Solar Sister conducts an annual end-of-year survey of a sample of Solar Sister entrepreneurs to gather insights about their businesses, their experiences with Solar Sister, and the changes in their lives and livelihoods over the past year.

Prepared By: Solar Sister’s Monitoring and Evaluation Team
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11 SURVEY DETAILS AND TEAM
01. Economic Wellbeing
Solar Sister provides women a valuable income-generating opportunity in the clean energy sector. Despite economic and other contextual challenges that affected their businesses, 84% of entrepreneur respondents reported being better off than they were 12 months ago.

02. Decision-Making Power
Providing women with economic opportunity helps to facilitate decision-making power. In 2023, there was a 50% increase in respondents who reported having significant or total control over economic decisions in their household from baseline.

03. Pathway to Prosperity
Solar Sister generates a pathway to prosperity for women through entrepreneurship, which elevates women out of poverty. The probability of Solar Sister households living in poverty, calculated using the standardized Poverty Probability Index, was reduced by 87% from the baseline.

04. Ripple Effects
The positive outcomes from Solar Sister's model don't stop at the entrepreneur; entrepreneurs reported significant positive impacts on their families, children, and communities in 2023, including a 22% increase in the number of respondents' girl children who are able to attend school.
RESPONDENT DEMOGRAPHICS

Sample

In 2023, we surveyed 351 Solar Sister Entrepreneurs across Kenya (50), Tanzania (151), and Nigeria (150). The sample was 87% women, with an average household size of 5.7.

“ In the night, everywhere is shining with solar light. ”

-Tanzanian Entrepreneur

- 80% of respondents have at least one child.
- 45% of respondents completed education equivalent to primary school or less.
- 74% of respondents are married.
ECONOMIC WELLBEING

The Bottom Line
Despite significant external challenges, Solar Sister Entrepreneurs reported a significant improvement in their economic well-being in 2023; the majority of entrepreneurs reported feeling financially better off than last year.

**Entrepreneurs experience a 30% increase in financial wellbeing after at least one year with Solar Sister**

<table>
<thead>
<tr>
<th>Financial Wellbeing</th>
<th>Baseline</th>
<th>Endline</th>
</tr>
</thead>
<tbody>
<tr>
<td>20%</td>
<td>55%</td>
<td>84%</td>
</tr>
<tr>
<td>90%</td>
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What did SSEs spend their income on in 2023?

- **Food**: 100
- **Children's education**: 80
- **Healthcare**: 50
- **Agriculture**: 40
- **Home improvements**: 30
- **Investments**: 20
- **Their own education**: 10

Entrepreneur Insights
ENTREPRENEUR CHALLENGES

We asked Solar Sister Entrepreneurs what challenges impacted their businesses in 2023

Market Competition
Frequent price fluctuations, instability in the market, and competitors selling lower-quality products at a lower price have been huge challenges for our entrepreneurs, often causing customer loss.

Opportunity: In 2024, we are seeking new ways to lower product costs for entrepreneurs, including exploring carbon credits and microfinance solutions.

Economic Conditions
In 2023, our entrepreneurs had to navigate a “cash crunch” in Nigeria, currency devaluations in all three operating countries, inflation, an increased cost of living, and severely diminished customer spending capital.

Opportunity: While we don’t have control over economic conditions, we are committed to supporting our entrepreneurs to build resilient businesses that can withstand challenges.

Safety
Although mentioned by only a few entrepreneurs, a serious concern highlighted in our 2023 survey was safety threats to our entrepreneurs when they are selling in their communities, including harassment, gender-based violence, and theft.

Opportunity: In 2024, we will strengthen our gender safeguarding policies and work with entrepreneurs to ensure their safety while doing business.

Transportation & Weather
Many of our entrepreneurs who have been with us for years have experienced saturation in their immediate community and are looking to expand their business into further geographical areas, which can be costly. Additionally, fluctuating weather, including heat waves and increased rainfall, are barriers to moving through communities.

Opportunity: We are investing in digital solutions to help our entrepreneurs digitize and mobilize their businesses from wherever they are.
DECISION-MAKING POWER

“I believe that this world is not all about men. Women can be more if they set their hearts to it and give a good environment to thrive, so I speak to everyone who cares to listen especially women to become who they dream of becoming.”

-Tanzania Entrepreneur

Decision-making and purchase power improve over time with Solar Sister

| Entrepreneurs with significant purchase power | Baseline: 30% | Endline: 70% |
| Entrepreneurs with autonomous household decision-making | Baseline: 25% | Endline: 40% |

The Bottom Line

Through entrepreneurship, as women’s wealth grows, so does their livelihood. Entrepreneurs reported significant increases in being able to make decisions about where their money is spent and control over financial and social decisions in their household, including whether their children attend school.
PATHWAY TO PROSPERITY

The Poverty Probability Index (PPI®) is a poverty measurement tool for organizations and businesses with a mission to serve people experiencing poverty. The PPI is statistically sound yet simple to use: the answers to 10 questions about a household’s characteristics and asset ownership are scored to compute the likelihood that the household is living below the poverty line.

Probability of Solar Sister households living in poverty reduced by 87% from baseline

*Note that we do not yet have baseline data on Kenyan entrepreneurs to perform these comparisons

The Bottom Line
Solar Sister creates a pathway to prosperity that elevates women out of poverty.
**RIPPLE EFFECTS**

Now we have a saying that if you empower a woman, you empower the community because the women are a great army.

-Nigerian Entrepreneur

**The Bottom Line**
Solar Sister’s impact doesn’t stop at the entrepreneur; positive outcomes have a ripple effect on their family and community.

**GENDER ROLES**

More than 50% of entrepreneurs reported talking about ideas regarding gender roles in their communities, such as women controlling their finances or women in leadership roles.

One Kenyan entrepreneur stated, “We share within our local boards, at our business premises, in our houses, community meetings, in the church where I am a leader, we talk about the [gender] roles.” Solar Sister Entrepreneurs are breaking down barriers and leading by example.

**EDUCATION**

Entrepreneurs reported a significant increase in girl children enrolled in school

<table>
<thead>
<tr>
<th>Baseline</th>
<th>77%</th>
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<tbody>
<tr>
<td>Endline</td>
<td>94%</td>
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</tbody>
</table>

Girls continue to face significant barriers to accessing education, and there are currently 16.7 million girls out of school in sub-Saharan Africa. The proportion of Solar Sister Entrepreneur’s girl children enrolled in school increased from 77% at baseline to 94%. Our entrepreneurs reported their income being a catalyst for getting their children into school and solar light being a huge facilitator in increasing children’s study hours at night.
SOLAR SISTERS IN THE COMMUNITY

We asked entrepreneurs what their community likes most about them. Here’s what they said.

Solar Sister Entrepreneurs...

- **Are Role Models**
  People look up to Solar Sisters as leaders.

- **Earn respect**
  They operate fair, strong businesses.

- **Have Strong Character**
  Their communities admire their trustworthiness, resilience, and integrity.

- **Bring Clean Energy**
  They bring affordable clean energy and the opportunities that come with it.

- **Break Barriers**
  They demonstrate the value of being a woman in business

"They love how I bring light to their community, how I help our children study at night, and the way I take care of my solar business and family."

-Kenyan Entrepreneur
SURVEY DETAILS

Solar Sister conducts an annual end-of-year survey of a sample of Solar Sister entrepreneurs to gather insights about their businesses, their experiences with Solar Sister, and the changes in their lives and livelihoods over the past year.

METHODOLOGY

The end-of-year survey was conducted with a sample of 351 entrepreneurs selected with a stratified random sampling strategy, ensuring representation from active and dormant entrepreneurs with a range of tenure with Solar Sister. Participants were not compensated for their time, but did earn entry into a raffle for a small solar product for their participation. The survey encompassed a combination of quantitative and qualitative questions, covering a range of topics such as income generation, savings, economic well-being, decision-making processes, education, and overall quality of life. The surveys were administered by our headquarters staff members over the phone.

LIMITATIONS

Our survey methodology, while informative, is not without limitations. Conducting the survey internally introduces a potential bias as respondents may feel inclined to respond more positively due to their relationship with the organization. Additionally, language barriers may have influenced the accuracy and depth of responses, as not all respondents may have been fluent in the survey language. Additionally, there is risk of self-selection bias as participants were free to decline to participate in the survey as a whole or any individual questions. These limitations should be considered when interpreting the findings and may impact the generalizability of the results.
SURVEY TEAM

Solar Sister’s 2023 end-of-year survey was designed, and analyzed by the cross-country Monitoring and Evaluation team. Data collection was led by the country team leads and supported by staff across the organization.

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We’d like to extend a huge thank you to each Solar Sister entrepreneur who participated in our 2023 end-of-year survey, without whom this work would not be possible!

Tell us what you think!
Visit Solar Sister on social media to share your thoughts!
@iamsolarsister