Learning by Doing? Evidence from a Randomized Impact Evaluation of Business Games in Zambia

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Key Messages

- Short, experience-based training programs such as the Business Games can effectively change business practices including record keeping, paying oneself a salary, and financial behavior.
- The Business Games induce a shift towards saving groups, increasing participation in savings by 13.7 percentage points and taking out a loan by 9.8 percentage points. Without training, roughly one in three individuals keep track of their sales; training raises this to more than one in two.
- These behavioral changes may have the potential to translate into higher incomes and more employment over the longer term, although income and employment effects are not detectable one year after the training.
- Short-term gains in knowledge did not persist over time and fundamental knowledge gaps can likely only be closed in combination with more intensive or complementary measures.
- Experience-based short formats can be a cost-effective instrument for changing behavior, but realistic expectations are essential.

Background

In developing countries, the majority of the population depends on employment in small businesses and smallholder agriculture, yet incomes from these activities are often unstable and insufficient. At the same time, many farmers and small business owners lack the practical knowledge and skills to manage their business, with around two-thirds of the self-employed in Africa classified as undereducated for their occupation (African Union Commission and OECD, 2024).

Skills and business training programs are widely implemented to close these knowledge gaps, but the evidence on their effectiveness remains limited and mixed. Rigorous impact evaluations conducted in Sub-Saharan Africa are concentrated in a handful of countries (Beber et al., 2024) and measured effects vary substantially across contexts and programs (Kluve et al., 2019, 2017). Although more intensive interventions tend to produce more sustained impacts (Beber et al., 2024), short training formats continue to be implemented at scale, because they are inexpensive, reach large numbers of beneficiaries, and impose low opportunity costs on participants. This makes the question of what such short formats can realistically deliver and where their limits lie directly relevant for policy.

Intervention and Study Design

The Business Games (BG) are simulation-based learning formats focusing on business and financial knowledge developed by the German Sparkassenstiftung for International Cooperation (DSIK) in collaboration with BTS, a global expert company in simulation-based learning, and are implemented with different target groups around the world. This brief draws on the rigorous impact evaluation analyzing the effects of the Farmer Business Game (FBG) and the Micro Business Game (MBG) in Zambia. Both follow an experience-based learning approach in which participants learn by doing rather than through classroom instruction. The training programs have a duration of three days and consist of so-called Know-How Sessions, where participants learn key financial and management education concepts, and multiple simulation rounds. During the simulation rounds, the participants work in teams to manage a (farm or non-farm) business and compete with the other teams. At the end of each round, the participants receive feedback and discuss the outcome of the round based on their management decision.

The evaluation uses a randomized controlled trial comparing respondents who are offered participation in the program on a random basis and respondents who are not offered program participation. Individuals are interviewed before the training and one year after the training. A brief knowledge test on financial literacy was also administered to both the treatment and control groups after respondents in the treatment group had completed the training.

Results

The training programs significantly impacted participants' financial behavior and business practices, but these changes had not translated into detectable gains in income or employment one year after the training.

Measurable changes in business practices

One year after the training, individuals offered the program use certain business and financial practices more consistently than the control group. Slightly more treated individuals save, mainly due to more participation in savings groups, with a smaller increase in bank-based saving. The share of individuals saving in a savings group rises from just over half to about two-thirds. This is mirrored on the financial-access side: treated individuals are more likely to own a bank account and to hold a semi-formal loan. The intervention seems to shift borrowing towards Savings and Credit Cooperatives (SACCOs) and village banks rather than to formal institutions such as banks, microfinance institutions or government schemes. Roughly one out of three treated individuals take out a loan from a savings group compared to fewer than one out of four in the control group.

The training also changes how participants approach borrowing. Those offered the program make more informed credit decisions: they are aware of more loan options, more likely to compare options against one another, and more optimistic about their prospects with alternative lenders, while also holding more realistic expectations about approval with treated individuals being more likely to expect a given application to be rejected. The largest effects are on core management practices: paying oneself a salary, keeping records of sales and expenses, and producing sales estimates. The intervention increases the share of respondents who keep records of their sales from 37% to 59% and the share of respondents who pay themselves a salary from 23% to 49%. Finally, the training extends into production and investment: treated individuals practice crop rotation more often and report higher levels of agricultural assets and greater levels of investment in their enterprises.

Limitations

These gains come with important caveats. First, the gains in knowledge measured shortly after the training do not persist in the medium to longer run. This fade-out is consistent with the broader literature on short training formats and indicates that a single, brief intervention is not enough to durably close fundamental knowledge gaps. Second, the evaluation finds no measurable effects on income, revenue, and employment one year after the training. The behavioral changes documented above are plausible channels through which incomes and jobs could eventually improve, but effects have either not yet materialized or are too small to detect within the one-year window.

Conclusions and Recommendations

The evaluation shows that the Business Games are an effective, low-cost instrument for changing how farmers and micro-entrepreneurs manage money and their enterprises. The training strengthens saving practices, expands access to semi-formal credit, improves the quality of borrowing decisions, and raises the use of core management practices such as record-keeping. These are meaningful shifts in a population where most depend on small businesses and smallholder agriculture and where practical financial and managerial knowledge is often scarce. At the same time, these behavioral changes have not yet translated into measurable gains in income or employment one year after the training. Taken together, the results show that the Business Games can reliably change what participants do, while leaving open the question of how long it takes – and what complementary support is required – for those behavioral changes to show up in incomes and employment.

Several implications follow. Expectations should be realistic: short, experience-based training programs are well suited to shift specific practices, but they are not a substitute for more intensive training or accompanying measures. Where the goal is precisely to change specific routines or practices such as saving, record-keeping, access to finance, or informed borrowing, short trainings like the Business Games are a cost-effective behavioral instrument that offers good value for money. To close fundamental knowledge gaps and reach economic outcomes such as income and employment, short formats likely need to be paired with more intensive or complementary interventions.

About the Study

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Bibliography

African Union Commission, OECD, 2024. Africa's Development Dynamics 2024: Skills, Jobs and Productivity, Africa's Development Dynamics. OECD. https://doi.org/10.1787/df06c7a4-en

Beber, B., Lakemann, T., Schnars, R., Lay, J., 2024. Employment Effects of Skills Trainings in Sub-Saharan Africa: A Systematic Review of Recent Randomized Controlled Trials. De Economist. https://doi.org/https://doi.org/10.1007/s10645-024-09442-6

Kluve, J., Puerto, S., Robalino, D., Romero, J.M., Rother, F., Stöterau, J., Weidenkaff, F., Witte, M., 2019. Do Youth Employment Programs Improve Labor Market Outcomes? A Quantitative Review. World Development 114, 237–253. https://doi.org/10.1016/j.worlddev.2018.10.004

Kluve, J., Puerto, S., Robalino, D., Romero, J.M., Rother, F., Stöterau, J., Weidenkaff, F., Witte, M., 2017. Interventions to Improve the Labour Market Outcomes of Youth: A Systematic Review of Training, Entrepreneurship Promotion, Employment Services and Subsidized Employment Interventions. Campbell Systematic Reviews 13, 1–288. https://doi.org/10.4073/csr.2017.12