

Final findings

Feeder road development

The research project 'Feeder road development for inclusive productive employment' investigates specific ways in which road development in Ethiopia promotes productive employment through: (i) direct employment in infrastructure construction, (ii) the generation of or changes to employment due to improved mobility and access, and (iii) changes to employment due to different water resource management options linked to the design of roads. The following are the final findings and policy messages.

Final findings

- Rural roads are built to improve people's mobility and to enhance access to markets, administrative centres, schools and health posts, and are credited with important socio-economic changes. In the long-term, rural road developments are expected to lead to improvements in agricultural productivity due to better access to food, labour and inputs. While both surplus food producing households and agricultural labour households benefit, questions remain about the possible widening of inequalities between these two groups. The gaps could become wider considering differences in existing capabilities between households. For example, surplus crop producers will have an advantage when it comes to transporting bulk food to urban markets. Cash poor female-headed households will suffer more as food is more easily exported out of their locality: they will have to walk long distances to purchase food. Households therefore enjoy different gains from new feeder roads, and this could very well increase, rather than decrease existing inequalities.
- Another observed indirect benefits is the establishment of small roadside businesses. These play an important role in promoting the local economies and creating off-farm employment opportunities. The ability of these enterprises to realize their full potential depends largely on the availability and provision of appropriate and cost-effective business development support services. More than 93% of the respondents believe that construction of feeder road in their village has opened new opportunities that were not commonly available before. However, more than 63% of the respondents believe that the rural communities could not fully seize these opportunities due to entrepreneurial and financial limitations, as well as a lack of affordable and accessible transportation facilities.
- Beyond these potential long-term benefits, feeder road developments increase direct employment opportunities for people close to and outside the project areas. Workers (both skilled and unskilled) in the study areas were engaged in feeder road construction and maintenance primarily as daily labourers. The majority (>60%) of the skilled and unskilled workers who engaged as daily labourers were satisfied with the wage rate, working conditions and the timing schedule with their other domestic works. However, the research findings also revealed the existence of spatial and temporal variability in daily wage rate mainly in roads constructed by private contractors. The wage variability was also a function of gender. In Raya-Azebo district, for example, women workers daily wage rate ranged between 28 and 35 ETB while that for men the daily wage rate was between 35 and 45 ETB. The wage rate difference emanates due to the presence of pre-existing poor attitudes of the contractors on female engagement in labour intensive works.
- Roads also have a major influence on surface water hydrology in the areas where they are built leading to a change in run-off patterns. At present this creates considerable problems: erosion, local flooding, sedimentation and water logging along road bodies and downstream areas. These impacts can, however, be turned around with roads acting as instruments of good water management, leading to resilience in existing and future road structures. With relatively small additional investments (<8% on gravel roads, less

than 2% on highways) roads can help not only to harvest water, but also improve climate and flood resilience by better managing high runoffs too and contribute to lower maintenance costs of roads. Where implemented, road water harvesting activities have led to increases in family incomes of around 20-30% through increased water availability and soil moisture. Where road water management has shown its benefits, 80% of farmers say they would financially contribute to future road water management schemes.

Policy messages

- Roads change runoff patterns of landscapes often leading to concentrated flow of water which causes negative impacts. Through proper management, negative impacts can be turned into positive impacts through various water harvesting options.
- Feeder roads have contributed to the expansion of non-farm businesses in the rural areas of Northern Ethiopia and created business opportunities. However, transportation related problems remain a major constraint to rural business growth and operation following lack of access to finance.
- The construction and maintenance of roads play a significant role in creating employment opportunities and generating substantial wage income to people (both women and men) around and outside the project areas. However, the wage rates were clearly a function of time, space and gender.
- To ensure that the roads do not disproportionately benefit the better-off, additional actions must be taken for the benefit of the most vulnerable groups by either reducing their spending, increasing their income, or better yet increasing their opportunities for building up an asset base.
- More synergies are needed between land, water and the road infrastructure; cooperation between agriculture, roads, and water authorities should take place. These is more easily done around feeder roads, because they tend to be physically less disruptive and their impacts are easier to adapt to.
- Conventional motorized vehicles are not suitable to rural conditions. Intermediate means of transport and transport services are of equal importance to the road infrastructure they require.
- There is a compelling need to explore a wider range of options of rural transport means that are affordable and reliable, and designed to accommodate diverse needs of men, women, elderly, disabled, and the youth.
- Covering all rural roads in sub-Saharan Africa with evergreen multipurpose trees will generate employment, protect crops and roadside communities and provide socio-economic benefits
- Road development can enable small-scale mining activities for construction material. Through proper planning and support, it can provide youth employment opportunities.

Knowledge products

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Contact

Dr Maggi W.H. Leung, research project leader, w.h.m.leung@uu.nl

Dr Ir Crelis Rammelt, postdoctoral researcher, c.f.rammelt@uu.nl

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