

# BICYCLES: A TOP DEVELOPMENT INVESTMENT

RCT & Cost Effective Analysis | May 2023 - May 2025



## INTRODUCTION

Building on two landmark randomized controlled trials (RCTs) conducted by IDinsight in partnership with World Bicycle Relief in Zambia, a new analysis finds that bicycles deliver a **14.7-to-1 return on investment**, placing them among the most impactful development interventions.

In Zambia, where 60% of the population lives in rural areas with limited access to reliable transportation, bicycles unlock opportunity at a fraction of the cost of traditional infrastructure. Evidence, taken during Zambia's worst drought in 40 years, shows bicycles boost household income, keep girls in school, expand healthcare reach, and strengthen resilience against climate shocks.

## KEY FINDINGS



### ECONOMIC OPPORTUNITY

Households receiving bicycles generated an **average of \$3,188 in economic benefits** over five years.



### EDUCATIONAL BENEFITS

Providing bicycles to girls in primary schools, grades 5, 6, and 7, **increases school attendance by 17 days each year**, per \$100 invested.



### HEALTHCARE REACH

Community health workers can serve **2,811 additional clients over 5 years** per bicycle distributed, or **1,297 additional clients per \$100 invested** in the program.



## CASE STUDY

In Chipa Village, Mumbwa District, Headwoman Beatrice used to spend about **\$6 each week on transport to cover the 20 kms** required to attend meetings. With her new bicycle, those journeys cost nothing—and the savings fueled growth in her small grocery store and tomato garden. In just one year, her household income **doubled from \$175 to \$350 per month**, by using the bicycle to transport fresh produce to market and restock her shop. Beyond her own success, family and neighbors borrow it to reach the health center, extending the impact far beyond one household.



## STUDY DESIGN AND APPROACH



### PARTICIPANTS

1093 livelihoods group members and 233 community service workers across 19 communities. Nearly 70% of participants were women.



### TREATMENT

Roughly half of 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.



### TIMELINE

The RCT evaluation took place between May 2023 and June 2024, showing measurable improvements in economic activity, social mobility, and access to essential services for bicycle recipients. The cost-effectiveness analysis took place during followup from May 2024 to May 2025.