lack of select material (gravel) is a factor. And the rest 29.09%, of the respondent replied it is not factor. While 81%

of the respondents said lack of rental road machineries around the project area is highly affect community participation in road infrastructure and the rest 19% of the respondent replied that it is no factor. On the other hand, 62.07% of the respondents said the amount of money that individuals contribute to road project is no affect community participation in rural road project.

According to the data analysis, among the factors that influence individuals not to participate in the road development work in the community, lack of selected material around local community, and lack of rental road machineries are the main factor.

#### 4.5.3. Institutional Factor that Affect Community Participation in Rural Road Infrastructure

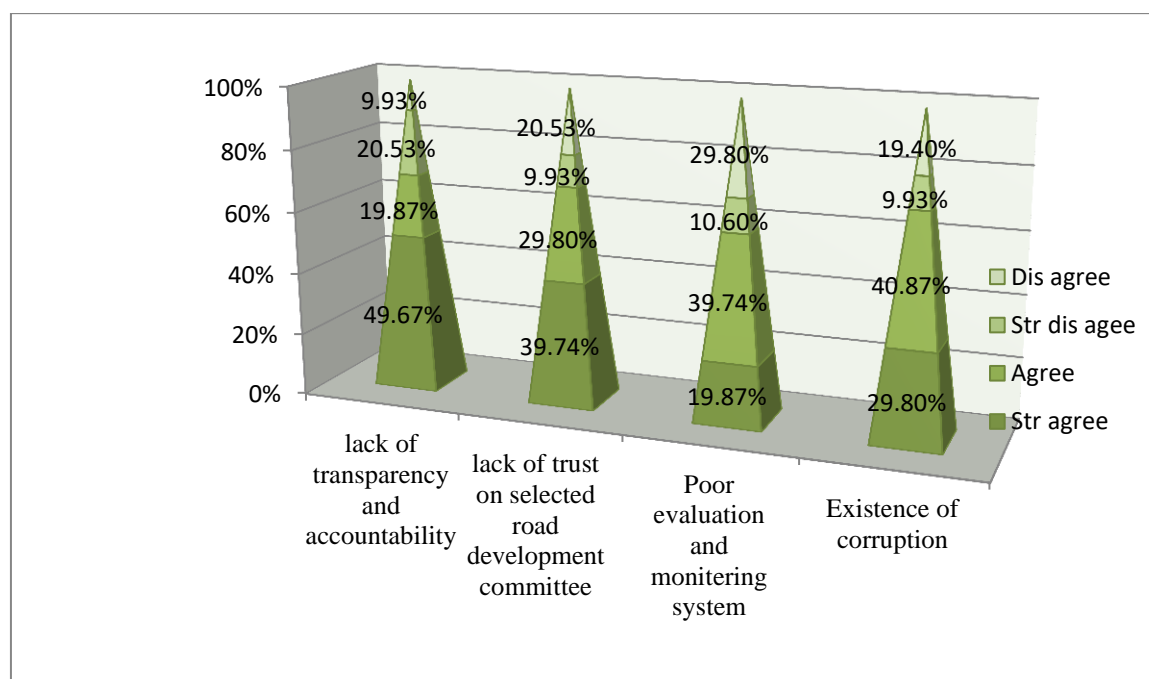


Figure 14. Institutional factor that affect community participation in rural road infrastructure

Source: field survey 2023.

According to figure 15, the data from the total informants on average 34.77% and 32.57 of respondents were replied that strongly agree and agree respectively also from the total respondents on average 12.74% and 65% of the respondents were replied that strongly disagree and disagree respectively.

Based on this analysis, when asked the respondents how much influence the variables on the issue, the majority of the respondents agreed that these variables like; lack of transparency, lack of trust on the selected road development committee, poor evaluation and monitoring system and the existence of corruption are the determinant factors that make community participation in road development is very low. Therefore the analysis shows that these problems are very serious in this study area.

According to the interview conducted with the head of the Gummer District Transport and Road Development Office currently. The result of interview shows that: The local community play significant role in rural road development rather than hopping or waiting for the government and are done by their own efforts and initiative. Through this process also there are problems that hinder the society are not as effective as it needs to be, and there are factors in the society where individuals become passively involved in the problem.

Fortunately, the environment where the community lives is hilly, so gravel production is not available as required. The select material comes from a faraway place and because of the distance the cost of gravel is so high. Therefor that affect the community participate in road development project to become less.

On the other hand, rental machines used for road construction are not available nearby the community, so the cost of loading and unloading these machines is so high and it has become a problem to reduce community participation in road infrastructure. In the same way, most of these community-run roads have not been professionally designed, so it will not be easy for talk with the different governmental or none governmental bodies to improve the level of its quality.

## 4.6. Inferential Statistics

The quantitative data has been analyzed through Inferential Statistics in which multiple regression modal were used to facilitate meaningful analysis and interpretations of the research finding by employing Chi-square distribution, Testing assumption of regression and Regression Analysis to assess the relationship between the independent variables and dependent variables.

### 4.6.1. Categorical Variable by Employing Chi-Square Distribution

Table 10 Analysis of the categorical variable by employing Chi-square distribution

| Variable Type                        | Category of the variable | Community participation |        |     |       |         | Chi2   | Sig.  |
|--------------------------------------|--------------------------|-------------------------|--------|-----|-------|---------|--------|-------|
|                                      |                          | High                    | Medium | Low | Total | Percent |        |       |
| Lack of awareness                    | Strongly Agree           | 61                      | 27     | 3   | 91    | 60.2    | 92.86  | 0.000 |
|                                      | Agree                    | 28                      | 17     | 0   | 45    | 29.8    |        |       |
|                                      | Disagree                 | 3                       | 0      | 12  | 15    | 10      |        |       |
|                                      | Strongly Disagree        | 0                       | 0      | 0   | 0     | 0       |        |       |
| Lack of access to communication      | Strongly Agree           | 39                      | 24     | 12  | 75    | 49.6    | 18.056 | 0.006 |
|                                      | Agree                    | 26                      | 17     | 3   | 46    | 30.4    |        |       |
|                                      | Disagree                 | 12                      | 3      | 0   | 15    | 10      |        |       |
|                                      | Strongly Disagree        | 15                      | 0      | 0   | 15    | 10      |        |       |
| Lack of Cooperation and Coordination | Strongly Agree           | 64                      | 38     | 3   | 105   | 69.5    | 42.01  | 0.000 |
|                                      | Agree                    | 15                      | 3      | 12  | 30    | 19.9    |        |       |
|                                      | Disagree                 | 13                      | 3      | 0   | 16    | 10.6    |        |       |
|                                      | Strongly Disagree        | 0                       | 0      | 0   | 0     | 0       |        |       |
| High cost of select material         | Strongly Agree           | 3                       | 0      | 12  | 15    | 9.9     | 101.78 | 0.000 |
|                                      | Agree                    | 14                      | 13     | 3   | 30    | 19.9    |        |       |
|                                      | Disagree                 | 28                      | 22     | 0   | 60    | 39.7    |        |       |
|                                      | Strongly Disagree        | 37                      | 9      | 0   | 49    | 32.5    |        |       |
| Lack of rental road work machinery   | Strongly Agree           | 8                       | 22     | 0   | 30    | 19.9    | 61.57  | 0.000 |
|                                      | Agree                    | 43                      | 6      | 12  | 61    | 40.3    |        |       |
|                                      | Disagree                 | 15                      | 15     | 0   | 30    | 19.9    |        |       |
|                                      | Strongly Disagree        | 26                      | 1      | 3   | 30    | 19.9    |        |       |
| Lack of                              | Strongly Agree           | 49                      | 14     | 12  | 75    | 49.7    | 24.24  | 0.000 |

|  |                   |    |    |    |    |      |       |       |
|--|-------------------|----|----|----|----|------|-------|-------|
| transparency and accountability            | Agree             | 16 | 14 | 0  | 30 | 19.9 |       |       |
|  | Disagree          | 16 | 15 | 0  | 31 | 20.5 |       |       |
|  | Strongly Disagree | 11 | 1  | 3  | 15 | 9.9  |       |       |
| Poor rural road quality and Sustainability | Strongly Agree    | 42 | 18 | 0  | 60 | 39.7 | 31.39 | 0.001 |
|  | Agree             | 22 | 11 | 12 | 45 | 29.8 |       |       |
|  | Disagree          | 11 | 1  | 3  | 15 | 9.9  |       |       |
|  | Strongly Disagree | 17 | 14 | 0  | 31 | 20.6 |       |       |
| Poor Evaluation and monitoring system      | Strongly Agree    | 13 | 3  | 0  | 16 | 10.6 | 63.87 | 0.000 |
|  | Agree             | 27 | 6  | 12 | 45 | 29.8 |       |       |
|  | Disagree          | 22 | 35 | 3  | 60 | 39.7 |       |       |
|  | Strongly Disagree | 30 | 0  | 0  | 30 | 19.9 |       |       |
| Existence of Corruption                    | Strongly Agree    | 22 | 11 | 12 | 45 | 29.8 | 32.01 | 0.002 |
|  | Agree             | 43 | 18 | 0  | 61 | 40.4 |       |       |
|  | Disagree          | 16 | 14 | 0  | 30 | 19.9 |       |       |
|  | Strongly Disagree | 11 | 1  | 3  | 15 | 9.9  |       |       |

According to the variable which is lack of awareness in the community on rural road development project, majority of the respondents were strongly agree and agree that individuals are remain from community participation because of lack of awareness. Thus, the result showed that there is a strong significant association between lack of awareness and community participation on rural road development project at 5% level (p-value <0.05, 0.0000<0.05, as table shown above).

Based on the above table Lack of access to communication is highly affect individuals not to participates in rural road development project Therefore, as the result indicated there is a significant association between information exchange and community participation on road development project at 5% level (p-value (Sig.) < 0.05, which is, 0.006<0.05, Table shown above).

Cooperation and coordination among stockholders is other independent variables in the study. According to the respondents response which is strongly affect individuals to be passive in community participation on rural road development project. Thus, the result indicates that

there is a strong association between coordination and cooperation with that of rural road development at 5% level (p-value < 0.05; Sig. = 0.0000<0.05, Table shown above). The result revealed that coordination and cooperation of community participation has a significant factor on the road development project.

Regarding the independent variable of High cost of select material, the majority of the respondents have agreed that it seriously affect individual's participation in rural road development. STATA result show that there is a strong association between High cost of select material with that of rural road development at 5% level (p-value < 0.05; Sig. = 0.0000<0.05, Table shown above. Therefore High cost of select material is statistically significant

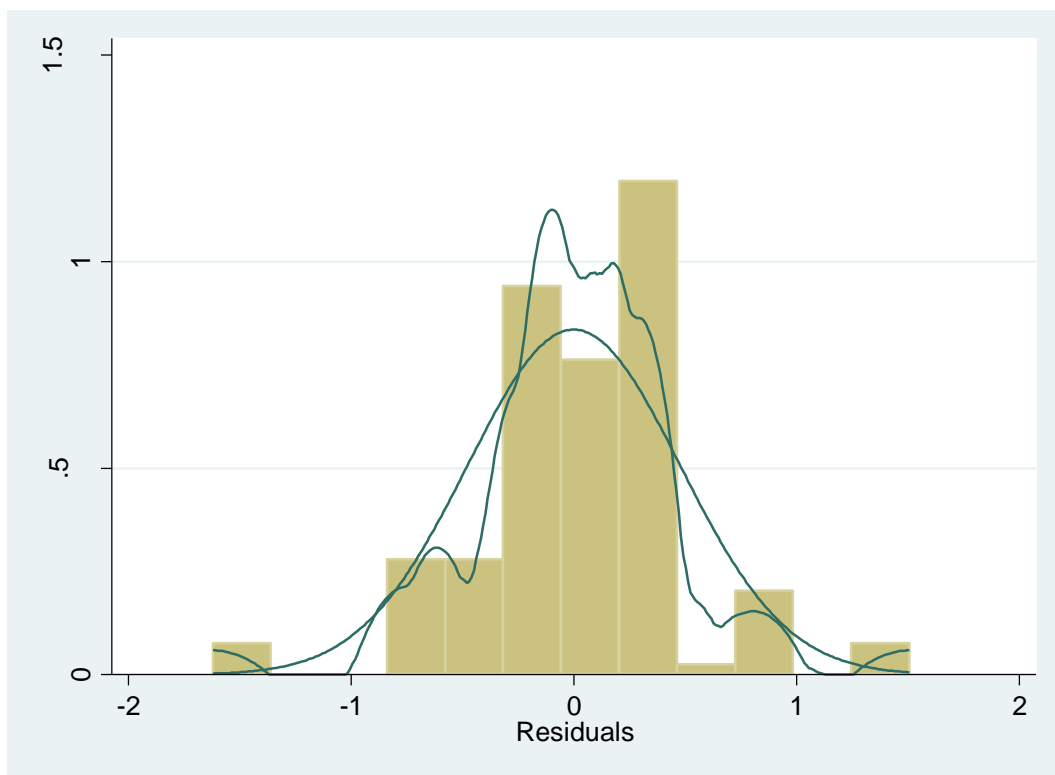
As the table shown the above, lack of rental road work machinery in the study area is seriously affect community participation in rural road development project in the study area. STATA result show that there is a strong association between lack of rental road work machinery with that of rural road development at 5% level (p-value < 0.05; Sig. = 0.0000<0.05, Table shown above. Therefore lack of rental road work machinery is statistically significant.

According to the data in above table, Lack of transparency and accountability is also factor affect the community in the rural road development project. Thus, the result showed that there is a strong significant association Lack of transparency and accountability between community participation on rural road development project at 5% level (p-value <0.05, 0.0000<0.05, and statistically significant.

Additionally, Existence of Corruption is independent variable which is strongly affect community participation in rural road development project according to the data from the above table. STATA result show that there is a strong association between Existence of Corruption with that of community participation in rural road development project at 5% level (p-value < 0.05; Sig. = 0.0000<0.05. Therefore Existence of Corruption in community participation on rural road development project is statistically significant factor.

#### 4.6.2. Testing Assumption of Regression Analysis

**Normality Test:-** the residuals should behave normal, that means, residuals( $e$ ) are the difference between the observed values( $Y$ ) and the predicted values( $Yhat$ ):  $e=Y-Yhat$ . If residuals donot follow a “normal” pattern then you should ckeck for ommitted variables, model specification, linearity, functional forms. In sum, you may need to reases your model/theory. In practice normality doesn’t represent much of a problem when dealing with really big samples.



Source: Researcher STATA Computation, 2023.

**Multi-co linearity test:** - is that independent variables are not perfectly multi-co linearity. One repressor should not be a linear function of another. When multi-co linearity is present standard errors may be inflated. STATA will drop one of the variables to avoid a division by zero in the OLS procedure (Stock and Watson, 2003). Contingency coefficients (Correlation Matrix) were computed to cross check the existence of multi-co linearity problem for discrete

explanatory variables. The decision rule for contingency coefficients stated that if contingency coefficient approaches 1, there is a problem of association between the discrete variables. As a general rule, according to Stock and Watson (2007) multi-co linearity problem arises when the correlation between variables is above 0.80 and -0.8. This was tested by employing Pearson correlation matrix which is shown in table 12.

#### 4.6.3. Pearson Correlation Coefficient for Relationship Analysis

Bivariate correlation ship analysis is used to measure the strength of the association between two variable and is only concerned the strength of the relationship. The correlation coefficient for each pair of study variable have been calculated if the correlation is found between -1 and +1, it is called Pearson's correlation coefficient.

| Range      | Interpretation          |
|------------|-------------------------|
| 0.00– 0.10 | Negligible correlation  |
| 0.10– 0.39 | Weak Correlation        |
| 0.40– 0.69 | Moderate Correlation    |
| 0.70- 0.89 | Strong Correlation      |
| 0.90–1.00  | Very strong Correlation |

Source: Schubert, Boer, & Schwartz, (2018).

Table 11 person's correlation coefficient for relationship

|                     |                     | Community participation | Rural road coverage | Lack of awareness | Lack of access communication | Lack of coordination and cooperation | High cost of select material | Shortage of Rental road machinery |
|---------------------|---------------------|-------------------------|---------------------|-------------------|------------------------------|--------------------------------------|------------------------------|-----------------------------------|
| Rural road coverage | Pearson Correlation | -0.5770                 | 1.0000              |                   |                              |                                      |                              |                                   |
|                     | Sig.(2 tailed)      | 0.0470                  |                     |                   |                              |                                      |                              |                                   |
|                     | N                   | 151                     | 151                 |                   |                              |                                      |                              |                                   |
| Lack of awareness   | Pearson Correlation | -0.9178                 | 0.4726              | 1.0000            |                              |                                      |                              |                                   |
|                     | Sig.(2 tailed)      | 0.0000                  | 0.5650              |                   |                              |                                      |                              |                                   |

|  |                     |         |         |         |         |         |         |         |
|--|---------------------|---------|---------|---------|---------|---------|---------|---------|
|  | N                   | 151     | 151     | 151     |         |         |         |         |
| Lack of access to communication            | Pearson Correlation | -0.5067 | 0.8096  | -0.1529 | 1.0000  |         |         |         |
|  | Sig.(2 tailed)      | 0.0001  | 0.0323  | 0.0410  |         |         |         |         |
|  | N                   | 151     | 151     | 151     |         |         |         |         |
| Lack of coordination and cooperation       | Pearson Correlation | -0.3845 | 0.1262  | 0.6487  | -0.1780 | 1.0000  |         |         |
|  | Sig.(2 tailed)      | 0.0398  | 0.0224  | 0.0000  | 0.0288  |         |         |         |
|  | N                   | 151     | 151     | 151     | 151     |         |         |         |
| High cost of select material               | Pearson Correlation | -0.5353 | -0.1739 | -0.8398 | 0.1954  | 0.7237  | 1.0000  |         |
|  | Sig.(2 tailed)      | 0.0000  | 0.0330  | 0.0000  | 0.0162  | 0.0034  |         |         |
|  | N                   | 151     | 151     | 151     | 151     | 151     |         |         |
| Shortage of Rental road machinery          | Pearson Correlation | -0.8178 | 0.3135  | 0.0019  | 0.7791  | -0.9318 | -0.1685 | 1.0000  |
|  | Sig.(2 tailed)      | 0.0072  | 0.0976  | 0.0412  | 0.0000  | 0.0055  | 0.0386  |         |
|  | N                   | 151     | 151     | 151     | 151     | 151     | 151     |         |
| Lack of transparency and accountability    | Pearson Correlation | -0.0203 | -0.0440 | -0.0762 | 0.0793  | 0.0729  | -0.002  | 0.3153  |
|  | Sig.(2 tailed)      | 0.0050  | 0.5920  | 0.3526  | 0.3329  | 0.3735  | 0.9805  | 0.0001  |
|  | N                   | 151     | 151     | 151     | 151     | 151     | 151     | 151     |
| Poor rural road quality and sustainability | Pearson Correlation | 0.0750  | 0.0294  | -0.0731 | -0.6031 | 0.3615  | 0.0219  | -0.3805 |
|  | Sig.(2 tailed)      | 0.0099  | 0.7202  | 0.3726  | 0.0000  | 0.0000  | 0.7891  | 0.0000  |
|  | N                   | 151     | 151     | 151     | 151     | 151     | 151     | 151     |
| Poor evaluative and monitoring system      | Pearson Correlation | -0.5413 | -0.0314 | -0.5627 | 0.2664  | -0.8091 | -0.281  | 0.2416  |
|  | Sig.(2 tailed)      | 0.0036  | 0.7021  | 0.0000  | 0.0009  | 0.0000  | 0.0005  | 0.0028  |
|  | N                   | 151     | 151     | 151     | 151     | 151     | 151     | 151     |
| Existence of corruption                    | Pearson Correlation | -0.6509 | -0.0499 | -0.2361 | 0.0215  | -0.0644 | 0.1222  | 0.2704  |
|  | Sig.(2 tailed)      | 0.0044  | 0.5432  | 0.0035  | 0.7934  | 0.4322  | 0.1349  | 0.0008  |
|  | N                   | 151     | 151     | 151     | 151     | 151     | 151     | 151     |

|  |                     | Lack of transparency and accountability | Poor rural road quality and sustainability | Poor evaluative and monitoring system | Existence of corruption |
|--|---------------------|---|--|---------------------------------------|-------------------------|
| Lack of transparency and accountability    | Pearson Correlation | 1.0000                                  |  |                                       |                         |
|  | Sig.(2 tailed)      | 0.0000                                  |  |                                       |                         |
|  | N                   | 151                                     |  |                                       |                         |
| Poor rural road quality and sustainability | Pearson Correlation | 0.4361                                  | 1.0000                                     |                                       |                         |
|  | Sig.(2 tailed)      | 0.0000                                  |  |                                       |                         |
|  | N                   | 151                                     | 151  |                                       |                         |
| Poor evaluative and monitoring system      | Pearson Correlation | -0.5149                                 | -0.2796                                    | 1.0000                                |                         |
|  | Sig.(2 tailed)      | 0.0074                                  | 0.0005                                     |                                       |                         |
|  | N                   | 151                                     | 151  | 151                                   |                         |
| Existence of corruption                    | Pearson Correlation | 0.6198                                  | 0.3595                                     | -0.8026                               | 1.0000                  |
|  | Sig.(2 tailed)      | 0.0000                                  | 0.0000                                     | 0.0278                                |                         |
|  | N                   | 151                                     | 151  | 151                                   | 151                     |

The result shown in above table, although the degree of effect is different from variable to variable, all independent variables are factors that affect community participation in the study area. When the researcher tests the correlation between lack of awareness and community participation, it is statistically significant and very strong negative correlation with the Pearson's correlation coefficient of -0.9178. That means the degree of lack of awareness increase the practice of community participation in rural road development in Gummer wereda is decrease.

Regarding to the relationship between lack of access to communication and community participation in the study area is moderate negative correlation with Pearson's correlation coefficient of -0.3067.and statistically significant. The result revealed that, lack of access to communication is factoring that affect community participation in the study area.

The correlation between Lack of coordination and cooperation and community participation statistically significant and their correlation is negative with Pearson's correlation coefficient of -0.3845. The result shown, when there is poor coordination and cooperation among the stockholder the achievement of community participation is low in rural road development in the study area.

Lack of select material near by the local community is strongly negative relationship with community participation and statistically significant at Pearson's correlation coefficient of -0.8178. Fortunately, the weather in the area where the community lives is hilly, so gravel production is not available as required. The gravel comes from a faraway place and the cost of this is so high that affect the community participate in road development project to become less.

Similarly, lack of access to rental road work machinery nearby the community affect the engagement of community participation in rural road development project in the study area. Therefore lack of rental road work machinery and community participation are strongly negative correlated with Pearson's correlation coefficient of -0.8178 and statistically significant. That means lack of access to rental road work machinery around the area is highly affect community participation in the study area.

On the other hand, poor evaluative and monitoring system and the existence of corruption are the variables that contribute negative effect to community participation in rural road development in the study area with Pearson's correlation coefficient of -0.5149, 0.6198 respectively and statistically significant

#### **4.6.4. Regression Analysis**

A multiple regression analysis has been used to determine the relationship between the variables under study. Additionally, a researcher used nine predictors for community participation in rural road development project in Gummer Wereda to establish the relationship between dependent and independent variables. These predictors included; lack of awareness, lack of access to communication, lack of cooperation and coordination, high cost

of select material, lack of rental road work machinery, lack of transparency and accountability, poor rural road quality and sustainability, poor evaluation and monitoring, and corruption.

Table 12. Model Summary

| Model | R     | R Square | Adjusted R Square      | Std. Error of the Estimate |
|-------|-------|----------|------------------------|----------------------------|
| 1     | 0.834 | 0.70     | the dependent variable | 0.543                      |

Source: Researcher STATA Computation, 2023.

According to the analysis of the modal summary on the above table the value of R square is 0.70 that means 70% of the dependent variable (community participation) is explained by independent variable which are lack of awareness, lack of access to communication, lack of cooperation and coordination, high cost of select material, lack of rental road work machinery, lack of transparency and accountability, poor rural road quality and sustainability, poor evaluation and monitoring, and corruption. This implies that the other variable not included in this model explained 36.3% of the dependent variable (community participation in rural road development project). Adjusted R square is the predictive power of the included independent variable in modal to explain the dependent variable which is 0.637.

Table 13 Analysis of Variance (ANOVA)

| Source             | Sum of Square(SS) | Degree of freedom(df) | Mean Square(MS) | F(10,140) | Sig.   |
|--------------------|-------------------|-----------------------|-----------------|-----------|--------|
| Regression (Model) | 33.5227182        | 10                    | 3.35227182      | 13.72     | 0.0000 |
| Residual           | 34.2123811        | 140                   | 0.244374151     |           |        |
| Total              | 67.7350993        | 150                   | 0.451567329     |           |        |

Source: Researcher's STATA Computation, 2023.

- a.** Predictors: rural road coverage, lack of awareness, lack of access to communication, lack of cooperation and coordination, high cost of select material, lack of rental road work machinery, lack of transparency and accountability, poor rural road quality and sustainability, poor evaluation and monitoring, and corruption.

**b.** Dependent Variable: level of community participation. The analysis of variance (ANOVA) in this study was used to determine the overall fitness of the regression model, which is F-test, was used to determine the overall significance of the regression model. From the findings in Table above, the p-value was 0.0000, which is the p-value (sig. value) is less than 0.05, that is it was statistically significant) and null hypothesis (H0) reject and alternative hypothesis (H1) accept. Thus, the p-value (Sig.) indicated that the overall model is well fitted. This demonstrated that lack of awareness, lack of access to communication, lack of cooperation and coordination, high cost of select material, lack of rental road machine, lack of transparency and accountability, poor rural road quality and sustainability, poor evaluation and monitoring system, and corruption, are factors that effect of community participation in rural road development project in the study area.

Table 14. Regression Analysis

| Model                                      | $\beta$ Coeff. | Std. Err. | t-value | P>t   | [95% Conf. Interval] |
|--|----------------|-----------|---------|-------|----------------------|
| Lack of awareness                          | -0.217         | 0.287     | -0.76   | 0.045 | (-0.783, 0.350)      |
| Lack of access to communication            | 0.247          | 0.159     | 1.55    | 0.122 | (-0.067, 0.562)      |
| Lack of cooperation and coordination       | -0.178         | 0.338     | 0.53    | 0.004 | (-0.491, 0.846)      |
| High cost of select material               | -0.659         | 0.196     | -3.35   | 0.001 | (-1.047, -0.270)     |
| Lack of rental road machine                | -0.453         | 0.156     | -2.90   | 0.004 | (-0.762, -0.144)     |
| Lack of transparency and accountability    | 0.165          | 0.173     | 0.95    | 0.342 | (-0.177, 0.507)      |
| poor rural road quality and sustainability | -0.119         | 0.117     | -1.02   | 0.312 | (-0.349, 0.112)      |
| Poor evaluation and monitoring             | -0.247         | 0.093     | -2.66   | 0.009 | (-0.431, -0.064)     |
| Existence of Corruption                    | -0.065         | 0.211     | -0.31   | 0.003 | (-0.482, 0.353)      |
| _constant                                  | 4.894          | 0.852     | 5.74    | 0.000 | (3.21, 6.579)        |

Source: Researcher's STATA Computation, 2023.

The coefficients Table above provides with a constant ( $\beta_0$ ) (4.894) and the co-efficient of each independent variable which aids in the formulation of the multiple linear regression equation. The regression equation is:

$$Y = \beta_0 + \beta_1(x_1) + \beta_2(x_2) + \dots + \beta_k(x_k) + e$$

Y=dependent variable  $\beta_0$ = slope coefficient  $\beta_1$ = intercept coefficient

x= independent variable and e= error term.

$$Y = 4.894 + (-0.217)X_1 + 0.247X_2 + 0.178X_3 + (-0.659)X_4 + (-0.453)X_5 + 0.165 X_6 + (-0.119)X_7 + (-0.247)X_8 + (-0.065)X_9$$

Where,  $X_1$  =Lack of awareness,  $X_2$  = Lack of access to communication,  $X_3$  = Lack of cooperation and coordination  $X_4$ = High cost of select material,

$X_5$ = Lack of rental road machine,  $X_6$  = Lack of transparency and accountability,

$X_7$  = poor rural road quality and sustainability,  $X_8$ = Poor evaluation and monitoring

$X_9$  = Existence of Corruption

The regression findings output presented in table above, when the value of all independents variable which included in the model are zero the average value of community participation in rural road development projects in the study area is the same to the amount of  $\beta_0$  (4.894). Based on the results in table above it revealed that Lack of awareness, high cost of select material, lack of rental road machine and poor evaluation and monitoring have a significant influence/effect on the level of community participation in Gummer Wereda. The p-value ( $P > |t|$ ), for all these independent variables;  $P|t| < 0.05$ , were statistically significant.

As per the findings, it is strongly agreed when  $\beta_1$  (lack of awareness) increases by a unit the community participation in study area is decreased by 21.7% other variables keep in constant.

The variable is statistically significant since  $P > t = 0.045 < 0.05$ , which indicates that lack of awareness is factor affect community participation in the study area.

Similarly, when  $\beta_3$  (Lack of cooperation and coordination) increases by a unit the community participation in study area is decreased by 17.8% other variables keep in constant. The variable is statistically significant since  $P > t = 0.004 < 0.05$ , which indicates that Lack of cooperation and coordination has negative influence on the community participation on the rural road development project in the study area.

High cost of select material ( $\beta_4$ ) has negative influence on the community participation on the rural road development project because cost of select material increased by a unit community participation in study area is decreased by 65.9% other variables keep in constant. As the result showed above table  $P > t$  value is less than 0.05, which is  $P > t = 0.001 < 0.05$ , which indicates that there is a strong significant effect between high cost of select material and community participation on rural road development project, in Gummer Wereda.

On the other hand, lack of rental road machine ( $\beta_5$ ) has another negative significant effect/influence on the rural road development project of community participation. According to the result revealed that the cost of rental road machine increase by a unit community participation in rural road development project in the study area decreased by 45.3% other variables keep in constant. This indicated that the high cost of rental machine has a significant influence on rural road community participation in Gummer wereda, which is,  $P > t$  value = 0.004 is less than 0.05.

Poor monitoring and evaluation ( $\beta_8$ ) is another independent variable which has a negatively affect community participation on rural road development project of in Gummer Wereda. The result showed that Poor monitoring and evaluation system increased by a unit community participation on rural road development project in Gummer Wereda decreases by 24.7% other variables keep in constant and which has a negatively significance effect/influence on community participation of rural road development project, which is,  $P > t$  value = 0.009 < 0.05.

According to the STATA result, existence of corruption ( $\beta_9$ ) increased by a unit community participation on rural road development project in Gummer Wereda decreases by 6.5% other variables keep in constant. Therefore the existence of corruption is significant factor that affect community participation on rural road development project in study area, which is P >t value = 0.046 is less than 0.05

## **CHAPTER FIVE**

### **CONCLUSION AND RECOMMENDATIONS**

#### **5.1. Conclusion**

According to the research finding the majority of the study area has access to get winter road coverage that connects their village with the main road and that has been built by in coordination with government and local community. On the other hand, there is the serious problem in terms of access to get all weathered road and the majority of roads that deliver service only in winter season. In general, as confirmed in this study, the community has made a significant role to achieve the rural road coverage by spending money, sacrificing their labor and coordinating the project in the community.

As stated above in the data analysis, it was understood based on the written questionnaire and interview conducted on the issue that the experience, participation, and understanding of the community is very high. And the majority of the community has a good understanding of what community participation means and can explain what community participation means in different terms.

In addition to that, apart from understanding and knowing what community participation means it was found that 94.04 percent of community members participated in the road development and involve by contributing in various ways, according to the results of the research paper. In the same way, according to information sources who were interviewed and are close to the issue, said the Gurage community has a long history and experience in participating in road development and is a pioneering community in this development area and the previous WolKite to Hosanna gravel road is one of the witness, as it a part of community work. It has been noted that there is a demand that is increasing exponentially over time.

Another of the questions answered in this research paper is the basic question of what kind of benefit is the participation of the local community in road development work, and as it is stated in the data analysis of these data sources, the participation of the community in the road development work has many benefits, among which the main ones mentioned it help to enhance the sense of ownership in the development process, it helps as it creates an

environment of mutual support and coordination, and it increases the capacity of citizens to participate in various developmental issues. Based on the information sources, the findings of the research indicate that community participation is important to do better quality and sustainable work of road development and also it helps to build new road networks and repair the ones that have been built.

The results of the study indicate that the majority of the community has less participation in the decision-making process, and mostly the road development committees and political leaders participate and influence in the decision-making process. It has been confirmed that the public participates only during the implementation but the participation in the decision-making process and planning is minimal.

The study revealed that there are structural factors like, lack of awareness, lack of communication and lack of coordination, economic factors like lack of road machinery nearby the community, institutional factors; problem of accountability and transparency, lack of trust in the kebele road development committees, a weak evaluation and control system, and rent-seeking attitudes and personal reasons have been affecting the active participation of the community in road infrastructure development in the study area.

## **5.2. Recommendation**

A recommendation given to all stakeholders according to the research finding on the role of community participation in road development are presented as follow.

### **❖ For the local community**

- When the community members who do not participate in the road development work in the area explain the reasons for not participating, it is lack of information, awareness problems, lack of communication, so the local community should use religious leaders as communication channel at the end of every religious ceremony to strengthen the process of exchanging information and the communication system.
- To up grading of these roads built by the community, the local community should assign influential person to lobby the government before introducing the newly annual budget, Businessmen and other partner organizations in order to improve their quality and to carry out the work of wearing gravel.

### **❖ For investors and partner organizations**

- The communities living in the area where the study was conducted have a very high level of initiative in participating in road development project and to satisfy the ever-increasing demand for community, the investors should take advantage of this good opportunity to import different heavy road machineries through investment licenses with low tariff system and provide rental machinery nearby the community.

### **❖ For Gummer Wereda Transport and Road Development Office**

- Most of the roads that are built with the participation of the local community have no road design, therefore before building the concerned bodies in transport and road development office have to prepare design for this road according to the level of desired.
- In the process of roads being built or repaired by the Kebeles community, up to from fundraising to bidding, as well as from the contractor's agreement to handover, the employees from transport and road development office should support and monitoring as well as improve the evaluation and control system.

**❖ For Woreda Administration**

- Roads built with the participation of the community should follow the legal process and establish the system of transparency and accountability.
- Just like other sectors, now a day it is necessary to establish a governmental structure by hiring a government-paid professional who can support and manage this activity at the Kebele level.
- In addition to the grader machine that the district government has purchased and provided, it should purchase other additional machines that will help in road development work and provide it to the society at a low rental rate.
- \_ In order to reduce the high cost of bringing gravel from distant places, the district government should work with the neighboring districts and zones to produce gravel.

**❖ For the Researchers**

- Research should be carried out to show the importance of these rural access roads built with the participation of the community on the social, political and economic activities of the community and what kind of impact they have on the livelihood of the rural community.

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## **APPENDIX - 1: RESEARCH QUESTIONNAIRE**

**Questionnaire to Be Filled by House hold**

**Wolkite University**

**College of Social Sciences and Humanities**

**Department of Governance and Development Studies**

The purpose of this questionnaire is to collect data for the study on the title Assessing the role of community participation in rural road development project: In the case of Gurage Zone Gummer Woreda. The researcher is going to conduct this study for academic purpose i.e. for a partial fulfillment of MA degree in Development Studies. Therefore, your genuine information is highly valuable for the success of this study. The researcher would like to assure you that your response will be kept confidential. Truthfully, feel free and try to answer the questions honestly and accurately. You are not required to write your name.

*I thank you for*

**GENERAL INSTRUCTIONS:**

- Before providing your answer, please read the question carefully,
- Answer the whole questions,
- Circle your appropriate response and kindly write your opinion briefly for the short answer questions on the space provided.
- No need to write a name.

**Part I: General Background of the Responses**

Questionnaire Number.....

1. Name of residence kebele-----
2. Gender (A) Male (B) Female
3. Age-(A) 18-24 (B) 25-34 (C) 35-44 (D) 45-54 (E) 55-64 (F) 65 and above
4. Level of education (A) No formal education (B) Primary education (1-8) (C) Secondary education (9-12) (D) Certificate( E) Diploma (F) Degree (G) other (specify)
5. Marital status (A) Single (B) Married (C) Divorced/separated (D) Widowed
6. What is your Occupation (A) trading (B) Salaried Employee (C) Farming (D) Unemployed (E) Skilled Laborer (F) Other (Specify).....?

**Part Two -the practice of community participation in rural road development project**

Q1. Do you know anything about community participation?

- A. yes B. no

Q2. If your answer is **yes**, what is community participation in your understanding?

- A. Engagement in road infrastructure  
B. Contributing of resources C. involvement in decision making

Q3. What lock like the practice of community participation in different infrastructure in your kebele? A. High B. Medium C. Low

Q4. In your kebele is there community participation in rural road development project?

A. yes B. no

Q5. Do you participate in your kebele to build or maintain in rural road infrastructure?

A. yes B. no

Q6. If your answer to Q5 is no, what's the reason for that?

- A. Don't know when the meetings were held
- B. Not interested in attending a meeting
- C. Views have not been considered
- D. Dominance of the top-down approach (anti-participatory)

**Part three- The importance of community participation in planning and implementing in rural road development**

Q7. Do you think community participation is important to bring tangible road infrastructure development?

A. Yes B. No

Q8. If your answer is **yes** to Q7, in your opinion how important is community participation in rural road development in your locality?

- A. Better quality infrastructure and sustainability
- B. Enhance Citizens Empowerment
- D. Create sense of ownership and mutual support
- D. To build new road and maintenance and management of local road project

Q9. Is there any kind of rural road that connects your kebele from other kebele or your kebele from main road? A. yes B. no

Q10. If your answer is yes for Q9, what kind of the road is found in your kebele?

A. Earth work completed road B. gravel road C. all weathered road D. all

Q11. If your answer is yes for Q10, who built that road?

- A. Government B. NGO C. local community D. both the coordination of government and Local government

Q12. Who are the key decision makers in the road infrastructure development? (Note: more than one responses is possible)

- A. political leader C. the entire community members are equally involved  
B. road development committee

Q13. In what way does the community participate in road infrastructure development programs?

- A. Planning process B. Decision making process  
C. Implementation process D. at all stage

#### **Part four –The contribution of community participation in road development**

Q14 What role your community plays in rural road development project in your locality (note: more than one response is possible)?

- A. Contribute money C. Provide labor E. Manage the projects  
B. Collect local materials D. Contribute ideas F. Mobilize communities G. not at all

Q13. If you answered your community contributed money to build and maintain road project, how can determine the amount of money?

- A. based on the cost estimation of the road project  
B. based on economic states of each households  
C. based on the common agreement of community in their meeting  
D. based on the road committee decision

Q14 Who collects the allocated money from each household for road development project in your kebele? A. political leader B. road development committee D. other governmental agent

Q15. If your answer is yes for Q5 what is your contribution in rural road development project in your keeled?

- A. Contribute money      C. Provide labor      E. Manage the projects  
 B. Collect local materials      D. Contribute ideas      F. Mobilize communities G. not at all

**Part five- Factor affects community participation in rural road development**

In your opinion what challenges does the community face when participating in the development of road development in your locality? Please insert (√) marks while you provide your response based on your degree of agreement.

*KEY:* SA= Strongly Agree, A = Agree, DA= Disagree, SD= Strongly Disagree

| S.NO | structural factor  | Degree of Agreement |   |    |    |
|------|--|---------------------|---|----|----|
|      |  | SA                  | A | DA | SD |
| 1    | Lack of awareness/information                            |                     |   |    |    |
| 2    | Lack of access to communication                          |                     |   |    |    |
| 3    | Lack of cooperation and coordination                     |                     |   |    |    |
|      | <b>Economic factors</b>                                  |                     |   |    |    |
| 4    | Lack of select material nearby the community             |                     |   |    |    |
| 5    | Asking the contribution beyond the capacity              |                     |   |    |    |
| 6    | lack of rental road machinery around local area          |                     |   |    |    |
|      | <b>Institutional factors</b>                             |                     |   |    |    |
| 7    | Lack of transparency and accountability                  |                     |   |    |    |
| 8    | Lack of trust on the selected road development committee |                     |   |    |    |
| 9    | Poor evaluation and monitoring system                    |                     |   |    |    |
| 10   | Existence of corruption                                  |                     |   |    |    |

## **APPENDIX 2: INTERVIEW GUIDELINE FOR TO KEY INFORMANTS**

**Wolkite University**

**College of Social Sciences and Humanities**

**Department of Governance and Development Studies**

The purpose of this questionnaire is to collect data for the study on the title Assessing the role of community participation in rural road development project: In the case of Gurage Zone Gummer Woreda. The researcher is going to conduct this study for academic purpose i.e. for a partial fulfillment of MA degree in Development Studies. Therefore, your genuine information is highly valuable for the success of this study. The researcher would like to assure you that your response will be kept confidential. Truthfully, feel free and try to answer the questions honestly and accurately. You are not required to write your name.

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Q1. How can you justify the relationship between community participation and road development project?

Q2. What look like the engagement of community in rural road development project in your woreda?

Q3. Is there any a good opportunity that your community initiate to involve in rural road development project in your woreda?

Q4. What is the importance of community participation in rural road development project in your woreda?

Q5. What your communities are played to improve the quality and coverage of rural road development project?

Q6. What are institutional frameworks designed to mobilize and initiate the participation of all stakeholders in rural road development project in your woreda?

Q7. How can you evaluate, monitor and follow-up the procedure and efficiency of community participation in rural road development project in your woreda?

Q8. What is the main factor that affects community participation in rural road development project in your woreda?

Thank you in advance

### APINDIX-3 DOCUMENT REVIEW

Gummer Woreda Road Development and Transport Office Report From 2011-2015 on Current Performance of Rural Road Infrastructure which were Built by Community Participation

ገንዘብ ወይን ገንዘብ ቀለጭን ገንዘብ ወይን ገንዘብ ገንዘብ ገንዘብ

| ተ.ቁ | የተገኘው ገንዘብ | ወይን  | ገንዘብ | የገንዘብ ገንዘብ | ሰነድ ቀን | ገንዘብ ገንዘብ  |
|-----|------------|------|------|------------|--------|------------|
| 01  | ገንዘብ       | ገንዘብ | ገንዘብ | ✓          | 2011   | 400,000    |
| 02  | ገንዘብ       | ገንዘብ | ገንዘብ | ✓          | 2011   | 155,000    |
| 03  | ገንዘብ       | ገንዘብ | ገንዘብ | ✓          | 2011   | 100,000    |
| 04  | ገንዘብ       | ገንዘብ | ገንዘብ | ✓          | 2011   | 600,000    |
| 05  | ገንዘብ       | ገንዘብ | ገንዘብ | ✓          | 2012   | 1,275,000  |
| 06  | ገንዘብ       | ገንዘብ | ገንዘብ | ✓          | 2012   | 3,740,232  |
| 07  | ገንዘብ       | ገንዘብ | ገንዘብ | ✓          | 2012   | 2365,800   |
| 08  | ገንዘብ       | ገንዘብ | ገንዘብ | ✓          | 2014   | 687,800    |
| 09  | ገንዘብ       | ገንዘብ | ገንዘብ | ✓          | 2014   | 4,282,172  |
| 10  | ገንዘብ       | ገንዘብ | ገንዘብ | ✓          | 2013   | 496,149    |
| 11  | ገንዘብ       | ገንዘብ | ገንዘብ | ✓          | 2013   | 250,000    |
| 12  | ገንዘብ       | ገንዘብ | ገንዘብ | ✓          | 2013   | 156,000    |
| 13  | ገንዘብ       | ገንዘብ | ገንዘብ | ✓          | 2013   | 250,000    |
| 14  | ገንዘብ       | ገንዘብ | ገንዘብ | ✓          | 2014   | 122,700    |
| 15  | ገንዘብ       | ገንዘብ | ገንዘብ | ✓          | 2014   | 4,376,800  |
| 16  | ገንዘብ       | ገንዘብ | ገንዘብ | ✓          | 2014   | 1,657,200  |
| 17  | ገንዘብ       | ገንዘብ | ገንዘብ | ✓          | 2014   | 1,253,600  |
| 18  | ገንዘብ       | ገንዘብ | ገንዘብ | ✓          | 2014   | 2,148,900  |
| 19  | ገንዘብ       | ገንዘብ | ገንዘብ | ✓          | 2014   | 287,600    |
| 20  | ገንዘብ       | ገንዘብ | ገንዘብ | ✓          | 2015   | 710,000    |
|     | ገንዘብ       | ገንዘብ | ገንዘብ | ✓          | 2015   | 25,374,083 |

Source Gummer woreda transport and road development office (2023)

## **APPENDIX-4 ROAD DEVELOPMENT COMMITTEES**

Road Development Committees were at Sit Observation in Burdana Denber Kebele



Source Gummer worda transport and road development office (2023)