ÜNİVERSİTEPARK Bülten | Bulletin

ISSN: 2147-351X | e-ISSN: 2564-8039 | www.unibulletin.com

ÜNİVERSİTEPARK Bülten | Bulletin • Volume 8 • Issue 1 • 2019

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To cite this article: Gafarso, H.N., Tufa, M.E. (2019). Effect of Universal Rural Road Access Program (URRAP) on Rural Households' Sociocultural Features: The Case of Jimma and Bunno Bedele Zones, South Western Ethiopia. *Üniversitepark Bülten,* 8(1), 44-62.

To link to this article: http://dx.doi.org/10.22521/unibulletin.2019.81.4

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ÜNİVERSİTEPARK Bülten | Bulletin • Volume 8 • Issue 1 • 2019 • pp. 44–62.

Effect of Universal Rural Road Access Program (URRAP) on Rural Households' Sociocultural Features: The Case of Jimma and Bunno Bedele Zones, South Western Ethiopia

HASSEN NAGESSO GAFARSO and MILKESSA EDAE TUFA

Abstract

Ethiopia has been undertaking numerous development projects with the objective of taking the country to the middle-income bracket in the near future. The Universal Rural Road Access Program (URRAP) road in Jimma and Bunno Bedele zones is among such projects. Though this project is intended to bring about significant positive change, there are unintended consequences on sociocultural elements of rural households. Accordingly, this study investigated the impact of URRAP road on the sociocultural transformation of rural households. A household survey for randomly selected household heads and in-depth interview, Focus Group Discussion (FGD), and observation for purposively selected samples were employed in the study. Data were then analyzed quantitatively by using SPSS statistical data software and qualitatively through thematic method. The findings of the study show that URRAP road has had both positive and negative impacts on sociocultural elements such as family organization, social interaction, education, health, and both material and non-material cultural elements of rural households. Finally, URRAP road is experiencing problems, and is in need of extensive and frequent supervision and monitoring, as well as inclusive, interdisciplinary and sound strategies and policies by responsible bodies at all levels and contexts.

Keywords: URRAP, social aspects, cultural elements, rural households.

DOI: 10.22521/unibulletin.2019.81.4

UNIBULLETIN • ISSN 2147-351X • e-ISSN 2564-8039

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Introduction

Public infrastructure encompasses long-term physical structures, facilities and supporting operating systems that provide essential services that facilitate the flow of goods, information and factors of production where the government has the primary role or has responsibility for deciding how the infrastructure is provided in the interests of the broader community (Poole, Toohey, & Harris, 2014). World Bank lending in the 1950's and 1960's was heavily biased towards infrastructural investment with road projects of exceptional prominence. This was the era of belief in the power of roads will "bring" development to remote areas. The first roads in various parts of the world were developed following trails and paths made historically by animals (Bogale, 2016).

Allport and Anderson (2011) explored that transport investment has the greatest impact on poor populations when other sector interventions are also in place. The poor are those disproportionately located in rural areas (Desai & Potter, 2008). Alkire, Chatterjee, Conconi, Seth, and Vaz (2014) also reported that 85% of the poor (measured using the Multidimensional Poverty Index) in 105 countries reside in rural areas of the developing world. In other words, most of the Third World poor live in rural areas. They are people caught in the deprivation trap; poor, weak, isolated, powerless, unemployed, and vulnerable (Willis, 2013).

The poor and remote communities realize larger benefits from roads in several ways. On the one hand, road construction and maintenance might provide employment opportunities for the local population; reduce the physical costs of access to resources and markets (Arethun & Bhatta, 2012; Terefe, 2012); reduce poverty (Shiferaw, Söderbom, Siba, & Alemu, 2013); increase (agricultural) production and generate economic growth in rural areas (Tegebu, & Seid, 2016); enable the provision of social services such as health and education (Norman, 2013); and, enhance social, economic and political development (Bogale, 2016).

However, Hirschmann (1958) tried to temper the high expectations with the qualification that transport holds no special inherent properties capable of initiating growth. It is also believed that the effects of roads tend to be complex and very context-specific, and therefore hard to presuppose any direct relationship between road development and economic growth, since the conditions under which road development will lead to positive economic growth outcome are not sufficiently specified. Furthermore, a succession of field studies beginning in the late 1970's began documenting the realities of rural transport, suggesting that rural road investments had a limited impact on rural dwellers' lives because the major share of rural travel and transport is bound up in domestic tasks such as water and firewood collection which generally involve walking on off-road paths (Fernando & Porter, 2002).

Ethiopia, which is one of the world's poorest countries with an estimated 83% of the country's population living in rural areas (Central Statistical Authority, 2015), has the lowest road density in the world, which is even far below the average African standard. It is alleged that the fundamental causes of poverty, isolation, powerlessness, vulnerability, unemployment, and high income inequality are insufficient and also unequal access and custody of roads together with other public infrastructures (Escobal, 2001; Wondimu & Weiss, 2012).

The government of Ethiopia has engaged in massive road construction investment through formulating the wide-ranging Road Sector Development Program (RSDP) in 1997 to increase the quality and quantity of the Ethiopian road network (Emmenegger, 2012; Ethiopian Roads Authority, 2011, 2012; Terefe, 2012). After 2010, the government launched a new Universal Rural Road Access subprogram to address rural accessibility and connectivity (Ethiopian Roads Authority, 2012). Moreover, the Ethiopian People's Revolutionary Democratic Front (EPRDF) government emphasizes the importance of roads for development and has defined road infrastructure as one of the main pillars of its developmental policy as formulated in the Agricultural Development Led Industrialization (ADLI), and the Poverty Reduction Strategy (PRS) (FAO/ILO/WFP 2008).

The researchers discussed the aforementioned studies on rural road accessibility and their expected returns in Ethiopia. It has been widely argued by Arethun and Bhatta (2012) that roads increase job opportunities and thereby open up new sources of revenue, leading to a more diversified income structure. Terefe (2012) combined panel data of rural households in Ethiopia with provincial level panel data of road density in order to estimate the impact of roads on poverty and consumption. Terefe used alternative econometric estimation methods to assess the robustness of the association between road infrastructure and rural wellbeing.

Despite a general consensus on the importance of rural roads for economic development and living standards, little emphasis is given to the negative impacts of rural roads on sociocultural change. All of the research conducted on the issues are methodologically quantitative with researchers from engineering, geography, and economics backgrounds. They also use only economic models and quantitative methods. In other words they study the impact of rural roads objectively, even though studying subjectively has an indispensable value. However, the nature of this issue requires knowledge from various disciplines of social sciences such as sociology, anthropology, and folklore. The current study has employed more qualitative data, with quantitative data collected so as to support the qualitative data as appropriate. Accordingly, the current study has attempted to address gaps in the literature from previous research.

The general objective of the study was to investigate the impact of URRAP road on sociocultural transformation of rural households in Jimma and Bunno Bedele Zones, in South Western Ethiopia.

Specific Objectives

- To identify the effect of URRAP road on the social interactions rural households in Jimma and Bunno Bedele zones.
- To identify the effect of rural road enlargement on indigenous cultural components in Jimma and Bunno Bedele zones.
- To identify the effect of URRAP road on pillar social aspects – health, education, and security in Jimma and Bunno Bedele zones.

Methodology

Study Setting and Population

The study area is in the Oromia National Regional State (ONRS) of Ethiopia, Jimma and Bunno Bedele zones, in south western Ethiopia. According to the Ethiopian Central Statistical Authority (2015) census data, the Oromia regional state has a population of 33,692,000 of which 4,880,000 are urban dwellers and 28,812,000 are rural dwellers. The total population of Jimma zone is 2,986,957 of which 1,498,021 are male and 1,488,936 are female.

Research Design

Creswell and Plano Clark (2011) defined research design as, "the procedures for collecting, analyzing, interpreting and reporting data in research studies" (p. 53). The current study employed qualitative approaches supported by quantitative. According to Bryman (1998), the quantitative research strategy explores human experience through numerical categories, while qualitative research strategies describe human interaction. More comprehensively, Marvasti (2002) asserted that the synthesis of these strategies provides a relatively complete image of human experience and interactional encounters, both through numerical and interpretative description. The philosophical foundation of the study was pragmatism so as to use varied data sources; using multiple methods in a study at the same time or one after the other and to use multiple perspectives to interpret the results. Similarly, Morgan (2014) concluded that,

Rather than framing the study of social sciences research as commitments to an abstract set of philosophical beliefs, pragmatism concentrates on beliefs that are more directly connected to actions. This calls for an approach to methodology that goes back to its original linguistic roots, the study of methods. (p. 1051)

Cross-sectional design has been employed in the current study to collect data at a specific time. Moreover, this study is descriptive, exploratory, and explanatory. It is descriptive since it describes the effect of URRAP road in sociocultural elements in the transformation of a rural community. It is exploratory since it explores social and cultural elements which are intensively victimized by the URRAP road. Finally, it is explanatory since it explains about changes of households' sociocultural aspects along with the construction and maintenance of URRAP road.

Methods of Data Collection

Household survey

Through the application of a household survey, demographic and socioeconomic data was collected (age, gender, religion, marital status, educational status, job, annual household income, household size). The survey data also includes the nature, types and changes of sociocultural aspects, and considers the feelings of household heads about the given infrastructure in respective to their culture and social aspects, social network, and cultural elements and features.

In-depth Interview

In-depth interviews were held to collect detailed data in order to offer a complete picture of the objectives of the study. Hence, respondents were purposively selected and deeply interviewed. The researchers selected the participants on the assumption that they

have experience on the issues under study and would be able to provide a profound level of information.

Key Informant Interview

The key informant interviews were conducted with key individuals on all selected sectors of public infrastructures. Accordingly, road enlargement stakeholders from government offices were interviewed, as well as coordinators of road construction, and road maintenance.

Focus Group Discussion (FGD)

In order to obtain adequate detailed information, Focus Group Discussions (FGDs) were held with purposively selected participants including both male and female, as well as youth, adult and elderly participants since the effect of URRAP road could differ according to these segments of the study population. For example, the participation of males and females is not the same in terms of accessing and utilizing the URRAP road.

Data Collection Instruments

Colton and Covert (2007) defined data collection instruments such as questionnaires as "mechanisms used to collect factual information, support observations, or assess attitudes and opinions of units...in a given study" (p. 6). In the current study, the main data-generation instruments were structured questionnaires, an interview guide, and a checklist. The primary objective of the structured questionnaire was to elicit quantitative information from heads of households. Checklists were used for observation, while the interview guide was used to elicit qualitative information (meanings, words, ideas) through deeper consultations with informants, key informants, and discussants. The checklist and interview guide were constructed following an open-ended, semi-structured questionnaire format.

Sampling and Sample Size

According to authors such as Corbetta (2003), simple random sampling technique appears appropriate when the lists of the units studied are accessible. This technique bears its usefulness in the household survey conducted with households. Correspondingly, the researchers obtained residents lists from the respective kebeles (districts). Aside from accessing the lists of households, according to Cohen, Manion, and Morrison (2000), "in simple random sampling technique, each member of the population under study has an equal chance of being selected from a list of the population" (p. 100). Such qualities marked simple random sampling technique as the most appropriate to be used for the current study. Accordingly, two districts from Jimma zone and one district from Bunno Bedele zone were randomly selected.

The sample size was determined depending on the formula of Yamane (1967, p. 886), as it is simplified in the case of a finite population. The formula considers 95% confidence with a 5% margin of error. Accordingly, 210 household heads were randomly selected.

Concerning the sample size for qualitative methods: 18 individuals were selected for in-depth interview (six from each district); as well as 15 key informants (six from the road authority office, which was two from each district; three from agriculture and rural development, which was one from each district; three from natural resources, which was one from each district; and the three leaders of the selected districts); and three FGDs, with one held in each district. The total participants of the FGD were 27, excluding facilitators.

The sample size was determined by saturation points based on the discussed qualitative methods.

Methods of Data Analysis

The analysis employed a mixed design approach. This design was optimal as it allowed the researcher to "triangulate...compare and contrast quantitative statistical results with qualitative findings for justification and validation purposes" (Creswell & Plano Clark, 2011, p. 77). Quantitative analysis used the numeric data gathered through sample households. The quantitative data applied both techniques of descriptive statistics. The descriptive analysis emphasized percentages, central tendencies, and graphic presentations; with interpretations also following the presentations. The Chi-square test of association was tested to look at the prevailing associations among the interactional variables. Cross-tabulation results helped to discern the general patterns seen among the associated variables. The qualitative data were transcribed, categorized, schematized and interpreted based on their respective contents and themes. The meanings, words, symbols and argumentative texts formed basic premises in the structures of reporting the subtitles, sections, and chapters.

Ethical Considerations

In conducting the study, ethical considerations and safety measures were taken into account. Accordingly, prior to attending the research location, a letter from Jimma University, College of Social Sciences and Humanities Research Coordinator was given to the woreda administrative and other required bodies. Following arrival in the field and having initially contacted the respondents, the purposes and importance of the study was explained to each of the study's participants and informed consent was obtained. Thus, the participants were given the authority to permit or refuse to take part in the collection of data in any form; with full rights reserved to withdraw at any time from the study; or to change ideas or to edit the recorded materials. In addition, the privacy of the participants was assured and they were informed that whatever information they provided would remain confidential. That is, the confidentiality and anonymity of information were strictly maintained.

Results and Discussion

This section looks at the data analyses, presentation, interpretation and discussion of the study. It attempts to address the research objectives concerned with the impact of URRAP road on the sociocultural transformation of rural households. Specifically, it presents detail based on (a) demographic and socioeconomic information; (b) the effect of URRAP road on family organization, social integration, and health; and (c) the effect of accessibility to URRAP road on cultural components such as material and non-material cultural elements.

Demographic and Socioeconomic Characteristics of Sample Respondents

This section presents demographic and socioeconomic variables such as gender, age, religion or religious affiliation, educational level, marital status, household size, number of dependent household members, and income sources. Accordingly, three of these variables are described in Table 1.

Table 1. Gender, Marital status, and Religion of Respondents

Variable	Category	Frequency	Percent
Gender	Female	25	11.9
	Male	185	88.1
Marital status	Single	6	2.9
	Married	184	87.6
	Widowed	20	9.5
Religion	Protestant	55	26.2
	Islam	146	69.5
	Orthodox	9	4.3
Total		210	100.0

Source: Household survey 2017

The majority of respondents were male (88.1%), married (87.6%), and Muslim (69.5%). This is consistent with the actual demographics of the region, country, and study areas, in that the majority of rural household heads are male and married. Similarly, secondary data obtained from the districts shows that the majority of dwellers in the study areas (Gomma, Gera, and Didessa) were Muslim, which is on average 57.5%.

Table 2. Education level and Household Size of respondents

	N	Min.	Max.	Mean	*SD*
Education level	210	0	14	4.91	4.113
Household size	210	0	15	6.37	2.675

Source: Household survey 2017

Table 2 shows that on average, the number of years that respondents attended school was five; and the size of the average household is 6.4 persons. Such data has its own implication regarding access to and the utilization of public infrastructures. For example, education level has an association with utilizing transportation services, finding employment opportunities, coping with newly adopted technologies along with the transportation institution etc.

Sources of income of Respondents

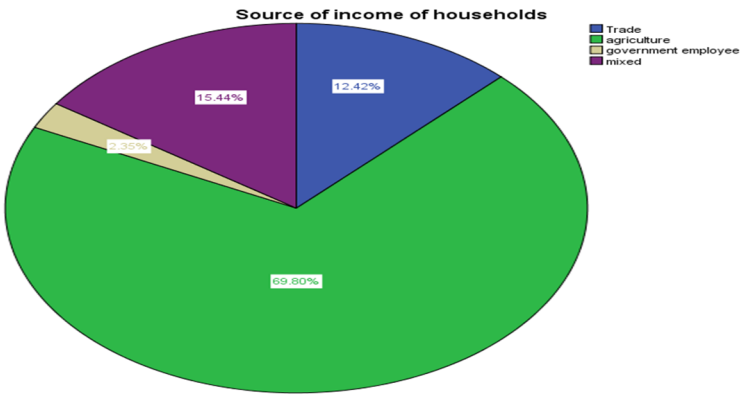

Figure 1. Income Sources of Respondents

The pie chart in Figure 1 shows that the majority of the respondents have been predominantly practicing agriculture, which accounts for 69.8%. Consistently, many studies

in the literature argue that agriculture remains the dominant sector in the Ethiopian economy, and accounts for around 50% of Ethiopia's GDP (Ethiopian Roads Authority, 2012). Growth of the Ethiopian economy is thus highly dependent upon agriculture with trade, export and foreign exchange earning capacity based heavily upon agricultural products (including coffee, chat, hides, skins, sugar, and spices) (Ethiopian Roads Authority, 2012).

Possible Association of URRAP Road with Emerging Social Problems

Along with the construction and utilization of rural roads, respondents argued that there are emerging social problems among the rural communities. These can be categorized as problems related to health, family, corruption and conflict, crime (e.g., theft, robbery, burglary, poaching, and scrumping), and education.

Health

Respondents believe that as the URRAP road is being constructed, it is also linked to various health-related issues. From observation, roads are clearly not up to standard. Besides, supply and demand are imbalanced, which leads to increased vehicular collisions and subsequent fatalities. Discussants of the FGD[1] in the Didessa district claimed that the road construction and upgrading has a tremendous negative health impact on both the inhabitants and local animal species. For example, during these road construction activities, there are significant earth movements as well as dust emissions and pollution from the burning of fuel. In some conditions and in the vicinity of houses and communities, dust and noise have been damaging to human health, with problems such as cancer and bronchitis reported among other ailments during construction and, especially, once the road is in regular use.

Figure 2. Dust created during road construction

There are cases that the researchers observed whereby road construction has created pits which have turned into artificial ponds. See Figure 3, which shows a pit in the Sedi-bore Gogo project in Gera district; one inhabitant local to this pit argued that it has inadvertently become a breeding ground for mosquitoes and water-borne diseases.

[1] FGD held with 10 individuals (Males = 6, Females = 4, Average age = 33.4 years).

Figure 3. Artificial ponds created during road construction

Furthermore, road improvements increase interactions amongst the population, particularly during road construction. In the study area, large numbers of participants had migrated from other areas. This may introduce exposure to communicable diseases and unwanted social patterns such as increased alcohol consumption and its known associated negative effects. Data from discussants of the Gomma district FGD[2] revealed that road crew members from other geographic areas had been introducing and spreading various health-related problems, especially HIV/AIDS and other sexually transmitted diseases (STDs), to the local inhabitant population. The majority of respondents (87.8%) believe that sexually transmitted diseases like HIV/AIDS are spreading among the community due to the rural road's introduction used as a starting point. In the words of one interviewee from Gomma (male, 45 years old), "road workers have been spreading AIDS. There are workers who attempt to give money for rural girls in order to get what they want – to have sex with them." One discussant from the Gera district FGD[3] (male, 43 years old) similarly stated this problem as, "they have been buying our children with small amounts of money. Since they do not know, the children consider that the money is sufficient to engage in these activities and sell their life."

As the number of vehicles on the roads continues to increase, especially those that allow increased vehicular speeds, this can lead to increased traffic accident rates affecting both the human and animal populations. All of the household survey respondents stated that safe infrastructure for pedestrians and cyclists is lacking for all roads which are being constructed under URRAP. Rodrigue, Comtois, and Slack (2014) also stressed that with the rapid expansion of roads for vehicular use, high numbers of traffic-related accidents can occur on the roads. Generally, the respondents feel that a lack of monitoring and evaluation regarding social aspects like those described, the topography of the land, weather conditions, poverty, and poor administration are factors associated with the URRAP road which negatively impact on the health of the human and animal inhabitants.

Family

It is believed that rural road construction can solve families' problems. However, it is also reportedly creating family-related problems. Conflict, mistrust, misunderstanding, and family disorganization are identified as road-associated problems from the sample in the

[2] FGD held in Gomma district with nine individuals (Males = 6, Females = 3, Average age = 39.1 years).
[3] FGD held in Gera district with nine individuals (Male = 6, Female = 3, Average age = 39.6 years).

study areas. Even though there are also another factors pertinent to these family problems, 76% of the respondents of the household survey believe that road construction is part of the cause of these problems. From the participants' responses, factors associated with these problems are said to be cost, time, and lifestyle. An interviewee from Gomma district (female, 45 years old) claims that whilst "time and cost spent on the road is known, sometimes it may not be as expected. Thus, misunderstanding and mistrust occurs amongst family members, when delays are seen from the expected timescales." Another respondent from Gera district (male, 38 years old) also added that;

Our children are joking with us. While they are in another area or town, they claim they are in the village. In other words, with a short period of time they can go wherever they want without the family's knowledge. This gradually leads them to attempt to free themselves from parental monitoring. Consequently, they start to practice either good or bad activities. Finally, the road is an inevitable factor for the movement of children from place to place, and perhaps to engage in crime which eventually paves the way for family conflict.

Corruption and Conflict

Corruption is shrinking Ethiopia's economy, and likely also plays a significant role among the local communities during road construction and its subsequent utilization. Data from the in-depth interviews and FGDs shows that the areas associated with corruption based on the rural road were:

- Selection of sites for camps, road routes, and another activities;
- Recruitment and hiring of workers or employees;
- Utilization of monies collected from the community;
- Tariffs.

There are at least temporary losses of agricultural and grazing land and even houses (for road detours, construction camps, storage sites, road routes etc.). There have been cases whereby these sites had been selected based on corruption. One respondent explained his complaint as;

During the construction of this road, project staff needed to construct a camp on the farming land of Mr. X …I won't tell you his name as he is well-placed in our community. He discussed the issues with the district bodies responsible and managed to change the proposed site from his own land to my farming land. I was in conflict with him since I had all the information about his corrupt activities. However, the responsible bodies from the Woreda Road Office told me that my farming land was selected since it was strategically placed for the accomplishment of the project.

URRAP road construction is inherently labor intensive. In principle, local communities are expected to be employed as job opportunities arise, along with the construction of the rural roads. However, the level of employment of local people on the projects has reportedly been very low. Where limited opportunities arise, it was seldom the poorest who were explicitly selected for the work. Women were often excluded, even though female single-headed households were among the most vulnerable in each of the study locations. One interviewee from the Gomma district (surveyor, male, 29 years old) also claimed that "contractors arrive with employees from unknown areas, which in turn means that local people are not getting the expected job opportunities. For me this was hidden root

corruption." Respondents of the study area believe that ethnicity, language, and place of origin are the likely criteria for recruitment.

As one in-depth interview participant from Gomma (male, 36 years old) said, "because we speak Afaan Oromo, we are being denied jobs. They use Amharic language as a hidden criteria. Even if they want to give us the job, they select only low status jobs for us." As known, almost all of the people who live in the rural study areas use the Afaan Oromo language. They cannot speak or are not fluent in Amharic. Thus, by default, the people from the rural study areas are not being granted the job opportunities that the program implicitly indicated.

Crime (theft, robbery, burglary, poaching, and scrumping)

Rural areas have plentiful resources, from wild animals to fruits, coffee, honey, livestock, natural forests, and water etc. The predominant source of income for the majority of households (69.8% of household survey) is agriculture, while 15.4% mix agriculture with other income sources. In other words, agricultural activities are of invaluable significance to rural households. However, during the road construction or its subsequent utilization, there are cases whereby these resources have been illegally taken by external[4] people. The majority of the household survey respondents (67%) suspect that external people are involved in one or more of the aforementioned criminal activities, either implicitly or explicitly. One discussant from the Gera district FGD[5] (female, 43 years old) claims that "contractors and workers who came from another areas were scrumping our fruit (banana, avocado, mango and others), and taking coffee during the night or on market days."

This implies that external involvement in these criminal activities can be determined by season, time/days, and networks. The rainy season, during the night, and on market days and Fridays[6] are the conditions/contexts during which the resources mentioned are being thieved, burgled, poached, and scrumped. There are also organized criminal elements involved in these activities, even involving some local people, with hidden, organized and strong networks with external immigrants. They have been playing their roles as follows:

- Identifying potential resources[7] to be thieved, burglarized, poached, and scrumped;
- Arranging the conditions to steal, burgle, poach, and scrump identified resources;
- Stealing and burglarizing (forest products like timber, wood); poaching (animals like sheep, goat, and sometimes ox); scrumping (fruits like coffee, avocado, banana, mango from trees or farms);
- Organizing the time/days to transfer stolen, burgled, poached, and scrumped resources to accomplices external to the area;
- Attempting to hide their involvement by being part of the community and showing themselves as victims.

[4] Immigrants, particularly from towns, including contractors, consultants, road construction employees (labor force), drivers and assistants, researchers, supervisors, and traders.
[5] FGD held in Gera district with nine individuals (Male = 6, Female = 3, Average age = 39.6 years).
[6] Majority of residents (66.4% of Household survey respondents) are Muslim and attend Friday prayers at mosques.
[7] Animals (domestic and wild), fruit (avocado, banana, mango), coffee, honey, natural forests, water, and another species found predominantly in rural areas.

Accordingly, one interviewee from the Gera district (male, 61 years old) stated that;

We heard that there are some individuals who; kill and take dogs intentionally so as to sell them to the Chinese; kill and take livestock of rural people intentionally so as to make a small amount of money; and scrump fruit from rural households unlimitedly and conceitedly.

Yet again, from the discussion of the FGD participants[8] the landscape (forests, hills, and mountains), the settlement structure of the rural people (scattered), and lack of access to infrastructure (ICTs and electricity mostly) create favorable conditions for such criminal enterprise.

Education

It can be openly observed from the media and heard from various sources, either formally or informally, that the quality of education in Ethiopia is declining. For example, at the 7th Annual International Conference on Status and Prospects of Education for Advancing Sustainable Development in Ethiopia, a reporter from ENN TV stated that the conference agreed that the quality of education in Ethiopia is declining over time (ENN TV, April 28, 2017). There are varied and interplaying factors attributable to the severity of this issue. From the in-depth interview with a leader from the road authority (male, 32 years old) and a surveyor (male, 24 years old) who were both from the Gera district, the expansion of different projects and investments, and the low applicability of certain government policies[9] are among the factors associated with the road and contributing factors to the declining quality of education in Ethiopia, both in general and in the study area in particular.

Rural inhabitants rely predominantly upon agriculture for their livelihood. New projects appearing in their local area opens up opportunities for diversification. Consequently, local children and students are highly likely to gain employment opportunities on road construction and maintenance projects. After having started to receive a wage, they would likely have left school and not returned to their education. Their willingness and motivation to attend education decreases as a result. The majority of respondents (76%) stated that their children prefer getting a job than attending school. One interviewee from the Gera district (male, 34 years old) claimed that;

Our children have been getting various construction skills. As a result, their mobility is increasing but, adversely, their willingness for education is decreasing. Our advice and recommendation for them to learn falls on deaf ears because they have been receiving more money than what we had been able to give them before.

URRAP Road and Indigenous Cultural Elements

Data from respondents indicate that the road constructed by URRAP has been predisposing local communities' cultural elements, both material and non-material, to acts of suspicion. Local communities' material cultures are those practically and principally accustomed among local communities, and perhaps by others for prevalent and sacred activities/occasions as well as eating, drinking, transportation, farming, trees (ex "Odaa" among Oromo), things to be worn, marriage, death, funerals, and local communities'

[8] FGD held in Gera district with nine individuals (Male = 6, Female = 3, Average age = 39.6 years).

[9] Specific policies: National Child Labor Policy, FDRE (Federal Democratic Republic of Ethiopia) Health Policy, National Environmental Policy, and Ethiopian Education and Training Policy.

economic and social organizations etc. These materials have special connotations, beliefs, and values among the local communities. Accordingly, all of the study's respondents believe that road construction is among the factors responsible for the degradation of local cultural elements in labeling them as traditional methods.

The respondents resoundingly stated that access to the new rural road is expediting the decline of cultural elements, although the road's construction is not the sole factor in play. An expert from the Culture and Tourism office in the Gomma district (male, 41 years old) stated that, "along with the development of the road, people are forgetting their indigenous material culture from time to time." The younger generation is extensively unable to even recall the names of these material cultures. Participants of the FGD[10] held in the Gera district (male, 65 years) old stated that;

We have abandoned riding mules and horseback and have taken up vehicles instead. As a result we are not using materials for riding mules and horses such as saddlery with all their decorative elements (bit/snaffle [lugaama], bridle [fuuloo], girth [qomee], pommel [dursaa], stirrup [faanoo], gilaasii, halangaa, haada, huddeellaa) during transportation and also for marriages. The loss of these beautiful materials and their customary names would be damaging for today's generation. In other words, they are forgetting and moving away from the connotations, beliefs, and values associated with these cultural components.

Another participant from the same FGD in the Gera district (male, 35 years old) added that;

Access to the rural road facilitates the adoption of advanced technologies for farming. As a result, we are expunging the local farming materials (so called traditional agricultural methods) which we had been using for a long period of time. Again, all of those materials have indispensable connotations, beliefs, and values among the locals. It is perhaps ambitious to try and integrate such connotations, beliefs, and values with these advanced farming technologies.

Both participants from the Gera district FGD state that local cultural materials are being inextricably interplayed with non-material cultural elements. In other words, material cultural elements have countless essential connotations, beliefs, and values. For example, *halangee* is commonly known and used among many Ethiopian people for the riding of horses and mules. Most of the time the *halangee* is made from the dark skin of the hippopotamus and sometimes from the skin of other animals like cattle or buffalo.

Figure 4. Photograph depicting a *Halangee*

Additionally, data from the respondents' open-ended questions describe the *halangee* as having a myriad of meanings, values, and implications, of which some are:

- To ask God (*waaqaa*) for help from hardship like drought, heavy rains, war, and disease;
- To lead people (it is a sign of leadership; for example the *Abbaa Gadaa* holds it during and after inauguration);

[10] FGD held in Gera district with nine individuals (Male = 6, Female = 3, Average age = 39.6 years).

- To give suggestions, finish discussions, and pass decisions (Oromo people use it slightly to hit the earth while they discuss, describe, analyze and pass decisions in their *Yaa'aa,* which literally means assembly);
- To socialize children (it is believed that the *halangee* is straight and children are also expected to be like it);
- To resolve conflicts (it is considered as a sign of peace and stability, and thus the Oromo people use it while dealing with all types of conflicts, crimes, and other social problems);
- To formulate family (on the occasion of marriage, the groom holds the *halangee* in his hand with the implication that he is ready to marry and be head of his household). For this reason the *halangee* is used only by males and not females in Oromo culture.

The Oromo people associate these values with the *halangee* because it is expected during all these and other social activities. But today, people are not expected to hold the *halangee* whilst driving their car. Thus, all of the above mentioned values, meanings, and implications are in question.

The respondents also believed that the rural road is playing a role in devastating or mixing local languages with other languages. People who come from other areas to work bring with them different cultural elements, including other languages. While they stay locally for work, they build camps in which they stay for a long period of time. As human beings they need various things, and in order to get them they interact with the local communities who have a different way of life from them. There is interaction in everyday life using language. Gradually, local people start to replace elements of their culture with new alternatives. For example, one respondent from Gera (female, 38 years old) stated that;

I think the rural road is a method of mixing languages. For example, we have started to use some Amharic words intermixed with our Afaan Oromo language. For example, 'woraaji Alle, hisab husad, raddat, shufeer' are being introduced into Afaan Oromo. Overall there are also terms used for human beings which are derived from the body parts of a car. For example, 'Gabinaash yamiral' (you have a beautiful face), 'spondash migarmi naw' (you have an amazing ass), 'firechash gaday naw' (your eyes are a killer), and so on. All these and others have been passed on to the rural people through the existence of the road.

A surveyor from the Gomma district (male, 29 years old) claimed that;

During the road construction, contractors were not locally-based. They brought their way of life with them which is different from that of the local communities. A large number of employees also came with the contractors. They stay in the communities up until the end of the project which impacts on the local communities' culture.

People in the study area also believe that the URRAP road has impacted on social norms such as to respect Waaqaa (God), Abbaa (father), Haadhaa (mother), Lafaa (earth), and other creations. All these are being depreciated mostly by the road construction. The actions and words of the majority of stakeholders in the road construction run against the moral norms of local cultural society. One of the participants of the FGD[11] from the Gera district (female, 35 years old) argued that;

[11] FGD held in Gera district with nine individuals (Male = 6, Female = 3, Average age = 39.6 years).

Even though we are getting a lot of advantages from the road, we are also losing some cultural elements for which our grandfathers and grandmothers sacrificed themselves. There were many sacred elements among our people. For example, God is sacred (waaqni wayyu), earth is sacred (lafti woyyu), father is sacred (abbaan woyyu), mother is sacred (Haati woyyu), horses for riding are sacred (far-sangaan woyyu), cows are sacred (dhaltiin woyyu), childbearing women are sacred (deessuun woyyu); but today, all of these are losing their importance and a counterculture is developing. For example, 'inatihin l**da' and other abusive words can be heard.

URRAP Road in Improving Social Network

As distances are shortened, visits between family members become more frequent. One interviewee from Gera district (male, 51 years old) claimed that, "Our pace of life has been suddenly changing, people are earning more and travel is less time-consuming. Even our sons, are working in other towns, but have been visiting us for festivals since the utilization of the rural road started." This implies that the URRAP road has enabled rural inhabitants to visit their relatives in other villages more frequently than prior to having road access.

Again they believe that rural roads help them to expand the networks to far flung villages and districts. Discussants from the FGD of Gera district assume that rural roads have meant better marriage offers for their sons and daughters from distant areas. A participant of the in-depth interviews in the Gomma district (female, 46 years old) argued that, "few people are willing to give their daughter away in marriage to a village where access is difficult and time-consuming. All marriage ceremonies are now expected to be held close to the route of the road." As the discussion of discussants of FGD in Gomma district[12] implies; accessibility to the road is helping to motivate and increase the number of participants in ceremonies for marriages, deaths, social support, births, and other festival ceremonies since all relatives on both sides are expected to attend easily. It is also giving opportunities and removing challenges for the elderly, and for children and the disabled (with either temporary or permanent disabilities) to participate in these ceremonies.

URRAP Road in Improving Other Social Services

Other social services or public infrastructures have been constructed along with an enlargement of the rural road. With roads connecting villages to the nearest town, multiple choices for education and health centers are being opened up for the villagers. Thus, from the respondents discussion, it is possible to say that rural roads decrease gender and age-based bias and segregation on receiving social services such as education and health. For example, access to the rural road motivates rural households to send their children (and significantly, girls) of the appropriate age for education since it "reduces time and cost" (Arethun & Bhatta 2012, p. 166). The Road Authority leader of the Gomma district argued that, "the rural road by URRAP has been helping the government to expand schools, health centers, and other public infrastructures."

In one way or another, primary health posts at kebeles have been providing services to the rural people. The road has joined neighboring villages and as a result, more expectant mothers attend antenatal checkups. The respondents were also pleased that women are able to come to the health posts and health centers for delivery of their children.

[12] FGD held in Gomma district with nine individuals (Males = 6, Females = 3, Average age = 39.1 years).

Complicated cases can now be referred quickly to the community health center or to the district hospital. Some respondents argued that with better connectivity, health posts and health centers are no longer facing shortages of Polio vaccines. Children are being immunized at regular intervals. The roads have also helped with improved follow-up of Tuberculosis (TB) patients. Cases of road traffic or farming accidents are also being attended to at the health posts. Consistently, the Ethiopian Roads Authority (2012, pp. 2-3) has also argued that access to rural roads "improves the quality of rural people's health status." Also, the study of Norman (2013) indicated that augmented mobility can improve the accessibility and quality of health and education services, particularly in rural or isolated areas.

URRAP Road in Diversifying Livelihood Strategies

Rural inhabitants have been diversifying their livelihood strategies, and the rural road is highly considered as an initiator to this change. It is also interplayed with the skills which householders gain from temporary employment opportunities during the road construction and its ongoing maintenance. As a result, the respondents feel that the skills they have been developing along with the road construction and maintenance have been helping them, and will continue to serve them in the future to diversify their livelihood strategies. The chi-square test shows that there was a significant and positive association found between URRAP road-associated employment opportunities and livelihood diversification strategies ($\chi2(3) = 42.684$, $p = .000$, $\alpha = .05$). The phi coefficient reported that there is a moderate association between the variables with a $\Phi = .378$ value. In the words of one interviewee from the Gera district (male, 32 years old), "although employment on road reconstruction is temporary, the short-term injection of cash can often provide the necessary start-up capital for us to diversify our livelihoods." Similarly, Asher and Novosad (2017, p. 3) argued that "rural roads lead to large movements of workers out of agriculture; a new road causes a 10% decrease in the share of workers in agriculture and an equivalent increase in waged labor."

Generally speaking, the majority of respondents believe that being the road constructed under URRAP provides employment opportunities (76.4%), supports participation in various communal ceremonies (51%) and the practicing of religious activities (40.2%), the expanding of health centers (87.3%), and increased schooling (89.8%).

Finally, the URRAP road has been making it easier for tourists to reach the cultural and historical monuments and sites positioned close to the road. An expert from the Cultural and Tourism Office from Gera district (male, 38 years old) said that the "rural road constructed by URRAP has been helping the government to identify potential tourism sites, encouraging and motivating tourists either locally or from abroad to observe our indigenous cultural elements in the rural areas."

Conclusion

The URRAP road has been constructed from 2012 in different parts of Ethiopia. Its players are both government and the Ethiopian people. The eagerness and enthusiasm of the people to realize the road is more significant than the government's undertaking. However, the URRAP road construction has been linked to various problems in social and cultural elements of the rural inhabitants. Social problems categorized as family problems, health problems, education problems, and crime have been spreading in rural areas since access has been given to the URRAP road. Waterborne diseases, sexually transmitted diseases, traffic accidents and health problems related to alcohol consumption are being

extensively observed along with the URRAP road. With regards to education, since the URRAP road has increased job opportunities, willingness of the local youth to learn is reducing drastically. Finally, the problems which had been predominantly linked to urbanized areas are now entering rural life along with the URRAP road. This implies that there are significant conflicts of interest associated with the road construction which may eventually lead to family disorganization and increased risk of societal degradation.

The URRAP road has played a role in devastating the rural way of life by instigating to change or replace it with the culture of others. Rural people have their own material and non-material cultural elements that they had been using for a long period of a time; however, that is now at risk due to so-called modernization. Nowadays, they have been following the roots of modernization which is implicitly making them set aside their cultural norms, languages, values, morals, and numerous material cultures; replacing them with imported so-called modernized ways of life from external areas. For example, they are being obliged to wear trousers that are designed for the culture of other areas. People are mixing or forgetting their languages in the utilization of public infrastructures in general and the rural road in particular. However, if well-managed, carefully designed, supervised, customized and internalized; the rural road can play a vital role in the socioeconomic development of rural Ethiopia. The road can create job opportunities, increase sociocultural participation, encourage social networks (interaction), increase tourism and its associated benefits, and assist in the expansion of other social services and access to them by the rural people.

Recommendations

Governmental Bodies

Government bodies should propagate what is documented in policy into practice. In other words, implement criteria for road route selection based on sociocultural impact analysis. In light with this, government bodies should encourage the continual monitoring and evaluation of infrastructural projects such as road construction at all levels.

Government bodies should customize imported modernization elements according to local inhabitants' ways of life. Material and non-material cultural elements should be addressed and incorporated within the given services. This may be achievable by empowering rural people to take advantage of the available job opportunities and to engage in alternative economic activities.

Policymakers

Policymakers should design inclusive policies that adequately address issues related to gender, age, living areas, local culture, family organization, education, health, and social and economic stability. This might be achievable by associating road-related policies with other social policies such as education and training, health, environmental, and social protection. Policymakers should also cooperatively work with researchers from varied disciplines from the natural sciences and social sciences.

Acknowledgements

The researchers would like to predominantly express their gratitude to Jimma University for its financial support in conducting the fieldwork of this study. The researchers are grateful for the time and information shared by the respondents from the respective offices,

and accordingly owe special respect to Jimma and Bunno Bedelle offices of transportation. The researchers thank them for opening their doors and enabling access to all the relevant data, archives and documents required for the study. Special gratitude is given to the respondents of the household survey, and to the key informants and all the interviewees. Finally, the researchers would like to thank all their friends who made suggestions and comments towards the successful accomplishment of this study.

Notes

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