

IDINSIGHT – MUMBWA KEY FINDINGS

With sustained use, bicycles accelerate economic gains through resilience and growth

Year Two Findings Mumbwa, Zambia

NOVEMBER, 2025

IDinsight

WORLD BICYCLE RELIEF®

BACKGROUND AND OVERVIEW

In 2024, when Zambia experienced the worst drought in 40 years, IDinsight, in partnership with World Bicycle Relief, was in the midst of conducting a randomized controlled trial on the impact of bicycle mobility. Between May 2023 and June 2024, this groundbreaking study, involving 1,488 participants from 19 rural communities in Mumbwa, rigorously evaluated how access to bicycles can improve livelihoods.

In Year 1 of the study, households used their bicycles an average of 223 days of the year and close to 20 km a day. They increased access to healthcare, increased capacity to carry water and access energy, and decreased time spent, creating valuable time for productive activities. Households with bicycles maintained their standard of living and adapted to the drought by making more trips to the market and engaging in trade. This resulted in higher monthly income, consumption, better food security and a higher-quality diet, in comparison to households without bicycles that saw reduced consumption and who spent more time traveling and struggled to rebuild to their baseline.

Now, second-year findings reveal how sustained bicycle use not only creates immediate gains but also strengthens economic returns, resilience and well-being over time. The Year 2 study reached 1,360 livelihood groups and community health volunteers. Impacts on consumption, assets, savings, income and business revenue were sustained and expanded. Locus of control and self-esteem also contributed to personal agency. Women participating in livelihood groups experienced similar benefits.

STUDY DESIGN + APPROACH

PARTICIPANTS

1,227 livelihoods group members and 261 community service workers across 19 communities. Nearly 70% of participants were women.

TREATMENT

Participants were provided with bicycles, while the control group continued without. Program participants in the control group will be provided with bicycles after the completion of the study.

STUDY FINDINGS

The Endline 2 study of the Mobilized Communities (MC) program in Zambia produced a social return on investment (SROI) of 14.7x over a five-year period.



KEY FINDINGS



BICYCLE USAGE

Among households with bicycles, **usage remained high in year two at 91%,** being used daily or several times a week, and **85% reported sharing their bicycles**. The bicycles were primarily used to access markets.



HEALTHCARE ACCESS

Community service workers with bicycles transported an **average of 24 more patients per year** than those without bicycles.



FOOD CONSUMPTION

Livelihood households with bicycles had **29% higher monthly consumption,** or $47 USD per month, a **$14 increase from year one.** They also had higher dietary diversity, with greater consumption of protein-rich foods and fewer events of food insecurity.



ENVIRONMENTAL IMPACT

Households with bicycles showed a **30% decrease in reliance on motorized transport** compared to the control group.



ECONOMIC BOOST:

For livelihood group members with bicycles, average monthly income increased to $29, a **36%increase over the control group**. Women experienced a **54% increase in average monthly income** and had **70% higher monthly savings** than those without bicycles. Livelihood group members with bicycles saw **$10 more in business revenue, 28% higher** than those without bicycles. Women generated **55% or $15 more business revenue per month.**



SOCIAL EMPOWERMENT

In year two, there was a **large and statistically significant increase in life satisfaction and locus of control.** Women spent less time traveling and experienced growth in productivity, welfare, well-being and empowerment from year one to year two.



TIME SAVINGS

Households with bicycles engaged in **approximately 1 hour more per day** of productive work.

CONCLUSION

From immediate relief to sustained progress, bicycles are helping communities reshape their trajectories in Zambia. They are tools of resilience, engines of economic growth, and vehicles for empowerment, particularly for women.

As this second phase of research confirms, mobility is not just a means to an end. It is the foundation for prosperity, dignity and independence.

World Bicycle Relief and IDinsight remain committed to expanding this evidence base, ensuring that the Power of Bicycles reaches even more communities across Africa and beyond.

WORLD BICYCLE RELIEF®

To read the full IDinsight – Mumbwa Key Findings Report, visit:
worldbicyclerelief.org/idinsight