
Source: IRC Airbel Impact Lab Blog on BILLY

# LIVELIHOODS COST EFFECTIVENESS BRIEF - Building Income and Leveraging Livelihoods for Youth (BILLY)

**Kenya | 2021**

## Executive Summary

The International Rescue Committee (IRC) implemented BILLY in Nairobi, Kenya from 2019-2021. BILLY was a micro-entrepreneurship program which provided business grants and services intended to increase employment status, consumption levels, and business investments. The program focused on youth in Nairobi, particularly refugees and vulnerable populations. As part of a research study, three treatment models of BILLY were implemented, which included various combinations of direct program services, business grants, and compensatory cash grants.

**BILLY costs varied $1,780 - $2,754 per youth across the three treatment arms, depending on the types of services provided within each.** A significant portion of the costs went to national staff, program supplies and materials, which include business grants. However, the cost of program service delivery was high even without the inclusion of the cost of grants.

**Teams considering implementing BILLY should consider limiting services such as savings groups and mentorship in addition to business grants and skills training, as these services raise the cost per client significantly without evidence of impact.** Resources used for personnel facilitating skills training, savings groups, and mentorship drove up the cost per client for treatment arms which received these services.

## Project Design

The movement of people and resettlement of refugees in new contexts can put pressure on both refugees themselves, as well as host communities. Refugees experience issues seeking wage employment and integration into host communities, while social systems and markets can experience pressure in host communities from the influx of refugees or internally displaced persons (IDPs). The issues experienced by refugees or IDPs include limited work opportunities due to citizenship, missing papers, or education attainment. Vulnerable groups such as refugees and women are at greatest risk in their search for employment and sustenance.

In response to these issues, the International Rescue Committee (IRC) implemented a microenterprise program which aimed at improving employment and integration opportunities for these vulnerable groups. The Building Income and Leveraging Livelihoods for Youth (BILLY) program aimed to increase employment rates and incomes of young urban refugees and vulnerable groups in Nairobi, Kenya, through a multi-phase program implemented between 2019-2021.[iii]

Governments around the world are increasing investments into skills training programs to improve employability among vulnerable groups. However, there is mixed evidence on the effectiveness of these programs. The research on BILLY sought to produce empirical evidence of the impact and cost-effectiveness of skills training programs, compared to cash-distribution practices, only.[iv]

### Box 1. Building Income and Leveraging Livelihoods for Youth (BILLY)[i]

*Program services delivered:*

- **Learn to Earn (L2E)** business skills trainings were comprised of 5-day curriculum trainings on business skills such as developing a business and finance strategies, budgeting, and business communication. Clients were also eligible to receive transport stipends at the end of each training day.

- **Savings Groups** took place in the form of Urban Savings and Loans Associations (USLAs). USLAs were launched after L2E trainings were complete and were open to non-BILLY clients, however most participants were a part of the BILLY program.

- **Mentoring and Coaching** was provided to clients after taking part in the L2E business training sessions. Clients were provided additional feedback through coaching and mentorship on their business plan and budget prior to submission to the award committees who would approve the business grants. Mentoring sessions were also provided to these clients after the skills training course to provide guidance on improving their business plans.

- **Business Grant** were distributed to all three groups. Clients were required to produce a business proposal (including a business plan and budget) within a few weeks of their enrollment to receive the business grant. At this time, **award committees** reviewed the proposals to determine the final amount of the business grant to be distributed, which was determined by the type of business proposed. Grant amounts ranged from 20,000-60,000 KES (approximately 150-450 USD) for clients with existing businesses, and between 20,000-50,000 KES (approximately 150-375 USD) for clients proposing new businesses.[ii]

## Program & Research Design

BILLY was implemented in two phases. Phase 1 launched a rolling recruitment process between August and October of 2019. At this time, 359 youth[v] were enrolled and were randomly assigned to one of three treatment arms comprised of a unique combination of services. Phase 2 included a control group in addition to the three treatment arms, to whom services were delivered a year after Phase 1 (between 2020 – 2021).[vi]

This project included a range of cross-cutting one-time activities at the livelihood centers including recruitment, data collection and informational sessions. Recruitment of clients was undertaken in cohorts through IRC outreach activities. Registration data was used to randomize clients into treatment arms. After an informational session at an IRC livelihood center, clients would receive the suite of services associated with their given treatment arm. Grants were distributed after services were delivered to clients. The services provided are described in Box 1.

### Packages of Activities

The research study sought to understand if a combination of microenterprise services was more cost-effective than directly providing the cash value of microenterprise services to clients. For the impact evaluation, the 359 participants were randomly assigned to one of three treatment groups which received specific combinations of these services:

**Table 1. Activity Packages**

| Treatment Group | Business Grant | Skills Training | Savings Group | Mentoring | Cash Grant |
|---|---|---|---|---|---|
| **Group 1** | **Yes** | **Yes** | **Yes** | **Yes** | 0 KES |
| **Group 2** | **Yes** | No | No | No | **42,000 KES** |
| **Group 3** | **Yes** | **Yes** | No | No | **32,000 KES** |

**Cash grants** were given to clients in Group 2 and 3. These grants were intended to be equivalent to the value of services they did not receive. To account for the value of services not provided, Group 2 received an additional cash grant of 42,000 KES (312 USD) and in Group 3 received an additional 32,000 KES (240 USD). The value of the business grant and cash grant were combined for the cost analysis.

For example, Group 3 received the business grant, skills training, and the cash grant equivalent to services they did not receive (savings group and mentoring). As a result, comparison of results between Group 2 (grant only) and Group 3 would allow the researchers to understand the "marginal impact of training, relative to the opportunity cost of cash not provided."[vii] This responds to data gaps about the impacts of training or the simple distribution of cash.

## Project Costs

**Overall, approximately $768,000 was spent between August 2019 – April 2020 on the services for 359 clients who took part in Phase 1 of the research study.** 74% of this was spent on direct program costs, of which nearly half were a combination of business grants and cash grants.

**Table 2. Grant Spending by Treatment Group**

| Treatment Group | Number of Clients | Total Spent on Business Grants + Cash Grants |
|---|---|---|
| Group 1 | 112 | $56,184 |
| Group 2 | 120 | $105,053 |
| Group 3 | 127 | $98,951 |
| **Total** | **359** | **$260,189** |

## Cost by Program Activity

**Grants and award committees absorb most of the total program costs across the three treatment arms throughout the program implementation period (Table 3).** The activities that benefitted all treatment arms: information sessions, data collection and registration, and activities at the IRC Livelihood Centers, did not contribute significantly to overall costs per group.

**Table 3. Cost by Activity**

| Treatment Group | BILLY Program | | | | | OTHER | | | Operation Support & Management | TOTAL |
|---|---|---|---|---|---|---|---|---|---|---|
| | Skills Training | Mentoring | Savings Groups | Grants | Award Com. | Info Session | Registration & Data | BILLY Center | | |
| Group 1 | $28,652 | $51,973 | $61,638 | $66,425 | $13,953 | $3,980 | $6,794 | $11,956 | $63,077 | $308,448 |
| Group 2 | $- | $- | $- | $116,026 | $5,581 | $4,264 | $7,279 | $12,810 | $67,583 | $213,543 |
| Group 3 | $29,683 | $- | $- | $110,563 | $8,372 | $4,513 | $7,704 | $13,557 | $71,525 | $245,917 |
| **Total** | **$58,335** | **$51,973** | **$61,638** | **$293,014** | **$27,907** | **$12,756** | **$21,777** | **$38,323** | **$202,185** | **$767,907** |

**Apart from grants, services such as savings groups and mentoring contributed significantly to total cost, adding $113,000 of costs for Group 1.** This significant additional cost was driven by time and effort spent by staff supporting those activities, including livelihoods officers, mentors, and savings groups facilitators. Staffing for mentorship and savings groups comprised nearly 89% and 82% of the given service cost, respectively. In comparison, costs for training were relatively lower per client served compared to the savings groups and mentorship services.

## Cost by Treatment Group

**Cost per client increased as BILLY microenterprise services were added to each treatment arm (Table 4).** The treatment group which only cash and business grants, Group 2, cost $1,780 per client. Group 3, which added skills training in addition to Group 2 services, cost marginally more per client at $1,936. The group which received all services, Group 1, was $2,754 per client.

**Table 4. Cost by Treatment Group with Business Grant**

| Activity Costs Only[viii] | Group 1 | Group 2 | Group 3 |
|---|---|---|---|
| Per Treatment Group | $222,641 | $121,607 | $148,618 |
| Per Client | $1,988 | $1,013 | $1,170 |
| **Full Cost-Efficiency Results** | **Group 1** | **Group 2** | **Group 3** |
| Per Treatment Group | $308,448 | $213,543 | $245,917 |
| **Per Client** | **$2,754** | **$1,780** | **$1,936** |

The full cost-efficiency results show that cost per client is highest for Group 1. Costs for Group 1 were driven up by the additional resources required for the extra services received by this group and were 55% higher than the cost per client for those who received only business grants. In comparison, the addition of skills training increased the cost per client by 9%.

To understand costs of services apart from grants, we remove the grant value and observe cost per treatment arm differences in Table 5.

**Table 5. Cost by Treatment Group without Business Grant**

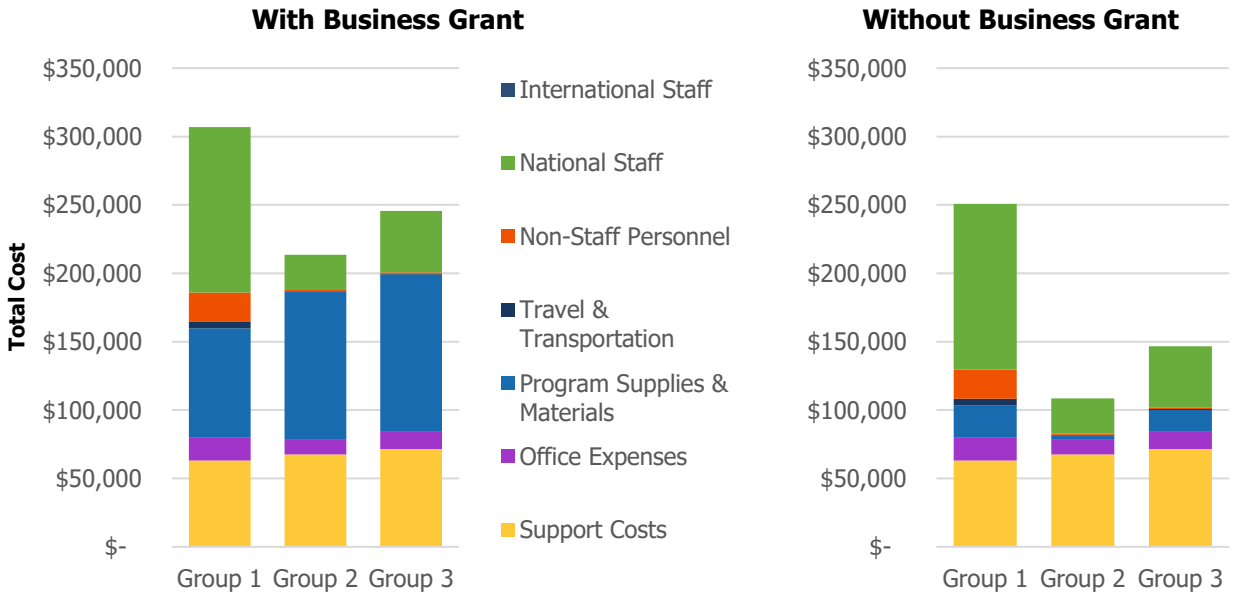
| Full Cost-Efficiency Results | Group 1 | Group 2 | Group 3 |
|---|---|---|---|
| Per Client **without** business grant | $2,252 | $905 | $1,157 |

**Without grants, the difference in cost per group increases in magnitude. The higher cost per client for the full-service group, relative to the other two groups, is driven by the additional services received by Group 1.** The ingredients required for these services which drove these additional costs for Group 1 included: livelihood officers, business trainers, and USLA volunteers. Comparison of cost per client between Group 1 and 3 also suggests that the additional costs in Group 1 are driven specifically by savings groups and mentoring services.

When we review costs by cost category, the largest spending was associated with: Program Supplies and Activities, Support, and National Staff (Figure 1). When we compare total cost by category and treatment group with and without grants included, we confirm that grants (business and cash grants) are the key driver of program supply and material costs.

Across the three groups, the magnitude of additional resources required for staff to provide the additional services to Group 1 and 3 drives up costs for these treatments considerably.

**Figure 1. Cost Category per Treatment Group**



## Results of the Impact Evaluation

The impact of the BILLY program was measured in a randomized evaluation between 2019-2021. The following key findings were identified, listed by impact domain. It should be noted that the COVID-19 pandemic occurred mid-way through the evaluation, which is believed to have muted the full effects of the program.

**Primary outcomes** included employment status (in terms of likelihood of working and number of hours worked), consumption levels, and business investments (in the form of productive assets). When compared to the pure control group, any of the three treatment arms performed better than control in terms of improved productive assets. This was particularly evident for treatments who received additional cash grants (Group 2 and 3). No gains were observed for the other primary outcomes, when compared to control.

However, among the three treatment arms, none of the groups outperform another in achieving primary outcomes.

**Secondary Outcomes** included wellbeing, earned income, life skills, and savings. When compared to the pure control group, treatment arms which received additional cash (Group 2 and 3) were more likely to exhibit higher savings rates. Control youth were also more likely to experience salaried (formal) employment than treated youth, however the research concluded that this is because treated youth were operating microenterprises instead of seeking formal employment. Few differences were found in earned income and life skills between treatment and control.

Among the three treatment arms, participants the treatment arm which included business skills training, business, and cash grants (Group 3) exhibited improvements in wellbeing, likelihood of being formally employed, and savings, when compared to the other treatment arms. It is assumed that this is an indirect effect of the business skills training courses, which served as a mechanism through which youth were able to expand their social and business network.

Group 1 and 3 were also more likely to exhibit savings in the long run, compared to Group 2. This may be because the business skills training courses experienced by these groups cover savings as well.

## Cost-Effectiveness Findings

**Overall, the results support the strong conclusion that the full suite of services offered to Group 1 is not a cost-effective use of resources.** While no substantial differences are observed across the three treatment arms for primary outcomes, differences in secondary outcomes provides sufficient justification for continuation of the treatment package offered to Group 3 (business training and grant). Any future interventions should consider the additional costs associated with services provided, such as savings groups, mentoring, and training, compared to the cost-effectiveness of these intervention modalities.

**Primary cost drivers were the value of grants and resources used manage and implement microenterprise services such as business skills training, savings groups, and mentoring.** These services are expensive due to the extent of time and effort required by personnel. Without observed impact of these additional services, particularly savings groups and mentorship, we cannot conclude that resource use for these additional services is cost-effective for primary outcomes.

Among the three treatment arms, Group 1 was the most expensive modality for the BILLY microenterprise program, comprised of the entire suite of services including: skills training, savings groups, mentorship, and business grants. This was followed by Group 3, which was provided skills training, business grants, and a compensatory cash grant, and finally by Group 2 which received only business grants and a compensatory cash grant. Even without grants, Group 1 remains the most expensive modality, compared to Group 2 and 3.

Impact results between treatment and control suggest there is an added value of the BILLY programming on business investments in the form of productive assets. However, since no difference was observed among the three treatment arms for **primary outcomes**, it cannot be concluded that any of the treatment arms are more cost-effective than another for improving employment status, consumption levels, or business investments.

However, among **secondary outcomes** observed, participants in Group 3, who received business skills training and grants, exhibited better mental wellbeing, improvement in formal employment, and savings. It is assumed that the trainings served as a mechanism to providing access to networks and support systems for participating clients. As a result, Group 3 is the most cost-effective treatment arm in terms of secondary outcomes.

### Analysis Method: Cost-Effectiveness at the IRC

The IRC is committed to maximizing the impact of each dollar spent to improve our clients' lives. Cost effectiveness analysis compares the costs of a program to the outcomes it achieved (e.g., cost per diarrheal incident avoided, cost per reduction in intra-family violence). Conducting cost effectiveness analysis of a program requires two types of information:

1) An impact evaluation on what a specific program achieved, in terms of outcomes
2) Data on how much it cost to produce that outcome

Teams across the IRC produce a wide range of outcomes, but cost effectiveness analysis requires that we know - based on impact research - exactly which outcomes were achieved and how much they changed, for a given program. For example, an impact evaluation might show a village that received IRC latrines and hygiene promotion had a 50 percent lower incidence of diarrhea than a village next to it which did not receive the IRC intervention. If so, we know the impact of our program: 50 percent decrease in diarrhea incidence. Cost effectiveness analysis becomes possible only when there is an impact study that quantifies the change in outcomes as a result of the IRC project.

At the same time IRC runs impact evaluations, we gather data on how much the evaluated program costs. First, IRC staff build a list of inputs that were necessary to implement the evaluated program. If one thinks of a program as a recipe, the inputs are all the 'ingredients' necessary to make that dish. Budgets contain a great deal of information about the ingredients used and in what quantities, so reviewing the program budget is the first place to start. However, many of the line items in grant budgets are shared costs, such as finance staff or office rent, which contribute to multiple programs, not just the one included in the impact evaluation. When costs are shared across multiple programs, it is necessary to further specify what proportion of the input was used for the particular program. Specifying such costs in detail, while time-consuming, is important because it provides lessons about the structure of a program's inputs. We can divide costs into categories and determine whether resources are being allocated to the most important functions of program management and enable us to model alternative program structures and quantify the cost implications of different decisions.

The **Airbel Impact Lab**, the IRC's research and innovation team, designs, tests, and scales life-changing solutions for people affected by conflict and disaster. Our aim is to find the most impactful and cost-effective products, services, and delivery systems possible. Airbel works to develop breakthrough solutions by combining creativity and rigor, openness and experience, and a desire to think afresh with the experience of a large-scale implementing organization.

This work was conducted by the Best Use of Resources Initiative at the IRC. For questions or more information please contact us at **airbel@rescue.org**.

*Preferred citation*

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Airbel Impact Lab
Research & Innovation at the IRC

## Ingredients List

### Kenya | 2020 | USD

The following cost-ingredients list can be found on the BILLY program website, **here**.

| Full Cost-Efficiency Results | Group 1 | Group 2 | Group 3 | TOTAL |
|---|---|---|---|---|
| **Staff** | **$ 1,577** | **$ 69** | **$ 399** | **$ 2,045** |
| Technical Advisor (ERD) - International | $ 1,317 | $ 38 | $ 316 | **$ 1,671** |
| TAs (Client Voices & Protection) - International | $ 260 | $ 31 | $ 83 | **$ 374** |
| Livelihoods Coordinator | $ 3,375 | $ 891 | $ 1,170 | **$ 5,436** |
| Livelihoods Manager | $ 9,790 | $ 2,097 | $ 3,130 | **$ 15,016** |
| Livelihoods Officers (2) | $ 25,358 | $ 970 | $ 1,946 | **$ 28,274** |
| Caseworkers | $ 13,434 | $ 3,013 | $ 4,643 | **$ 21,090** |
| Business Trainers | $ 31,755 | $ 8,989 | $ 15,807 | **$ 56,551** |
| Protection Staff (2) | $ 5,443 | $ 763 | $ 1,898 | **$ 8,103** |
| ACRe Focal Point | $ 5,814 | $ 1,103 | $ 1,952 | **$ 8,869** |
| Supply Chain and Finance (3) | $ 6,223 | $ 3,503 | $ 6,026 | **$ 15,753** |
| Driver (2) | $ 3,189 | $ 170 | $ 262 | **$ 3,620** |
| Office Assistants (2) | $ 1,927 | $ 552 | $ 903 | **$ 3,382** |
| Benefits | $ 14,709 | $ 3,568 | $ 6,957 | **$ 25,234** |
| **Non-Staff Personnel** | **$ 21,310** | **$ 1,001** | **$ 1,168** | **$ 23,479** |
| USLA Volunteers | $ 20,470 | $ 456 | $ 483 | **$ 21,410** |
| Data Volunteers | $ 839 | $ 544 | $ 685 | **$ 2,069** |
| **Travel & Transportation** | **$ 4,850** | **$ 521** | **$ 564** | **$ 5,936** |
| Domestic Travel | $ 4,013 | $ 264 | $ 279 | **$ 4,556** |
| Other (Accommodation, Per diem, TA visit) | $ 836 | $ 258 | $ 286 | **$ 1,380** |
| **Program Supplies & Materials** | **$ 79,915** | **$ 107,605** | **$ 114,417** | **$ 301,936** |
| *Learn to Earn* | | | | |
| Facility Rental + Catering | $ 5,334 | $ - | $ 6,124 | **$ 11,458** |
| Transport Stipend | $ 7,246 | $ - | $ 5,588 | **$ 12,834** |
| Childcare Stipend | $ 1,120 | $ - | $ 1,016 | **$ 2,136** |
| *Other* | | | | |
| Business Grants | $ 56,184 | $ 105,053 | $ 98,951 | **$ 260,189** |
| Airtime | $ 733 | $ 142 | $ 188 | **$ 1,063** |
| Advocacy & Awareness Campaigns | $ 633 | $ 678 | $ 718 | **$ 2,029** |
| USLA Funds | $ 6,442 | $ - | $ - | **$ 6,442** |
| Private Sector Forums | $ 607 | $ - | $ - | **$ 607** |
| Legal Representation | $ 225 | $ 241 | $ 255 | **$ 720** |
| Sensitization & Lobbying Forums | $ 335 | $ 359 | $ 380 | **$ 1,074** |
| Stakeholder Reference Group Meetings | $ 21 | $ 22 | $ 23 | **$ 66** |
| Course Correct Activities | $ 702 | $ 753 | $ 796 | **$ 2,251** |
| Focus Group Discussions (ACRe) | $ 333 | $ 357 | $ 377 | **$ 1,067** |
| **Office Expenses & Capital Assets** | **$ 16,702** | **$ 11,146** | **$ 13,152** | **$ 41,000** |
| Program Office Rent + Furniture | $ 8,673 | $ 9,292 | $ 9,834 | **$ 27,799** |

| | | | | |
|---|---|---|---|---|
| Laptop Computers | $ 715 | $ 766 | $ 810 | **$ 2,291** |
| Data Collection | $ 219 | $ 235 | $ 248 | **$ 702** |
| Mobile Livelihoods Van | $ 7,096 | $ 853 | $ 2,259 | **$ 10,208** |
| **SUPPORT COSTS** | **$ 63,077** | **$ 67,583** | **$ 71,525** | **$ 202,185** |
| **TOTAL** | **$ 308,448** | **$ 213,543** | **$ 245,917** | **$ 767,907** |
| **Cost per Client by Group** | **$ 2,754** | **$ 1,780** | **$ 1,936** | |
| ***Number of Clients per Group*** | ***112*** | ***120*** | ***127*** | |

[i] The Building Income and Leveraging Livelihoods for Youth (BILLY) project was funded by Black Rock and IKEA. Data sources for this cost analysis included data collected by Best Use of Resources on staff time and effort allocations, financial records from Black Rock and IKEA, as well as IRC monitoring data. Cost data was based on actual spending throughout the implementation period and is reflected in 2020 USD. Implementation costs in the ingredients list provided and cost analysis reflect implementation of the program undertaken at IRC Livelihood Centers.

[ii] Khan, S., Leydier, B., and Zeitlin, A. (2022). "Building Income and Leveraging Livelihoods for Youth: Final Evaluation Report." International Rescue Committee and Princeton University. Georgetown University Initiative on Innovation, Development and Evaluation. Draft.

[iii] At the start of COVID-19, implementation was paused for a few months, however these months of cost were not included in the analysis. All three treatment groups were equally affected by the pandemic, however it is assumed by the research team that the BILLY program served as a protective measure, moderating some of the impacts of COVID-19 on the treatment group participants.

[iv] Khan, S., Leydier, B., and Zeitlin, A. (2022).

[v] Originally 535 youth were enrolled in the program, with 999 anticipated to be enrolled, however due to COVID-19 only a sub-set of these clients were able to be served for the duration of Phase 1.

[vi] Phase 1: baseline took place during summer of 2019, staggered delivery of services and grants provided in fall of 2019 through spring of 2020, endline completed in spring of 2021. Phase 2: baseline took place during winter of 2020, staggered delivery of services and grants provided between summer 2020 and summer 2021, endline completed in fall of 2021.

[vii] Khan, S., Leydier, B., and Zeitlin, A. (2022).

[viii] Activity costs only refer to direct program costs, e.g., not including operations support and management costs or "other" costs.