



IMPACT STUDY

# Gender Equity Advisory Services Evaluation

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# CONTENTS

Executive summary	1
Study Motivation and Approach	1
Main Findings	1
Introduction	3
Background for Gender Equity Advisory Services	3
Study Objective	4
Previous research	4
Methodology	5
Research Questions	5
Data	5
Analysis Methodology	8
Overview of GEA Portfolio	9
Descriptive Statistics	9
In-depth Analysis and Insights	10
Findings	18
Gender Inclusion	19
Financial Performance	20
Conclusions	24
References	25
ANNEXES	26
Annex 1: Key Indicators and Definitions	26
Annex 2: General Profile of the Root Capital Clients	29
Annex 3: Advisory Days by Service Type	32
Annex 4: Trends over time of outcome variables	33
TECHNICAL Appendix	36
Statistical Analysis Approach	36
Fixed effects regression parameters of interest	39

# EXECUTIVE SUMMARY

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## Study Motivation and Approach

Launched in 2020 with support from the Visa Foundation and others, Root Capital's Gender Equity Advisory (GEA) services aim to address structural barriers that limit women's equitable participation in agricultural small and growing businesses (agri-SGBs). These services, now implemented across all regions where Root Capital operates, focus on promoting gender-inclusive hiring practices, advancing women into leadership roles, and ensuring fair payment practices. Core GEA activities include conducting gender inclusion diagnostics, delivering tailored interventions such as gender awareness trainings and leadership development, and creating gender action plans specific to each business.

This evaluation of GEA services assesses their effectiveness in promoting gender equity within agri-SGBs. It examines the relationship between GEA participation and various aspects of gender inclusion, such as changes in female participation at training events, the proportion of female employees, or the number of women in leadership roles. This evaluation also explores how GEA services influence business performance, clients' engagement with other advisory services, and loan performance variables. By analyzing data from 2020 to 2024, this evaluation provides insights into the successes and challenges of GEA services, offering evidence for enhancing gender equity and informing future initiatives.

## Main Findings

The evaluation reveals positive trends in GEA Clients women's participation rates in advisory services, indicating a growing presence of women and signaling enhanced gender inclusion for advisory services overall. On average, one additional day of GEA engagement is associated with a 0.43 percentage point increase in women's participation rates in advisory services. Similarly, every additional \$100 of GEA investment is linked to a 0.13% increase in women's participation rates across all advisory services. GEA clients have an average women's participation rate 4.5 percentage points higher than non-GEA clients. Women's participation is increasing across all advisory sessions, particularly for Agronomic and Climate Resilience Advisory (ACRA), especially in the coffee and cacao industries. These results are stable and reliable for most of the GEA portfolio (74% of GEA clients) who receive five or fewer days of the service per year.

However, the analysis of Root Capital's indicators for women-led or gender-inclusive clients shows no significant relationship with the provision of GEA services. This lack of correlation is most likely due to the fact that such structural changes require more time to manifest.

In terms of financial performance, GEA services are associated with higher sales, payments to producers, DGX score<sup>1</sup>, loan size, and total disbursements. On average, each additional day of GEA services provided to clients receiving five or fewer days is associated with approximately 1.7% higher annual sales and a positive correlation with average payments to producers. Furthermore, for these clients, each additional day of GEA is linked to a 2.43% higher average credit size and a 3.52% higher average total disbursement. For every \$100 invested in GEA, average payments to producers increase by 0.38%. Being a GEA client is associated with an overall DGX score that is at least 6.5 units higher. However, no significant effect on the gender and equity subcomponent of the DGX score was observed.

Overall, GEA services demonstrate a positive association with key financial outcomes, which suggests the value of these advisory engagements. However, it is important to note that these associations may be driven by factors related to the types of clients eligible to receive these services.

The positive findings on women's participation and financial performance are encouraging, but it is important to interpret them as correlations rather than causal relationships. The characteristics of GEA clients prevent the construction of a direct comparison group to estimate causal impacts. GEA services have been formally in operation for just three years, resulting in a limited number of clients and observations. Furthermore, our monitoring data has notable limitations related to the original intention of their design and how accurately they capture organizational changes for women's leadership and gender inclusion, particularly in the short- and medium-term. Finally, our client selection process, which favors those with positive social impact, is correlated with several positive outcomes observed. This may suggest that certain positive business development characteristics attract clients to self-select to receive GEA.

It is essential to highlight our findings on the higher women's participation rates in advisory services. Root Capital is opening the door for more women to participate, investing not only in enhancing their skills but also in fostering inclusion and future leadership. By creating spaces for underrepresented groups, Root Capital ensures that advisory sessions become platforms for both capacity building and decision-making. This work paves the way for women to access more relevant and impactful roles within their organizations. Root Capital still has work to do in advancing gender equity and inclusion, as GEA services currently reach only a fraction of our portfolio. Embedding GEA services more broadly across all Root Capital services, perhaps by adopting GEA as a transversal element, could enhance our overall impact, promote gender equity, and strengthen the effectiveness of our advisory offerings.

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<sup>1</sup> The DGX score, is the numerical score of an agribusiness diagnostic tool created by Root Capital, which allows our staff to examine the internal and external behavior of a client through evaluation of the current operational and strategic situation, maturity, and its business culture.

# INTRODUCTION

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## Background for Gender Equity Advisory Services

Root Capital's Gender Equity Advisory (GEA) services were launched in 2020 with the primary aim of addressing structural barriers that prevent women from equitably participating in agricultural small and growing businesses (agri-SGBs). With support from the Visa Foundation and others, these services are now implemented globally and are currently active across all regions Root Capital serves. GEA services focus on promoting gender-inclusive hiring practices, increasing women's leadership roles, and ensuring fair payment practices. Key components include conducting gender inclusion diagnostics, implementing tailored interventions such as gender awareness trainings and leadership development, and developing gender action plans. Additionally, Gender Equity Grants (GEGs) can be provided to support the implementation of these plans, helping businesses make critical investments to advance gender equity.

The expected impact of GEA services is multifaceted. By fostering a more inclusive and equitable environment within agri-SGBs, these services aim to enhance the participation and leadership of women in the agricultural sector. This includes increasing the proportion of female employees, promoting women to leadership positions, and ensuring fair compensation for women producers. All these objectives aim to address structural limitations that impede gender equity in agriculture. Furthermore, GEA services are designed to improve business performance by addressing capacity gaps and de-risking borrowers, thereby facilitating access to financing, impacts that have been documented in previous Root Capital studies such as the [Inclusion Pays report](#) (Naeve & Moehler, 2022). Ultimately, the goal is to create a ripple effect that not only benefits the individual businesses and their female stakeholders but also contributes to broader economic and social development in the communities they serve.

## GENDER EQUITY ADVISORY FRAMEWORK AND THEORY OF CHANGE

Root Capital's Gender Equity Advisory services aim to enhance women's inclusion in agricultural organizations through three main actions:

1. **Organizational Policies and Practices:** Providing advisory input and training to implement policies, systems, and procedures that reduce gaps in women's participation. This includes employees, leaders in middle and senior management, and producers in their value chains. By implementing and monitoring these policies, businesses can remove barriers to gender inclusion and demonstrate their commitment to gender equity.

2. **Leaders and Middle Management:** Developing and empowering women's leadership through advice and training. This equips women with the skills needed to effectively participate and perform in leadership roles, in the present and the future. Businesses create spaces for training and participation, enabling women to gain discussion, planning, and decision-making skills, thereby increasing their voices in decision-making processes and leadership roles.
3. **Entrepreneurial Women:** Supporting women producers and employees with business ideas through tailored training and advisory services. Businesses support women-led initiatives, ensuring women producers have greater access to resources and opportunities.

## Study Objective

This evaluation assesses the effectiveness of Root Capital's Gender Equity Advisory services in promoting gender equity within agricultural small and growing businesses (agri-SGBs). Specifically, it aims to understand the relationship between GEA participation and various aspects of gender inclusion, such as women's participation in training activities, the proportion of female employees, and the number of women in leadership roles. Additionally, it examines how GEA services influence clients' engagement with other advisory services and variables related to loan performance, including loan size and disbursements, as well as the impact of investments in GEA<sup>2</sup> on these topics. By analyzing internal data from 2020 to 2024, this evaluation provides insights into the successes and challenges of GEA services, offering evidence for enhancing gender equity and informing future initiatives.

## Previous research

Previous research by Root Capital (Naeve & Moehler, 2022) showed that enterprises with higher levels of women's leadership and/or participation tend to have more stable revenues, faster sales growth, greater success in securing new financing, lower default rates, and higher loan profitability. Unlike that study, which examined all gender-inclusive clients, this evaluation specifically focuses on clients receiving GEA services. The majority of these clients, by GEA's own design, are not gender-inclusive or women-led.

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<sup>2</sup> We calculate a proxy for the average financial investment per day of GEA engagement by country and year. The monetary investment includes costs associated with advisory contractors, professional services (consultants), travel, conferences and workshops, occupancy and telecommunications, and other direct costs. It is important to note that staff payroll and resilience grants are not included in this calculation.

# METHODOLOGY

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## Research Questions

To evaluate the influence of the Gender Equity Advisory services and its impact based on its stated theory of change, we focused on the following key research questions:

**RESEARCH QUESTION 1:** How do GEA services influence the gender composition and leadership roles within our clients' businesses, and how does participation in GEA services affect the participation of women in other advisory services offered by Root Capital?

**RESEARCH QUESTION 2:** What impact does participation in GEA services have on the overall financial performance of our clients, particularly loan performance?

**RESEARCH QUESTION 3:** How do investments in GEA correlate with these outcome variables of interest?

## Data

### DATA COLLECTION

This evaluation leveraged Root Capital's extensive monitoring data from its various programs and services, including loan performance, advisory services, social and environmental due diligence, and business diagnostics, covering the period from January 2020 through June 2024. The data was compiled into a panel-dataset, organized by client's Root Capital account number and year. By cross-referencing this data, we generated a comprehensive view of 805 of our clients (2,394 observations) and evaluated the impact across services for GEA and non-GEA clients.

In all cases, data for 2024 includes only the first two quarters of the year. Due to the data generation process, Root Capital's social and environmental metrics correspond to the finalized figures from the previous year. As a result, the analyses using these metrics are only available up to the second quarter of 2023.

While we prioritize using available data, there are three important limitations to our use of monitoring data:

1. We rely on existing variables and indicators that were not specifically designed to measure the progress of GEA's outcomes as outlined in its theory of change. Many aspects of organizational changes and gender inclusion (beyond women's participation)

are not fully captured. Consequently, the data may not accurately reflect the full impact of GEA services.

2. Our current internal definitions of women's leadership and gender-inclusive businesses limit the variability observed in our data. This constraint reduces the statistical capacity of our econometric models.
3. From the GEA' programmatic perspective, it is strategically more relevant to focus GEA on clients that are not women-led or gender-inclusive. This approach directly targets those who stand to benefit most from the service in their journey towards gender equity.

Due to the characteristics of the clients receiving GEA services, it is not possible to construct a true comparison group to estimate the causal impact of these services.

## KEY INDICATORS

Below we present the key indicators used throughout this study that we identified as essential for understanding the impact and outcomes of our GEA services. A comprehensive list of indicators compiled from various data sources and their definitions are detailed in Annex 1. Listed below are the primary outcome indicators used in our analysis.

**Table 1. Key indicators**

Topic	Indicators
<b>GEA</b>	<ul style="list-style-type: none"> <li>• GEA client</li> <li>• GEA advisory days</li> <li>• Proxy of GEA financial investment per advisory day</li> </ul>
<b>Gender-inclusivity</b>	<ul style="list-style-type: none"> <li>• Women participation rate in advisory sessions</li> <li>• Women-led businesses</li> <li>• Gender Inclusive businesses</li> <li>• Number of women producers</li> </ul>
<b>Financial Performance</b>	<ul style="list-style-type: none"> <li>• Sales</li> <li>• Average payments to producers</li> <li>• Average wages and salaries paid to employees</li> <li>• DGX overall score and the DGX Gender Equity subcomponent</li> <li>• Financial Fundamentals scores</li> </ul>
<b>Loan Performance</b>	<ul style="list-style-type: none"> <li>• Lending Client</li> <li>• Reached Client</li> <li>• Root Capital loan size</li> <li>• Disbursements</li> </ul>

We also intended to analyze other indicators such as repayment rates, risk ratings, and loan additionality. However, due to the lack of variability in our data, it was impossible to conduct this assessment. In other words, the data points were too similar, making it difficult to identify meaningful patterns or differences.

### DEFINITION OF A GENDER EQUITY ADVISORY CLIENT

For the purposes of this evaluation, the key criteria to identify a GEA client is the engagement in sessions beyond the initial gender gaps diagnostic. While we recognize a client's agreement to conduct a gender gaps diagnostic as a significant step toward participating in the program, we believe this initial stage alone is insufficient to conclude that a client has fully engaged with the service. For this reason, we regard any services beyond the initial diagnostic as “substantial engagements”.

Following the initial diagnostic, Root Capital provides GEA sessions on various gender-related topics. During the analysis period, 120 out of 805 clients in our sample participated in at least one GEA session, resulting in a total of 805 engagements. This accounts for 15% of the clients in our consolidated database. Table 2 shows a breakdown of the engagement topics and their frequencies.

**Table 2. Gender Equity Advisory Services Topics**

GEA sessions by topics			
	Number of Engagements	Engagements (%)	Number of clients
Gender Gaps Diagnostic	186	23.11	97
Strategic Action Plan for Business Gender Equity	198	24.6	62
Inclusive Enterprise Policies and Practices	193	23.98	56
Transformational Leadership for Women Employees	43	5.34	19
Transformational Leadership	43	5.34	28
Female-Led Entrepreneurship	13	1.61	8
New Masculinities	5	0.62	4
Gender Awareness	22	2.73	19
Governance and Transformative Leadership	53	6.58	28
Inclusive Value-Chains	8	0.99	8
Financial Education for Women Producers	18	2.24	16
Gender Equity Advisory	23	2.86	16
<b>Total</b>	<b>805</b>	<b>100</b>	<b>120</b>

Given the variability in the number of days clients participated in GEA services and whether they received substantial advisory content or only a diagnostic, we defined a “GEA client” for a particular year as follows, meeting one of these criteria:

- a) clients who received at least one substantial GEA engagement in that year, OR
- b) clients who had only a diagnostic in that year but received substantial services in the subsequent year.

Under this framework, we identified 108 GEA clients. This approach ensures we capture clients who moved beyond the initial diagnostic phase and received significant GEA services. For this study, being classified as a “GEA client” will be the key differentiator for comparison groups among Root Capital’s clients in this sample.

## Analysis Methodology

To analyze the relationship between Root Capital’s GEA services and key outcomes, we used multivariate, fixed-effects statistical models, explained in more detail in the Technical Appendix. These models help us understand how GEA services relate to gender inclusion and financial performance while controlling for various client characteristics and time-related factors. Our goal is to identify correlations rather than establish direct cause-and-effect relationships, as our data does not allow for such conclusions.

We used data from 2020 to 2024, with the constraints mentioned above, comparing clients who received GEA services with those who did not. These data include variables indicating whether clients received GEA services, the number of advisory days provided each year as well as a proxy for the financial investment in GEA. This approach allows us to explore how the intensity of GEA engagement relates to the outcomes of interest, such as business performance and loan performance.

To ensure the robustness of our findings, we conducted additional checks and employed alternative models. These included making variations in the analysis period (2021–2024), adjusting control variables (e.g., resilience grants), and restricting the sample to GEA clients who received no more than five advisory days to address outliers. It is important to note that nearly 75% of clients received between one to five days of GEA advisory. This indicates that the majority of our sample falls within this range, with any duration exceeding five days considered an outlier or extreme case. We also analyzed data separately for the coffee and cacao industries to examine whether relationships differ by sector. After taking all this into consideration, our results still consistently support the link between GEA services and improvements in women’s participation in advisory services, as well as positive relationships in some financial performance.

# OVERVIEW OF GEA PORTFOLIO

## Descriptive Statistics

The analysis covers the period from the first quarter of 2020 to the second quarter of 2024, a breakdown by region is reported below. Our dataset for this period includes 805 clients served by Root Capital, counting both lending and advisory services. Out of these, 706 clients engaged in at least one advisory service. The tables below provide descriptive statistics for Root Capital's clients during the period of analysis, along with a further breakdown of the clients receiving GEA advisory services.

**Table 3. Root Capital clients in sample by region and year**

Number of Root Capital clients region and year					
Region	2020	2021	2022	2023	2024*
ASI	10	17	18	17	25
EAF	79	121	164	149	91
MAC	69	100	68	142	90
SAM	78	82	91	92	96
WAF	57	26	33	30	18
<b>Total</b>	<b>293</b>	<b>346</b>	<b>374</b>	<b>430</b>	<b>320</b>

\* For 2024, the data presented corresponds only to the first two quarters of the year.

**Table 4. Number of Root Capital Clients**

Total Clients in sample	Clients with at least one advisory engagement	Clients with at least one GEA advisory engagement	Clients with GEA engagements beyond the gender gaps diagnostic
805	706	120	108

**Table 5. GEA Services**

	Total GEA Days	Average GEA Days
All GEA sessions	1,031.22	1.28 days (median: 1 day)
Sessions for Gender Gaps Diagnostic	186	0.96 days (median: 1 day)
Sessions for Substantial GEA themes	619	1.38 days (median: 1 day)

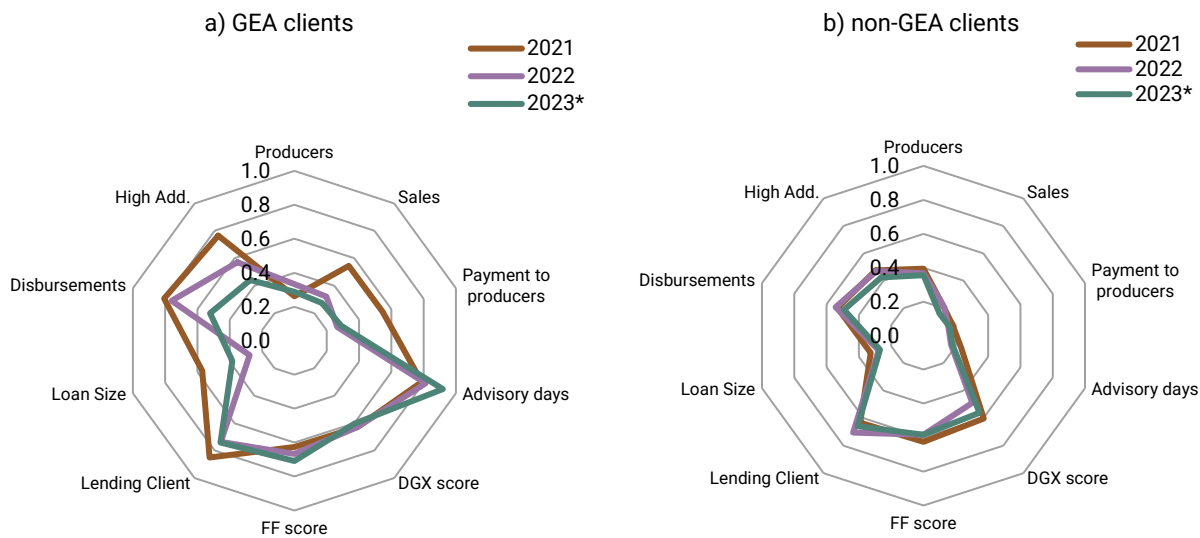
## In-depth Analysis and Insights

### GEA CLIENTS PROFILE

GEA clients have unique characteristics that set them apart from the rest of Root Capital’s portfolio. Figure 1 below illustrates the distinct profiles of GEA and non-GEA clients for the years 2021–2023.

Except for the number of producers, GEA clients typically present higher values across all financial and loan performance variables. They report higher sales, larger payments to producers, and higher scores for both DGX and Financial Fundamentals. Additionally, a greater proportion of GEA clients are lending clients, and among those with Root Capital credit, a higher percentage exhibit high loan additionality.

**Figure 1. Profile of GEA and non-GEA clients 2021-2023 (variables normalized to the scale 0 to 1)**



\* For 2023 given the structure of the data reported, the information presented corresponds only to the first two quarters of the year. Note: We use the median value for all continuous variables in the graphs (number of producers, sales, payments to producers, advisory days, DGX and FF scores, loan size, and total disbursements). For dichotomous variables (lending clients and high additionality), we present the proportion of clients with the relevant characteristic. For normalization to a 0–1 scale, we apply the interquartile range (75th percentile – 25th percentile). However, for sales, payments to producers, advisory days, and loan size—where values for GEA clients exceed the 25th percentile—we instead use the range between the 90th and the 10th percentile.

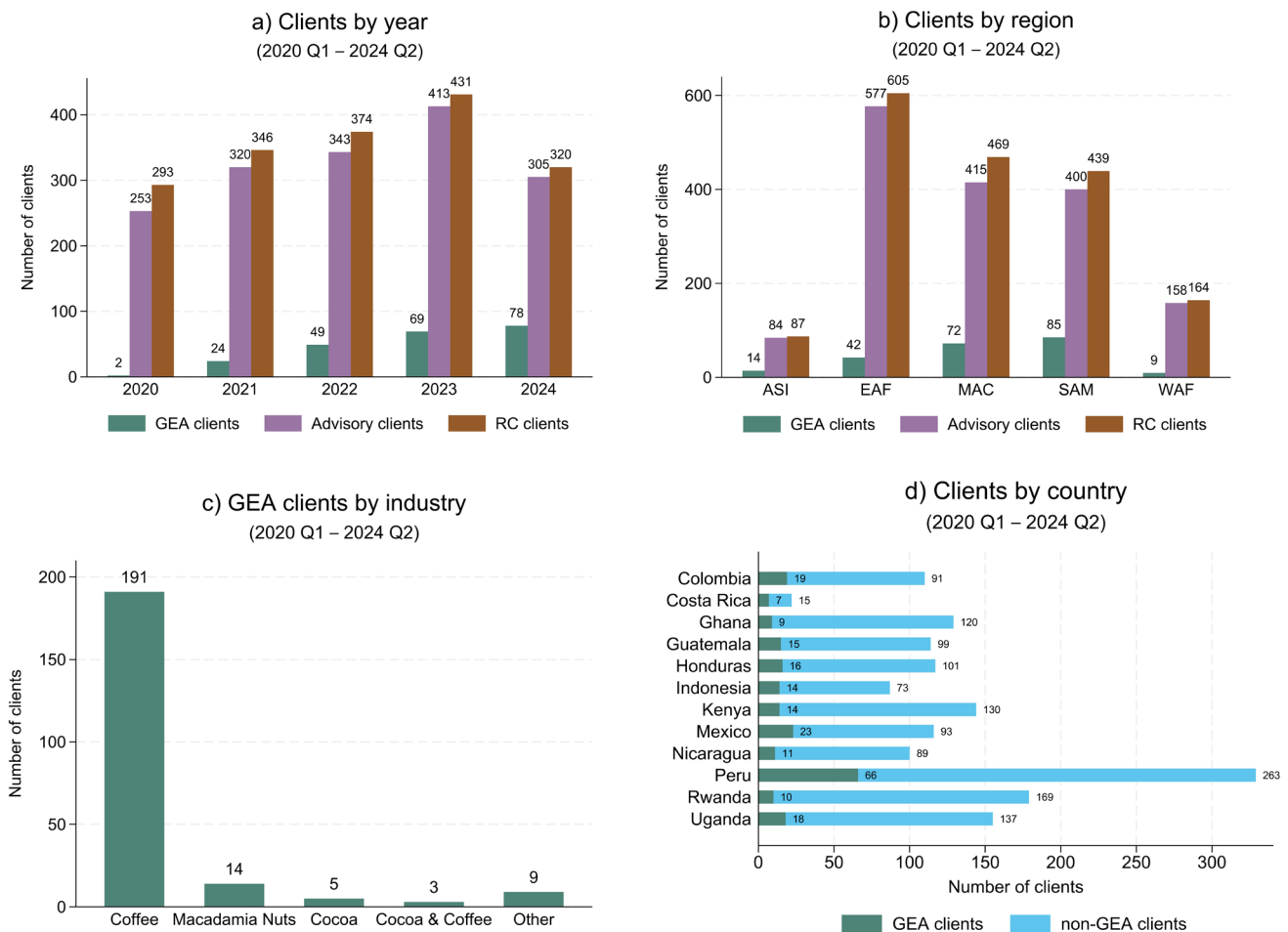
In terms of loan characteristics, both loan size and total disbursements are higher for GEA clients. The most notable difference, in relative terms using the 0–1 scale, is in the total number of advisory days. While the median number of advisory days per year ranged from 22 to 25 for GEA clients, it ranged from only 5 to 7 for non-GEA clients (see Annex 2).

Overall, GEA clients appear to be more developed. They are financially stronger, receive more advisory support, and have access to more and larger loans from Root Capital. These differences make it challenging to present a clear and fair comparison of financial performance between GEA and non-GEA clients. This is one of the reasons causal estimations of GEA’s impact are not provided in this evaluation report.

### GEA CLIENTS BY YEAR, INDUSTRY, REGION, AND COUNTRY

The number of clients receiving GEA services has been increasing each year (see Figure 2a). As observed in the graphs below, MAC and SAM have historically had the most clients participating in GEA, with SAM leading in overall number of clients. Consistent with our portfolio, most GEA clients are in the coffee industry, with Peru and Mexico having the highest number of participating clients. As of 2023, 16% of the clients in our portfolio were receiving GEA services.

Figure 2. Total GEA Clients by year, region, industry, and country



\* For 2024, the data presented corresponds only to the first two quarters of the year.

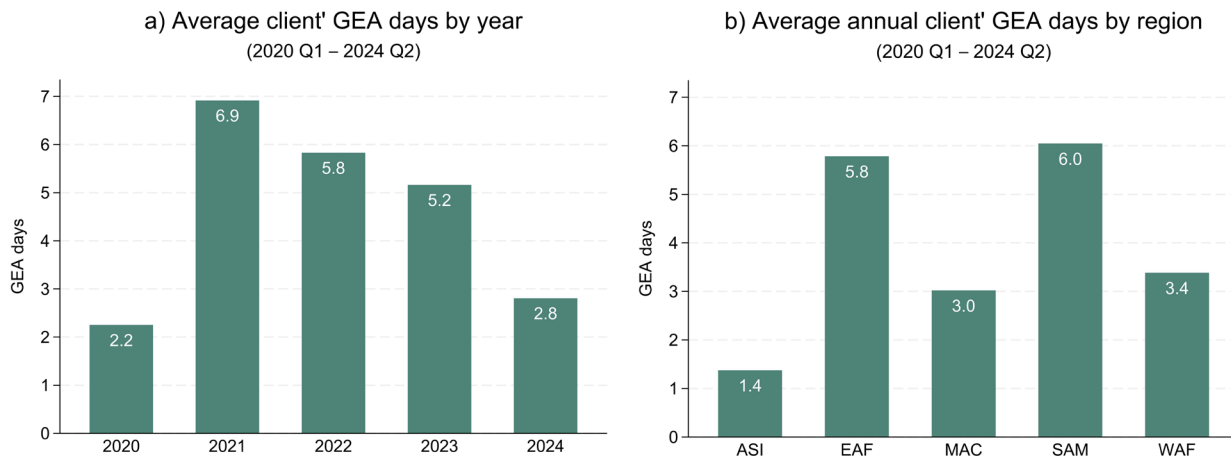
### ADVISORY DAYS FOR GEA CLIENTS BY YEAR, INDUSTRY, REGION, AND COUNTRY

Consistent with the data from the previous section, the graphs below (Figure 3) show the breakdown of GEA by advisory days. SAM has the highest average number of GEA advisory days at 6.0 days per year, followed by EAF with 5.8 days. Uganda (7.7 days) and Peru (6.7 days) have the highest average advisory days per year.

In 2021, the average number of GEA advisory days provided globally was the highest at 6.9 days, a number that has slightly decreased each year since then, though 2024 data is incomplete. The increase in online formats due to COVID in 2021 may have boosted the number of advisory sessions that year.

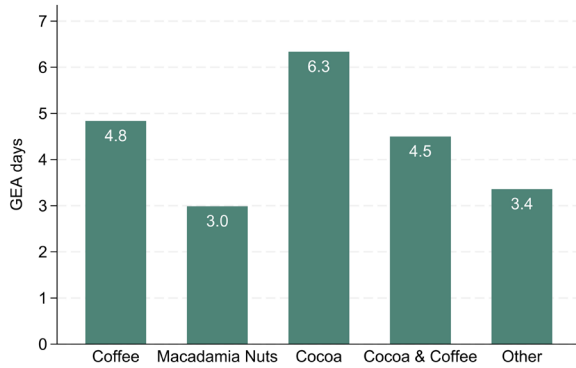
Although the average advisory days are relatively similar across regions, SAM and EAF have the widest range of advisory days per client and, along with MAC, they have outliers for clients with particularly high numbers of advisory days. Similarly, when broken down by country, Peru has the widest range of total advisory days per client, followed by Uganda, with Honduras, Guatemala, and Rwanda displaying a few outliers. Notably, 17 out of the top 24 clients with the highest number of GEA advisory days are in Peru, with the rest in Uganda (5 clients) and Honduras (2 clients).

**Figure 3 Advisory days for GEA clients per year, industry, region, and country<sup>3</sup>**

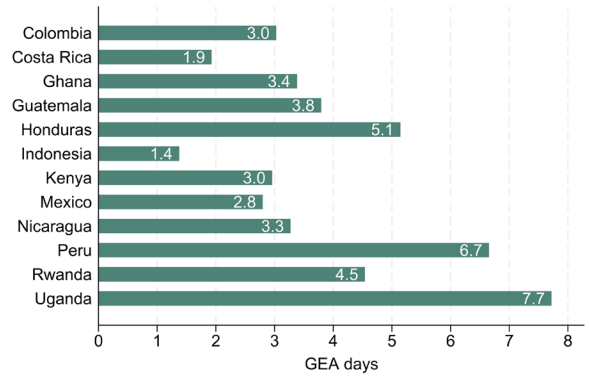


<sup>3</sup> A box and whisker graph, also known as a box plot, displays the distribution of data based on a five-number summary: minimum, first quartile (Q1), median, third quartile (Q3), and maximum. The box represents the interquartile range (IQR) where the middle 50% of the data lies, with the line inside the box indicating the median. The "whiskers" extend to the smallest and largest values within 1.5 times the IQR from the quartiles. Points outside this range are considered outliers and are marked individually (if any).

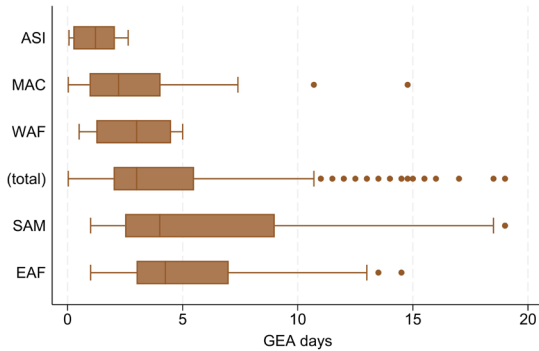
c) Average annual client' GEA days by industry (2020 Q1 – 2024 Q2)



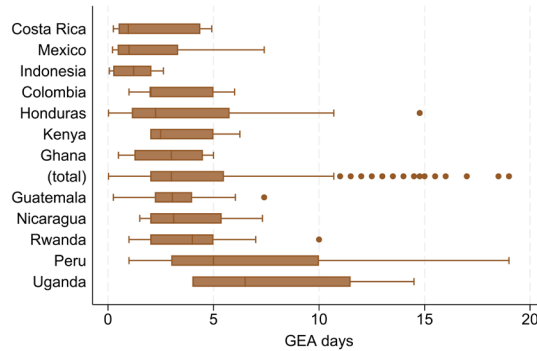
d) Average annual client' GEA days by country (2020 Q1 – 2024 Q2)



e) Distribution of annual GEA days by region (2020 Q1 – 2024 Q2)



f) Distribution of annual GEA days by country (2020 Q1 – 2024 Q2)

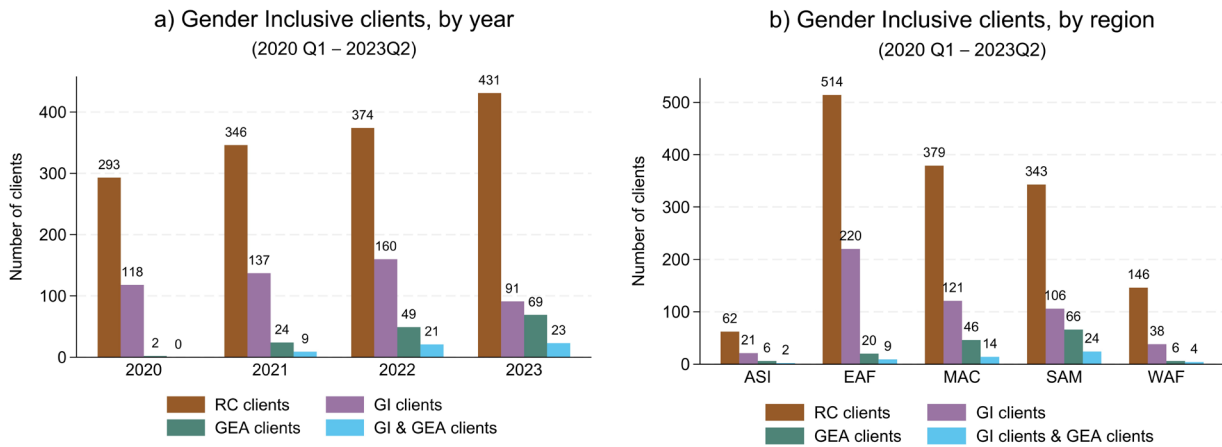


\* For 2024, the data presented corresponds only to the first two quarters of the year.

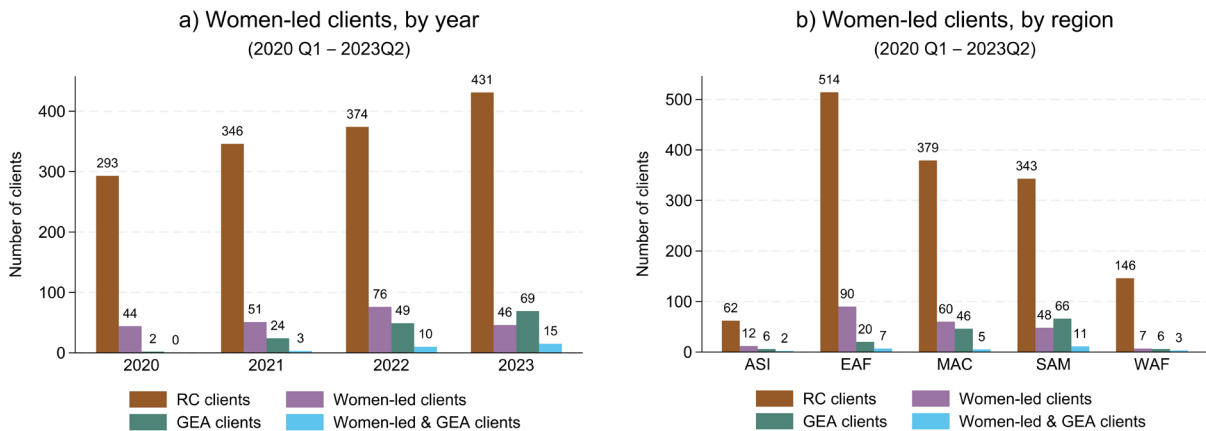
## GENDER-INCLUSIVITY: WOMEN LEADERSHIP AND PARTICIPATION

Before the GEA program began, or in the early stages of the pilot in 2020, Root Capital already had 118 clients classified as gender inclusive (Figure 4a, see Annex 1 for definition). This confirms that our social and environmental due diligence process favors clients with this profile. Nevertheless, there has been year-over-year growth in the number of gender-inclusive clients, with the proportion of GEA clients being gender inclusive increasing from 6.5% in 2021 to around 25% in 2023. This trend does not necessarily imply that GEA services are increasing gender inclusion; it could be that more gender-inclusive clients are interested in participating in GEA as the service has matured and provided more offerings. As of 2023, 21% of the clients in our sample were gender-inclusive, with 5% of total clients being both gender inclusive and receiving GEA services.

Similarly, only a small subset of women-led clients are also GEA clients (see Figure 5), highlighting that most are not receiving GEA services. However, we still see the proportion of women-led clients receiving GEA services increasing year to year.

**Figure 4. Gender-inclusive clients and GEA clients per year and region**


\* For 2023 given the structure of the data reported, the information presented corresponds only to the first two quarters of the year.

**Figure 5. Women-led clients and GEA clients per year and by region**


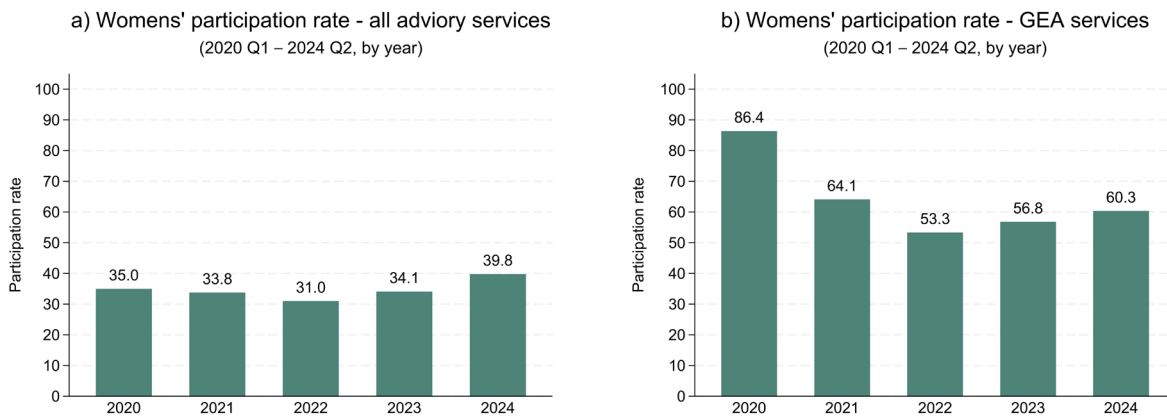
\* For 2023 given the structure of the data reported, the information presented corresponds only to the first two quarters of the year.

## WOMEN'S PARTICIPATION RATE IN ROOT CAPITAL'S ADVISORY SERVICES

The graphs below present the changes in women's participation rate in advisory services. We can see that the rate of women's participation in advisory engagements has remained stable over the years, with the exception of GEA in 2020, as the data represents only two clients.

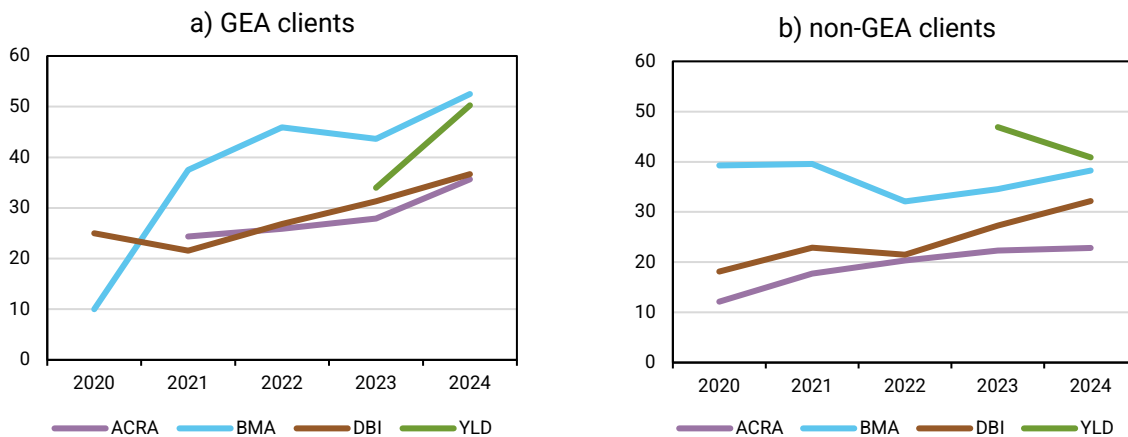
Figure 7 shows the participation rate of women for each of Root Capital’s advisory services<sup>4</sup>, divided by GEA and non-GEA clients. Overall, participation in GEA services appears to positively correlate with women's participation in other advisory services. Figure 7 also shows that women's inclusion has increased among GEA clients, while non-GEA clients in BMA and YLD have seen a decrease. For example, ACRA's women's participation rate started at 12.13% in 2020 (see Annex 2). By June 2024, it rose to 22.83% for non-GEA clients and 35.65% for GEA clients, a statistically significant difference of 12.82 percentage points.

**Figure 6. Women’s participation rate in in all Advisory services and in GEA services**



\* For 2024, the data presented corresponds only to the first two quarters of the year.

**Figure 7. Women’s participation across other advisory services by GEA client status**



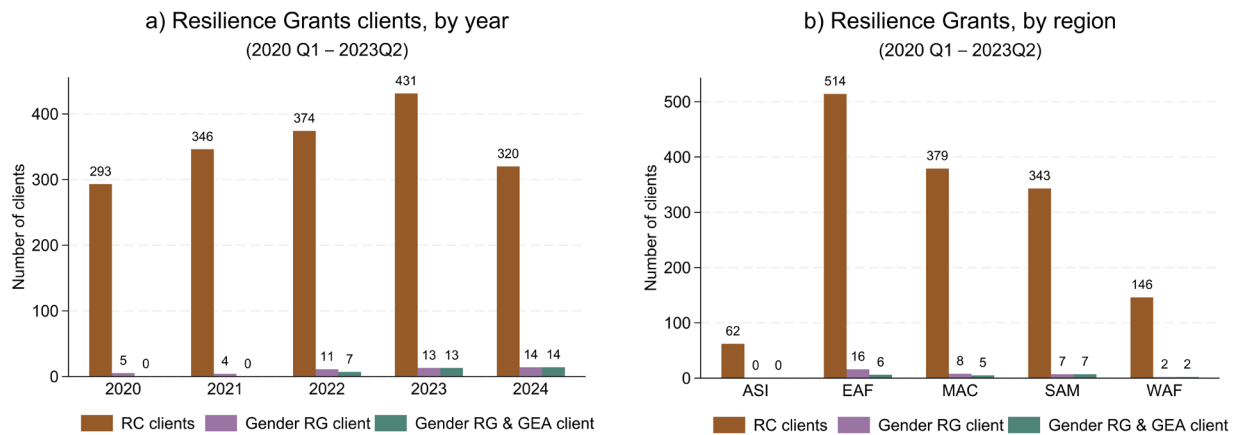
\* For 2024, the data presented corresponds only to the first two quarters of the year.

<sup>4</sup> Root Capital's other advisory services include Business Management Advisory (BMA), which covers essential agribusiness functions like financials, internal credit, strategic planning, governance, and HR; Digital Business Intelligence (DBI) provides training on digital data collection and analysis for better decision-making; Agronomic and Climate Resilience Advisory (ACRA) focuses on developing and implementing agronomic and climate adaptation plans to enhance resilience; and Youth and Leadership Development (YLD) integrates youth into existing services and offers targeted opportunities.

## RESILIENCE GRANTS

As of 2023, 3% of clients in our dataset received Gender Resilience Grants, all of whom were also GEA clients (Figure 8a). EAF has the highest number of resilience grants at 16, although this is less than half of its GEA clients (Figure 8b). SAM has the next highest number of resilience grants, with all recipients being GEA clients.

**Figure 8. Gender Resilience Grants and GEA clients per year and by region**



\* For 2024, the data presented corresponds only to the first two quarters of the year.

## SATISFACTION WITH THE SERVICE

Root Capital conducts an annual online client survey, *Voice of the Client*, to gauge the level of client satisfaction with its services. Figure 9 shows that the perceived effectiveness of GEA services has increased over the last three years. From 2021 to 2023, the percentage of clients who found the GEA service highly effective increased from 31.9% to 73.3%. In 2023 (see panel c), all clients rated the service as either effective or highly effective.

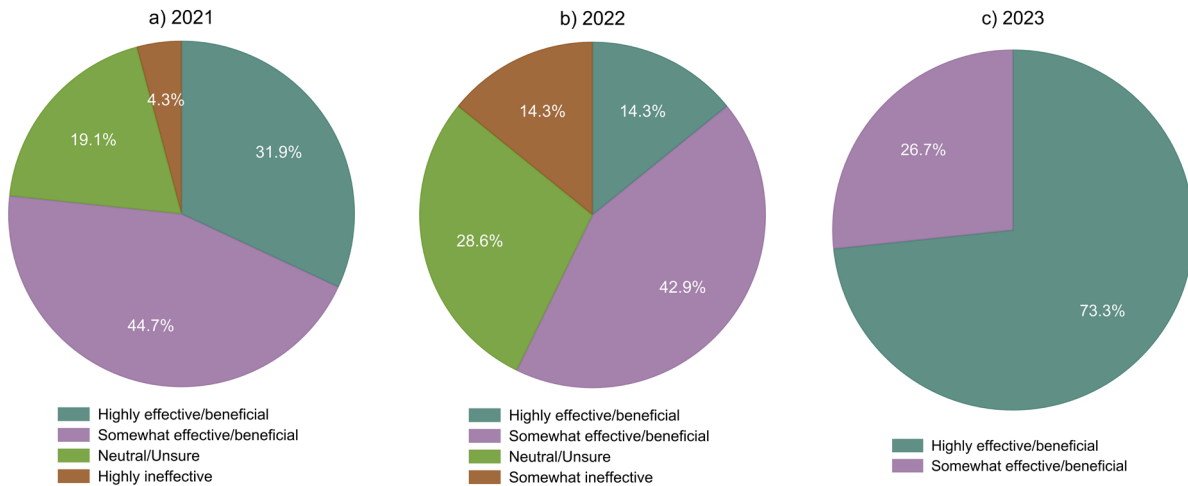
Using data from the *Voice of the Client* survey, we can also calculate the Net Promoter Score (NPS)<sup>5</sup> for Root Capital’s advisory services. Generally, an NPS above zero indicates client satisfaction.

<sup>5</sup> The Net Promoter Score (NPS®) measures customer loyalty based on responses to the question, “How likely are you to recommend Root Capital to a friend or colleague?” It is calculated by subtracting the percentage of “detractors” (scores of 0-6) from the percentage of “promoters” (scores of 9-10). Developed by Bain & Company, NPS is widely used to assess client satisfaction and gauge perceptions of service quality.

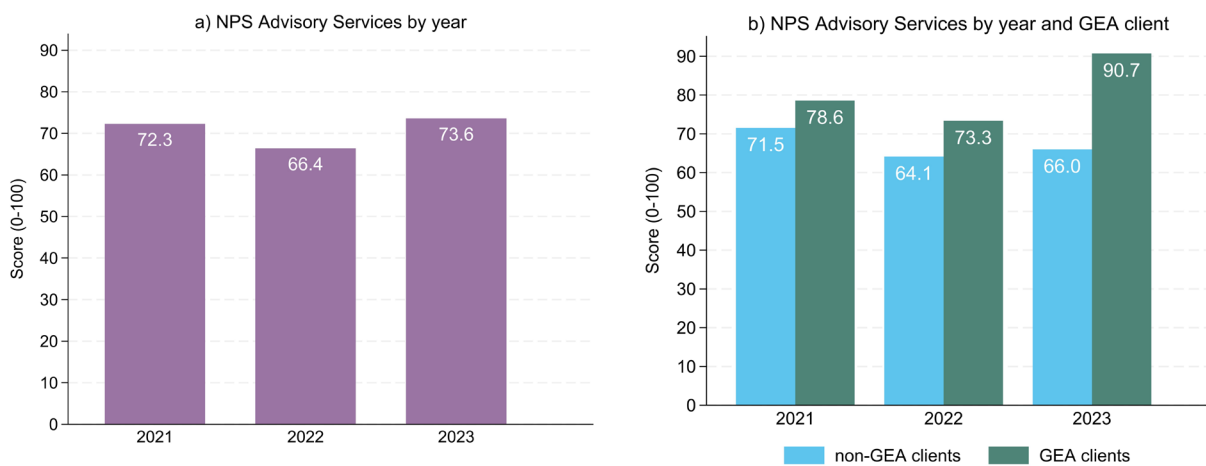
Figure 10a presents the annual NPS for advisory services. During the last three years, the NPS for all advisory services has fluctuated around 70. In 2023 we observe the highest NPS (73.6), which reflects a strong degree of satisfaction with the advisory services provided.

Figure 10b shows that GEA clients consistently have a higher NPS for Root Capital’s advisory services. In 2023, the NPS for GEA clients reached 90.7.

**Figure 9. Perceived Effectiveness of GEA Services (2021-2023)**



**Figure 10. Annual NPS for Advisory Services by GEA Client Status (2021-2023)**



## FINDINGS

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This section presents the results of our fixed effects regression models that explore the relationship between GEA and our outcome variables on gender inclusion and financial performance (see the Technical Appendix for details on the econometric specifications used).

To complement the interpretation of our results, Annex 4 provides a descriptive analysis of trends over time for the outcome variables among GEA clients, categorized by the number of years they received the service. It also details the sample size for each variable by number of years as a GEA client. For many of the outcome variables, clear increasing patterns are not evident, making it challenging to estimate statistically significant correlations with our fixed effects models. As discussed later in this document, structural and institutional changes take longer to materialize. Additionally, our monitoring data relies on variables and definitions that do not exhibit consistent variability over time, such as the categorization of gender-inclusive clients.

Reflecting our research questions, the following subsections discuss our findings in two main categories: gender inclusion and financial performance. We also explored the relationship between GEA financial investments<sup>6</sup> and our outcome variables to address our third research question.

### CAUTION IN INTERPRETING ADVISORY DAYS

It is important to interpret with caution the correlations with the number of advisory days. These correlations do not imply that every time a client receives an additional advisory day of GEA, there will be an equivalent increase in participation rates.

For example, the average participation rate of women in advisory services for clients with zero GEA days is 32.58%. For clients with zero to five GEA days, the participation rate rises to 46.03%, but it decreases to 43.11% for those receiving between five and nineteen GEA days. This suggests that the relationship between advisory days and participation rates is not linear and may be influenced by other factors.

Additionally, since 74% of GEA clients receive five or fewer GEA days, the correlations presented in this section are mostly driven by these clients. This means that the findings are heavily influenced by the experiences of clients with up to five GEA days and may not be representative of those with more advisory days. We ran robustness models excluding all clients with more than five advisory days, and our key results remained unchanged, reinforcing the need for cautious interpretation.

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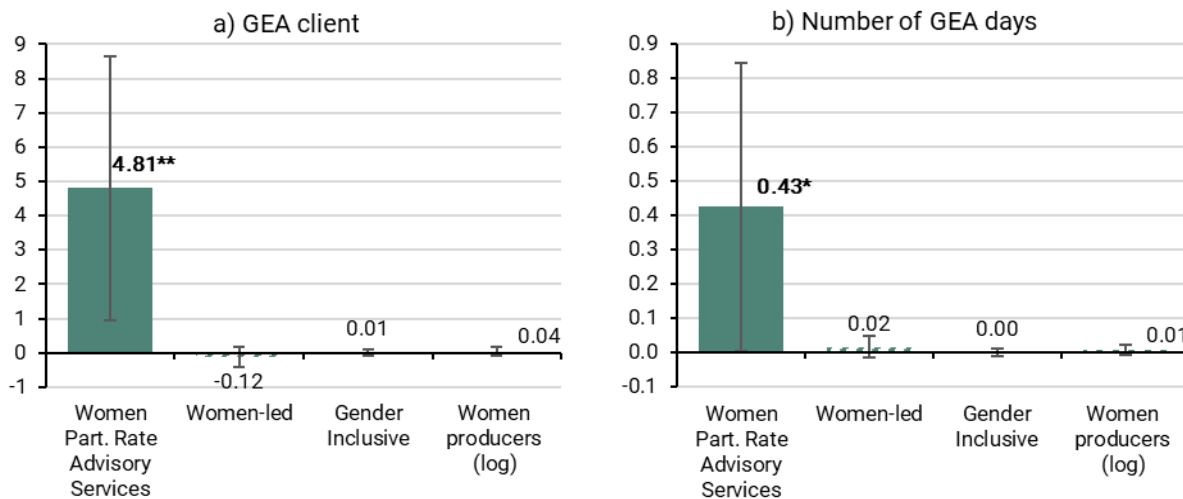
<sup>6</sup> We estimated GEA investments by reviewing the advisory services budget. This is a proxy, as it does not account for staff costs or resilience grants. For further details, please refer to Annex 1.

## Gender Inclusion

### CORRELATION WITH WOMEN'S PARTICIPATION RATES IN ADVISORY SERVICES

- We observe a positive and statistically significant relationship between GEA and women’s participation rates across all of Root Capital’s advisory services.
- On average, being a GEA client is associated with an increase of 4.8 percentage points in women’s participation rates during advisory engagements (see first bar in Figure 11a). These findings suggest that GEA services have positively changed the gender composition of participants in advisory sessions.
- In terms of the monetary investment of GEA engagements, an additional investment in GEA of \$100 is associated with an increase of 0.13% in women’s participation rates for all of Root Capital’s advisory services (see Table 12 in the Technical Appendix).
- Across the entire sample, on average one additional day of GEA engagement is associated with an increase of 0.43 percentage points in women’s participation rates (see Figure 11a), and 0.46 percentage points specifically for the coffee and cacao industries.
- Women’s participation is increasing across all advisory sessions and individual services including ACRA, BMA, DBI, and YLD. While GEA services have not yet driven deep structural changes in women’s leadership or inclusion (discussed in the following subsection), they are associated with increases in women’s participation rates in advisory engagements.

Figure 11. Correlation between GEA (clients and days) and gender inclusion outcomes - full sample



Note: Solid bars represent statistically significant results. Asterisks denote statistical significance at the confidence interval of 95% (\*\*) and 90% (\*), respectively.

## WOMEN'S LEADERSHIP AND GENDER INCLUSION

- **Our statistical analyses do not indicate any statistically significant relationship between GEA and women-led businesses or gender-inclusive enterprises.** This suggests that, after three years of implementing GEA services, we have not observed generalized changes in women's leadership and gender inclusion. Structural changes in leadership dynamics and inclusivity typically require longer timeframes to materialize due to factors such as ingrained societal norms and the need for comprehensive organizational support.<sup>7</sup>

## Financial Performance

### OVERALL FINANCIAL PERFORMANCE

- **In general, our findings suggest that GEA services are positively associated with some key financial outcomes. Our statistical analyses indicate that on average one additional day of GEA services is associated with higher sales, payments to producers, DGX scores, size of loans and total disbursements.** These effects are robust across different data sources, but we lose statistical significance when using GEA client instead of GEA days to quantify GEA services.

### IMPACT ON SALES AND PAYMENTS TO PRODUCERS

- **On average one additional day of GEA services corresponds to annual sales being approximately 1.7% higher** (see Figure 12). However, when the model uses a binary variable indicating whether a client received GEA services instead of the number of advisory days, the correlation while being positive is no longer statistically significant.
- There is also a positive correlation between the number of GEA days and the average payment to producers. **On average one additional day of GEA corresponds to 1.72% higher average payment to producers.**<sup>8</sup>
  - **On average, a \$100 increase in the investment in GEA is related to the average payments to producers being 0.38% higher.**

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<sup>7</sup> Our econometric model reflects the limited variability in the categories of women-led businesses and gender-inclusive enterprises. In our preferred specification (see Table 10 in Technical Appendix), we have only 53 observations across 18 different clients. This small sample size reduces the statistical power of the model and may also account for the lack of statistically significant results.

<sup>8</sup> These results are based on sales data from our Social and Environmental Metrics (SEMs), which proved to be the most comprehensive for our clients. We also ran fixed effects models using data from nCino, a software that houses financial statements for our clients, but these data were available only for lending clients. Despite the smaller sample size with data from nCino, the correlation remained positive and statistically significant, showing 1.63% higher sales and 1.58% higher payments to producers.

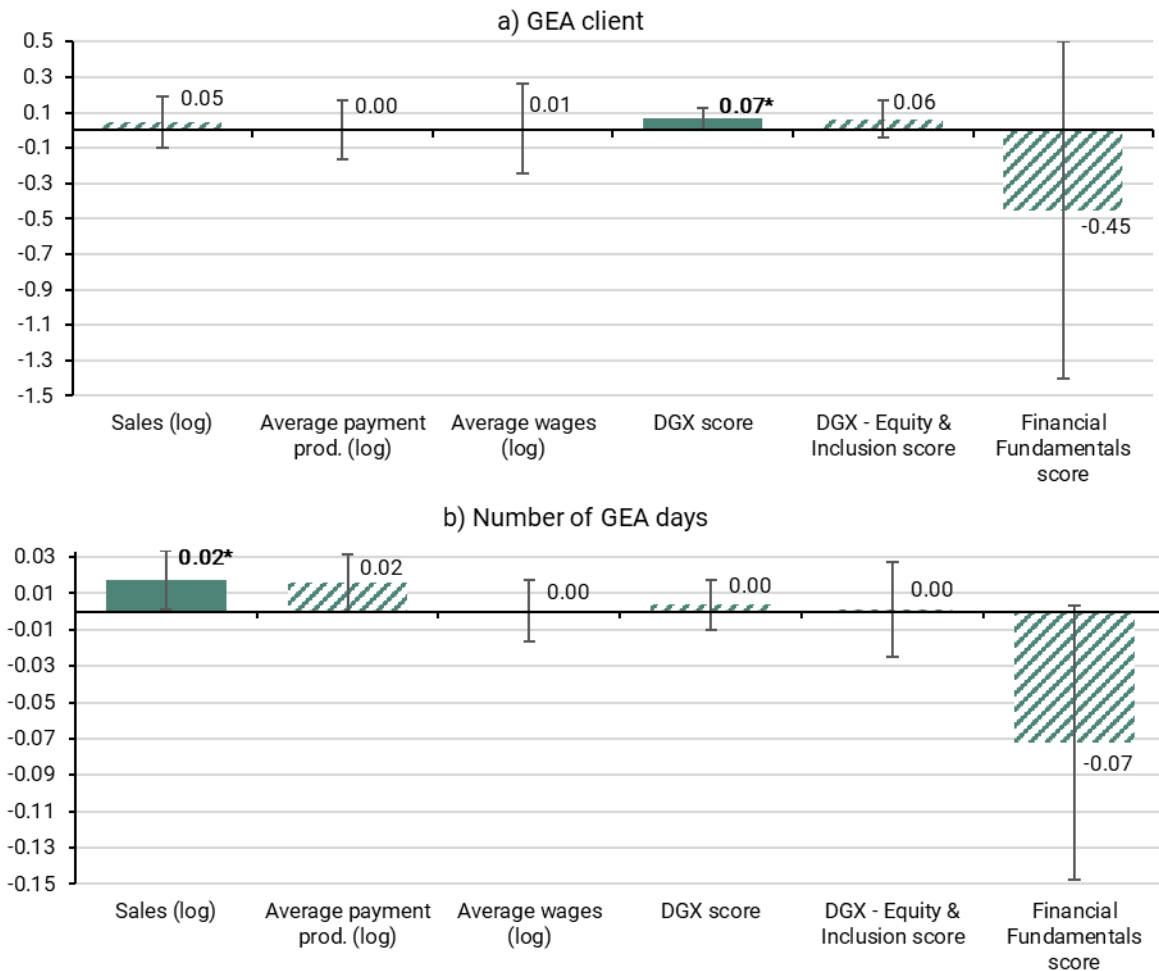
- **The positive correlation between sales and the number of GEA days is not stable and does not consistently hold true for all models.**
  - Our robustness check, which restricts the sample to GEA clients with up to five GEA days, does not show statistically significant correlations for either sales or average payments to producers.

### DGX AND FINANCIAL FUNDAMENTALS SCORES

- **Being classified as a GEA client is associated with at least 6.5 units higher overall DGX score** (ranging from 0 to 100). This result is consistent across the full sample, the coffee and cacao industries subsample, and when restricting the sample to GEA clients with five GEA days or less. However, we lose statistical significance when using the number of GEA days.
- **The Financial Fundamentals score for coffee and cacao industries shows a negative statistically significant correlation**, with on average each additional GEA day associated with a decrease of 0.087 units in this score (for more see Table 10 in Technical Appendix)<sup>9</sup>.
  - This negative correlation likely occurs because BMA clients start with lower Financial Fundamentals scores and improve over time, eventually becoming ready for other advisory services, including GEA. Thus, most GEA clients have already passed the period of increasing their Financial Fundamentals scores.
  - Approximately 40% of clients improve their Financial Fundamental scores after one year of receiving Root Capital advisory. On average, progress decreases in subsequent years, with 15% improving in the second year and 6% in the third year. Scores tend to stabilize at around 15 out of a possible 24 points.

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<sup>9</sup> This Root Capital proprietary tool measures the performance of a client across six business functions, with a score between 0 and 4 points assigned for each category.

**Figure 12. Correlation between GEA (clients and days) and financial performance outcomes - full sample**


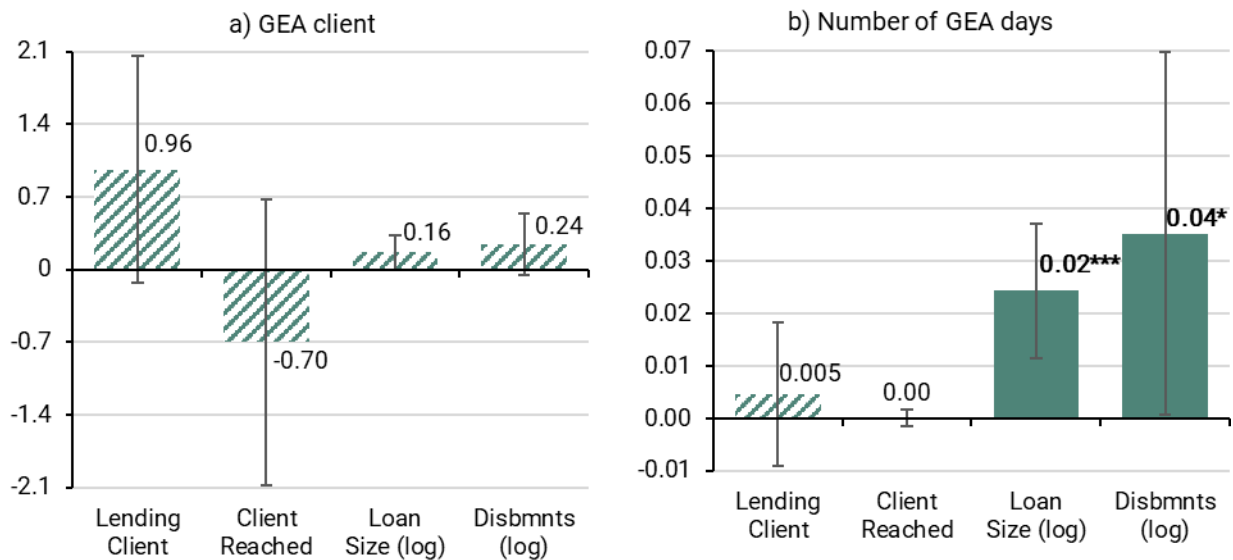
Note: Solid bars represent statistically significant results. Asterisks denote statistical significance at the confidence interval of 95% (\*\*) and 90% (\*), respectively.

## LENDING AND LOAN PERFORMANCE

- We find positive and statistically significant correlations between GEA days and size of loans and total disbursements (see Figure 13).
  - **On average one additional day of GEA is associated with having a 2.43% larger loan size** (Figure 13). Though we cannot claim that GEA causes any increase in likelihood to be a lending client, this seems to show a pattern of the type of clients that are also receiving GEA services and their trends in financial performance.
  - **Similarly, on average one additional day of GEA is associated with a disbursement that is on average 3.52% larger** (Figure 13). As with the credit size finding, this points to a characteristic of GEA clients.

- **An increase in GEA investment of \$100 is associated with a 0.42% larger loan size (Figure 13) and 0.88% larger disbursement.** However, these results are not significant when using the binary GEA client variable or when using the number of GEA days, restricted to clients who received up to 5 days of the service.

**Figure 13. Correlation between GEA (clients and days) and loan performance outcomes - full sample**



Note: Solid bars represent statistically significant results. Asterisks denote statistical significance at the confidence interval of 95% (\*\*), and 90% (\*), respectively.

## CONCLUSIONS

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This evaluation shows positive trends in women's participation rates in advisory services overall. GEA clients have higher women's participation rates in advisory services compared to non-GEA clients, with notable increases across all advisory sessions. However, we found no evidence for changes in other variables related to gender inclusion (women-led businesses or gender-inclusive enterprises), possibly due to the structural nature of these variables and a lack of variability of these outcome indicators.

In terms of financial performance, GEA services are associated with positive outcomes such as higher sales, payments to producers, DGX scores, loan sizes, and total disbursements. However, there is no significant impact on average wages or the gender and equity component of the DGX score. These associations highlight the value of GEA services, though they may be influenced by the specific characteristics of the clients who receive these services.

While these findings are encouraging, it is important to interpret them with caution, as they represent correlations rather than causal relationships. The GEA program has only been operating for a few years, resulting in a limited number of clients and observations, which restricts methodologies that would allow us to isolate a causal effect. For this evaluation, we also prioritized utilizing available data to minimize the burden on our clients and enhance the efficiency of our monitoring and evaluation resources. However, our monitoring data has significant limitations: i) It relies on existing output or outcome variables with limited variability, and ii) these variables were not specifically designed to measure GEA's outcomes. Finally, our client selection process, which favors those with positive social impact, is correlated with several of the positive outcomes observed.

It is essential to highlight our findings on the higher women's participation rates in advisory services. Root Capital is opening the door for more women to participate, investing not only in enhancing their skills but also in fostering inclusion and future leadership. By creating spaces for underrepresented groups, Root Capital ensures that advisory sessions become platforms for both capacity building and decision-making. This work paves the way for women to access more relevant and impactful roles within their organizations.

## REFERENCES

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Naeve, K., & Moehler, V. (2022). *Inclusion Pays: The Returns on Investing in Women in Agriculture*. Root Capital Impact Study. <https://rootcapital.org/publication/inclusion-pays-women-in-agriculture/>

# ANNEXES

## Annex 1: Key Indicators and Definitions

Table 6. Definitions for key indicators

Topic	Indicator	Description
<b>General Advisory</b>	Advisory service (engagements)	Refers to both training workshops and on-site engagements. Data can be disaggregated by methodology (online/remote and in-person), and regions (EAF, WAF, SAM, MAC, Indonesia).
	Number of Advisory Days	Number of days where an advisory service. One advisory service day is counted as 8 hours.
	Number of Advisory participants	Total number of people who participate in an advisory service, calculated at the level of the advisory engagement.
	Number of Female Participants	Number of women who participate in an advisory service, calculated at the level of the advisory engagement.
	Female Participation Rate	Female rate of participation = Female participants/Total Participants (per engagement).
	GEA client	A client that, in a given year, has either received at least one substantial advisory service OR who has completed a diagnostic and received “substantial services” in the subsequent year.
	Proxy of GEA investment	Estimation of the monetary value of every GEA day.  Using the annual GEA expenses by country, the average cost per GEA day is calculated and then multiplied by the number of advisory days per client.  GEA expenses by country do not include staff costs nor resilience grants.
<b>Gender-inclusivity</b>	Gender-inclusive	Root Capital considers a business gender-inclusive if:  Women make up more than 30% of enterprise farmer suppliers and employees OR the enterprise is women-led and women make up more than 20% of enterprise farmers suppliers and employees.
	Woman-led	Root Capital considers a business women-led if:

		<p>1) One or more women hold the position of Executive Director, Senior Manager, Director of Operations, President or equivalent level of leadership; OR</p> <p>2) If 51% or more of the membership of the cooperative or the membership of the board of directors (or similar government group) are women; OR</p> <p>3) 51% or more of managers are women; OR</p> <p>4) 51% or more of the business is owned by women.</p>
	Number of women on board	Number of women on client's board of directors
	Number of women employees	Number of full-time employees for a client
	Number of women producers	Number of female producers affiliated with a client
	Gender programs/policies	<p>Enterprise provides at least one gender-inclusive policy or program for employees and/or producers, specifically one of the following:</p> <ul style="list-style-type: none"> <li>- Policy prohibiting gender discrimination, including discrimination in hiring or pay based on gender</li> <li>- Policy prohibiting sexual harassment (in the workplace or among members) and/or a policy or protocol for reporting incidences of sexual harassment</li> <li>- Trainings or workshops for staff and/or producers about gender equality</li> <li>- Provide or sponsor childcare for meetings, trainings, or other events.</li> <li>- Training, mentorship, or other initiatives that support talent mobility for female employees or producers.</li> <li>- For enterprise staff only: Flexible options for work arrangements (such as working from home, job sharing, flexible work schedules, or maternity or paternity leave).</li> </ul>
	Gender-inclusion DGX scores	<p>DGX score for women representation, score for women participation in leadership and decision-making, and score for client's investments in gender equity.</p> <p>For more on the DGX tool see DGX variable below.</p>
	Gender Equity Grants	Program that offers catalytic grant funding to clients taking action to strengthen their impact related to one of our impact pillars, for example gender inclusion.
<b>Financial Performance</b>	DGX	Diagnostic tool that allows the Root Capital to examine the internal and external behavior of a company through evaluation of the current operational and strategic situation, maturity, and its business culture.

	Financial Fundamentals	Outcome-level metrics to assess progress on a client's business management capacities.
	Payments to producers	Annual monetary value of payments made to the suppliers of the main product.
	Employee Wages	Annual monetary value of salaries/wages paid to employees.
	Sales	Annual sales related to the organization's main product during the last fiscal year.
<b>Loan Performance</b>	Lending client	A client who has received a Root Capital loan in a given year
	Clients Reached	We report "Lending clients reached" to capture the number of borrowers with an outstanding Root Capital loan during a certain period. Clients reached are businesses that had a material outstanding loan balance ( $\geq 1,000$ USD) on a non-collateral dependent loan at any point in the reporting period. Clients with a collateral dependent (CD) loan for an entire year are excluded from this metric. For annual reporting, clients are added to the annual "Lending clients reached" total in the quarter in which they first had a material, non-CD outstanding balance.
	Loan size approved	Total amount of loan approved for loan to client
	Loan disbursements	Total amount disbursed or released to client
	Loan use	Loan use types include: <ul style="list-style-type: none"> <li>• Working Capital</li> <li>• Seasonal Capital</li> <li>• Climate Loan</li> </ul>
	RC primary lender	Indicates if Root Capital accounts for over 50% of a client's total loans.
	Additionality	Root Capital assesses additionality based on whether or not a loan is offered on the same terms from another source. High-additionality loans are not offered from any other source; medium-additionality loans are not offered from a commercial source.
<b>Voice of the Client Survey</b>	GEA rating	Client satisfaction ratings for Root Capital services, including GEA, collected annually.

## Annex 2: General Profile of the Root Capital Clients

Table 7. Gender Equity Advisory clients per region and year

Number of GEA clients region and year					
Region	2020	2021	2022	2023	2024
<b>ASI</b>	0	0	0	6	8
%	-	-	-	35.3	32.0
<b>EMEA</b>	0	0	5	15	22
%	-	-	3.0	10.1	24.2
<b>MAC</b>	1	11	14	20	26
%	1.4	11.0	20.6	14.1	28.9
<b>SAM</b>	1	13	27	25	19
%	1.3	15.9	29.7	27.2	19.8
<b>WAF</b>	0	0	3	3	3
%	-	-	9.1	10.0	16.7
<b>Total</b>	<b>2</b>	<b>24</b>	<b>49</b>	<b>69</b>	<b>78</b>
%	0.7	6.9	13.1	16.0	24.4

Table 8. Profile of Root Capital Clients by categorization of GEA client (2021-2023)

a) 2021

	All clients						non-GEA		GEA	
	n	p10	p25	Median	p75	p90	n	Median	n	Median
Number of producers	245	108	261	586	1,820	4,417	229	615	16	409
Sales (\$ USD)	231	319,700	598,600	1,630,000	4,329,000	8,121,000	215	1,610,000	16	4,247,000

Payment to producers (\$ USD)	232	209,300	473,900	1,343,000	3,643,000	7,076,000	216	1,255,000	16	3,750,000
Number of Advisory days	320	2	3	6.5	13.5	28.65	296	6.25	24	21
DGX score (0-100)	135	40.22	50.26	60.68	67.78	74.73	124	60.37	11	63.00
FF score (0-24)	202	10	12	15	18	20	181	15	21	15
Lending Client (%)	219	0	0	100	100	100	199	63.32	20	85.00
Loan Size (\$ USD)	143	250,000	300,000	600,000	1,000,000	2,000,000	126	572,700	17	1,000,000
Disbursements (\$ USD)	141	195,000	300,000	700,000	1,614,000	2,825,000	124	700,000	17	1,060,000
High Add. (%)	143	0	0	100	100	100	126	47.62	17	76.47

**b) 2022**

	All clients						non-GEA		GEA	
	n	p10	p25	Median	p75	p90	n	Median	n	Median
Number of producers	280	75.5	241.5	503	1,645	4,498	248	515.5	32	467
Sales (\$ USD)	266	298,600	680,400	1,782,000	4,024,000	8,723,000	234	1,746,000	32	2,702,000
Payment to producers (\$ USD)	266	219,800	531,900	1,429,000	3,921,000	8,819,000	234	1,331,000	32	2,275,000
Number of Advisory days	343	2	2	5	15	29.13	294	4.635	49	22.03
DGX score (0-100)	94	34.83	41.38	49.48	60.46	69.73	89	0.49	5	62.92
FF score (0-24)	244	7	11	14	17	19	209	14	35	16
Lending Client (%)	231	0	0	100	100	100	193	70.47	38	73.68
Loan Size (\$ USD)	164	200,000	300,000	500,000	1,000,000	2,000,000	136	500,000	28	500,000
Disbursements (\$ USD)	160	141,500	257,600	425,800	1,000,000	2,239,000	132	403,800	28	564,300
High Add. (%)	164	0	0	0	100	100	136	47.06	28	57.14

**c) 2023\***

	All clients						non-GEA		GEA	
	n	p10	p25	Median	p75	p90	n	Median	n	Median
Number of producers	136	109	300	593	2,077	4,764	101	633	35	512
Sales (\$ USD)	137	254,500	662,800	1,742,000	4,365,000	8,381,000	102	1,317,000	35	2,231,000
Payment to producers (\$ USD)	137	184,300	478,900	1,382,000	3,664,000	7,085,000	102	1,128,000	35	1,994,000
Number of Advisory days	412	1.75	2.225	7.515	18.75	29.5	343	5	69	25.5
DGX score (0-100)	165	35.71	49.45	56.37	67.12	74.53	136	56.12	29	60.35
FF score (0-24)	204	8	11	14	17	20	166	14	38	17
Lending Client (%) **	237	0	0	100	100	100	179	65.92	58	74.14
Loan Size (\$ USD)	161	200,000	250,000	400,000	750,000	1,500,000	118	350,000	43	500,000
Disbursements (\$ USD)	151	105,000	190,000	317,000	820,000	1,500,000	109	310,000	42	329,000
High Add. (%) **	161	0	0	0	100	100	118	42.37	43	44.19

\* For 2023 given the structure of the data reported, the information presented corresponds only to the first two quarters of the year.

\*\* For dichotomous variables (lending clients and high additionality), we present the proportion of clients possessing the relevant characteristic. We use the median value for the rest of the variables analyzed (number of producers, sales, payments to producers, advisory days, DGX and FF scores, loan size, and total disbursements).

## Annex 3: Advisory Days by Service Type

Table 9. Average Advisory Days by Service Type: GEA Clients vs. non-GEA Clients

Advisory Service	GEA clients (mean)	non-GEA clients (mean)	Difference in means	Advisory Service	GEA clients (mean)	non-GEA clients (mean)	Difference in means
<b>a) 2020</b>				<b>d) 2023</b>			
GEA	86.36	--	--	GEA	58.64	31.23	27.41***
<i>n</i>	2	0		<i>n</i>	69	5	
ACRA	--	12.13	--	ACRA	27.89	22.3	5.59
<i>n</i>	0	32		<i>n</i>	47	72	
BMA	10.00	39.28	-29.28	BMA	43.61	34.58	<b>9.03**</b>
<i>n</i>	2	110		<i>n</i>	63	264	
DBI	25	18.13	6.87	DBI	31.3	27.28	4.02
<i>n</i>	2	30		<i>n</i>	50	80	
<b>b) 2021</b>				<b>e) 2024*</b>			
GEA	64.09	--	--	GEA	59.8	68.57	-8.77
<i>n</i>	18	0		<i>n</i>	78	5	
ACRA	24.36	17.71	6.65	ACRA	35.65	22.83	<b>12.82***</b>
<i>n</i>	12	55		<i>n</i>	51	46	
BMA	37.50	39.56	-2.06	BMA	52.49	38.22	<b>14.27***</b>
<i>n</i>	22	160		<i>n</i>	53	180	
DBI	21.56	22.91	-1.35	DBI	36.67	32.17	4.5
<i>n</i>	14	59		<i>n</i>	55	76	
<b>c) 2022</b>				YLD			
GEA	53.52	50	3.52	<i>n</i>	33.98	46.9	-12.92
<i>n</i>	36.00	2		<i>n</i>	11	19	
ACRA	25.89	20.34	5.55				
<i>n</i>	24	67					
BMA	45.88	32.1	<b>13.78***</b>				
<i>n</i>	44.00	201					
DBI	26.84	21.46	5.38				
<i>n</i>	32	75					

\* For 2024, the data presented corresponds only to the first two quarters of the year.

## Annex 4: Trends over time of outcome variables

This annex presents a visual inspection of the trends over time of our outcome variables. Figure 14 to Figure 17 present the trends over time of our outcome variables among GEA clients. Firstly, on the left-hand side column, graphs (a) and (c), show the sample size by year as a GEA client for each of the variables listed in Table 1. Key indicators (if the sample size is the same for a group of variables, it is presented in the same series).

The period of analysis is standardized from Year 1 to Year 4, where Year 1 represents the first year as a GEA client, and Year 4 corresponds to the fourth year of receiving the service. For some variables, data for Year 4 is unavailable, meaning the outcome of interest cannot be observed across four consecutive periods. This may occur because there were no clients receiving GEA every year or due to the inherent periodicity of the variables under analysis.

Secondly, on the right-hand side column, graphs (b) and (d), present the actual trends over time for each of our outcome variables. It is important to notice that for those years with a sample size lower than 10, the average value in graphs on the right-hand side is not presented. Although this visual inspection may not display obvious improvements, our detailed statistical analysis indicates that GEA services are positively linked to better outcomes for clients. Our econometric models, which compare GEA clients with clients not receiving GEA and control for specific client characteristics, estimate robust correlations between GEA and these outcome variables (see Technical Appendix for detailed regression parameters).

**Figure 14. Sample size and trends by year of Gender Inclusion variables**

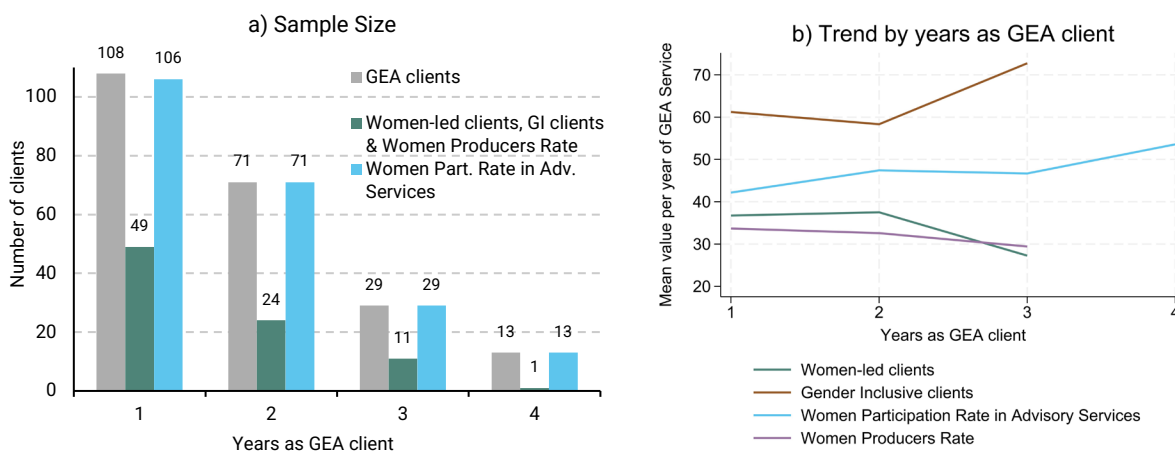


Figure 15. Sample size and trends by year of financial performance selected variables

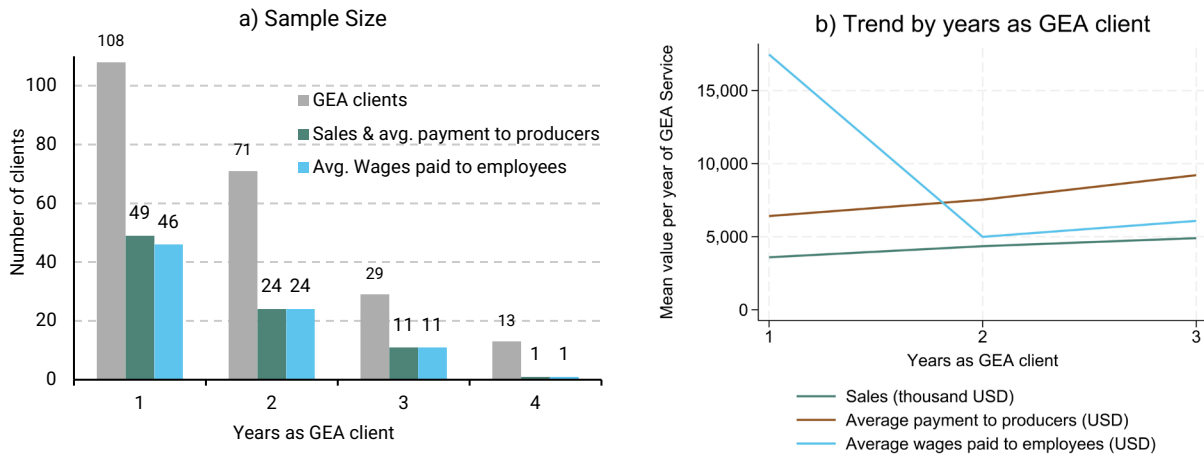
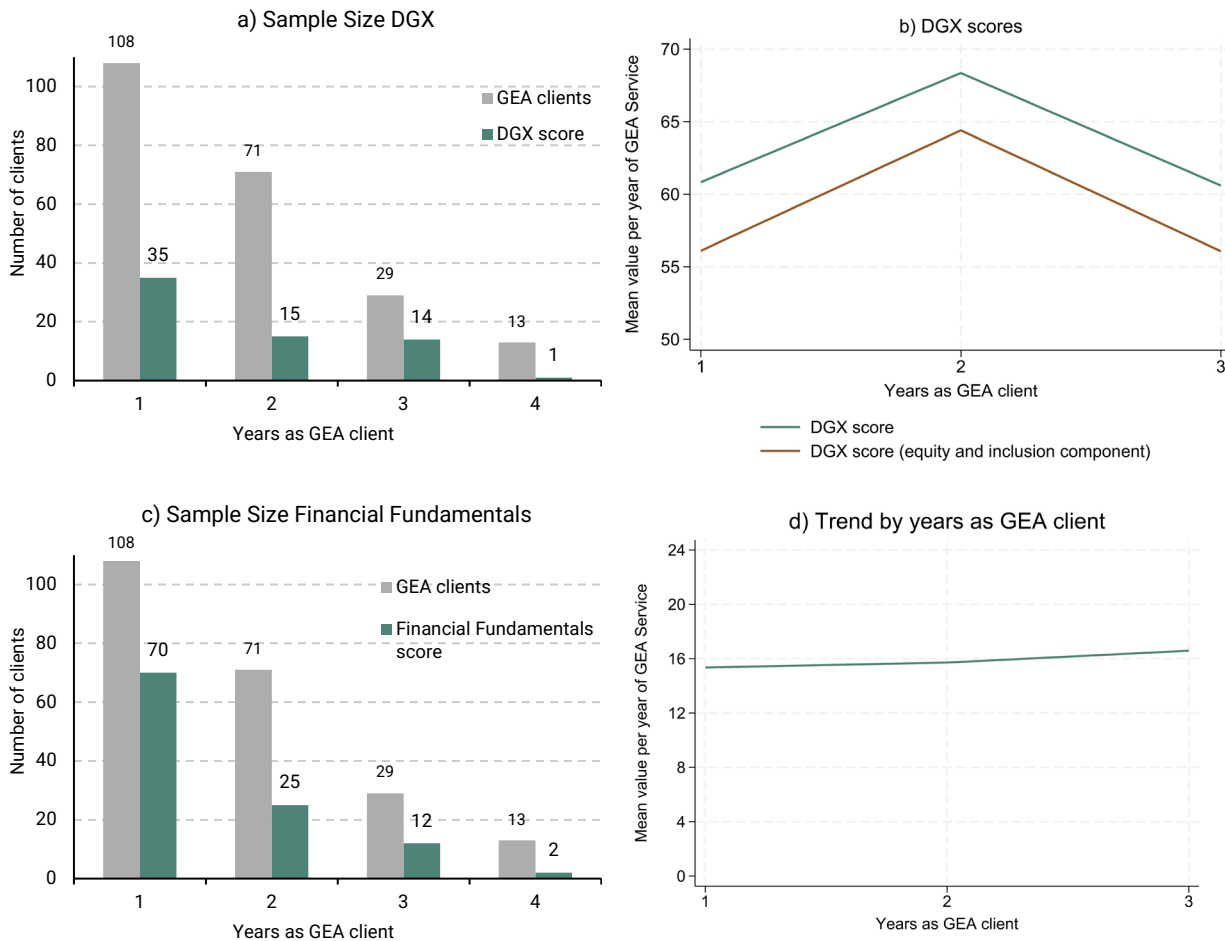
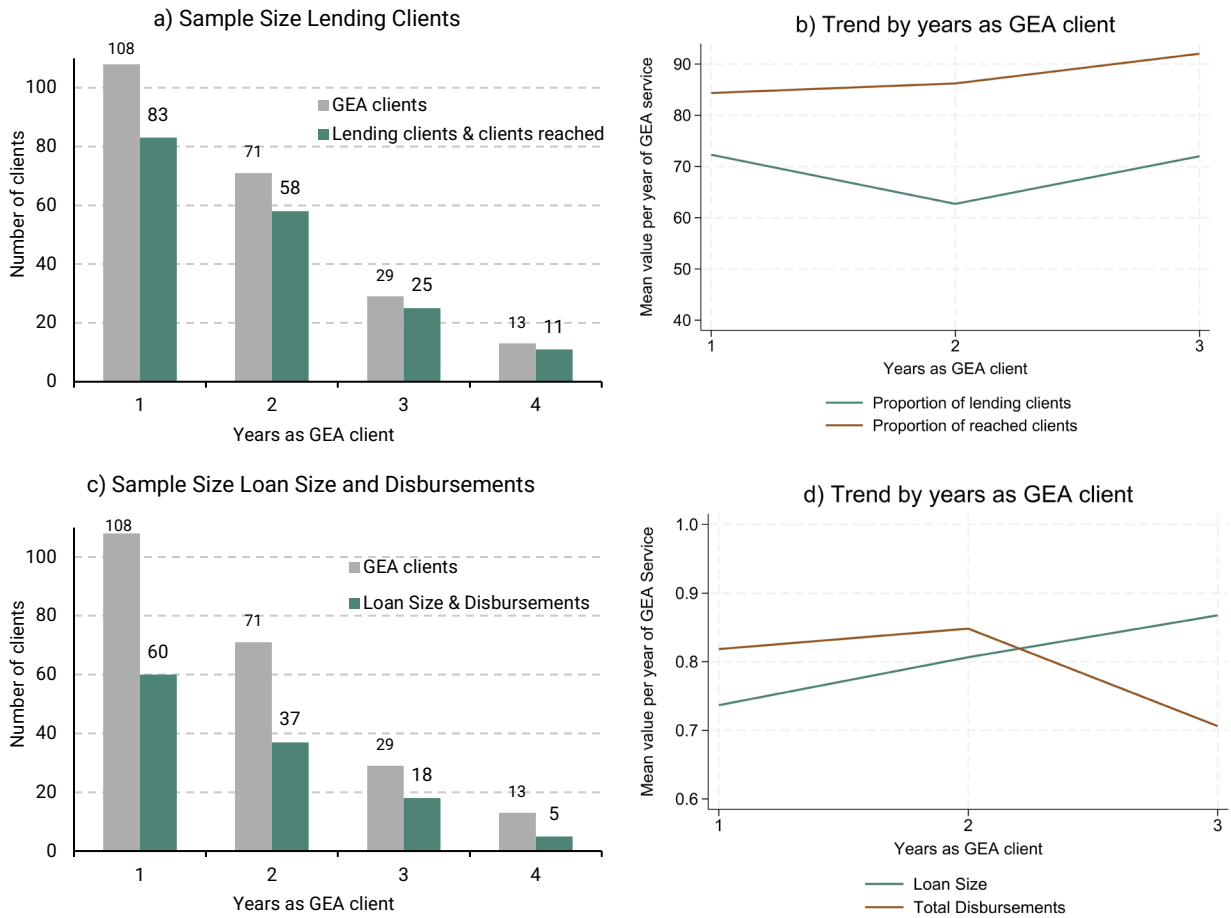


Figure 16. Sample size and trends by year of DGX and Financial Fundamentals variables



**Figure 17. Sample size and trends by year of Loan Size and Disbursements**


# TECHNICAL APPENDIX

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## Statistical Analysis Approach

We employed multivariate fixed-effects regression models to analyze the relationship between Root Capital's GEA services and two main categories of outcomes: gender inclusion and financial performance. This approach accounts for both observed and unobserved client-specific characteristics as well as broader time-related factors, ensuring robust results.

Our aim is to identify credible correlations rather than establish direct cause-and-effect relationships. The data does not allow for a quasi-experimental approach that could isolate causal effects of GEA services on the outcomes of interest.

We constructed a panel dataset using Root Capital's monitoring data, tracking clients from 2020 to 2024. This dataset enables comparisons between clients who received GEA services and those who did not, while controlling for within-client changes over time, such as organizational size, workforce composition, and technical or agronomic capacity. Year-specific variables were included in our models to account for unobserved time-varying factors, such as macroeconomic conditions or industry trends.

The fixed-effects specifications are presented in equations A1.1 and A1.2 below. For each specification, we evaluated three measures of GEA services:

1. A binary variable indicating whether a client received GEA services (as defined earlier in the report).
2. A continuous variable representing the number of GEA advisory days provided to each client annually.
3. A continuous variable serving as a proxy for the financial investment in GEA engagements by year and client.

The parameters of interest from each fixed-effects regression are reported in the next section of the Technical Appendix. By leveraging fixed-effects regression and incorporating year-specific variables, we isolated within-client and time-specific variations, ensuring our findings reflect consistent patterns in the data. However, while this method provides strong statistical insights, it does not permit to isolate treatment-effects.

To explore potential differences across industries within Root Capital's portfolio, we estimated each regression model for two samples:

- The full portfolio sample covering all Root Capital clients.
- A subsample of clients in the coffee and cacao industries.

This approach allows us to examine whether the relationships between GEA services and the key outcomes vary by sector, adding depth to our analysis.

Finally, we conducted robustness checks using alternative econometric specifications to validate our results or restricting our sample size to eliminate outliers. In this document, we present an extended model incorporating resilience grants into the fixed-effects regressions (equation A1.1). Parameters from other specifications, including those accounting for additional advisory services, are available upon request. Importantly, the general findings remain consistent across these alternative models, underscoring the robustness of our conclusions.

The two fixed-effects regression models are:

$$Y_{it} = \beta_0 + \beta_1 \cdot GEA_{it} + \beta_2 \cdot RG_{it} + \beta_3 \cdot RG_{it} \cdot GEA_{it} + \sum_{k=4} \beta_k X_{it} + \sum_{t=2020}^{2024} \gamma_t \cdot year_t + \alpha_i + \epsilon_{it} \quad (A1.1)$$

$$Y_{it} = \beta_0 + \beta_1 \cdot GEA_{it} + \sum_{k=2} \beta_k X_{it} + \sum_{t=2020}^{2024} \gamma_t \cdot year_t + \alpha_i + \epsilon_{it} \quad (A1.2)$$

Where:

- $Y_{it}$  represents each of the dependent variables for organization  $i$  in year  $t$ , including:
  - Women-led businesses
  - Women inclusive businesses
  - Number of women producers
  - Participation rate in advisory sessions
  - Sales
  - Average payments to producers
  - Average wages and salaries paid to employees
  - DGX overall score and the DGX Gender Equity and Inclusion subcomponent
  - Financial Fundamentals score
  - Lending Clients
  - Reached Clients (lending)

- Loan Size
- Total Disbursements
- $\beta_1$  is the GEA parameter of interest, which is represented by one of the three variables for GEA services:
  - A dummy variable  $GEA\_client_{it}$  indicating whether the organization is defined as GEA client.
  - A continuous variable  $GEA\_days_{it}$  for the number of GEA advisory days.
  - A continuous variable  $GEA\_investment_{it}$  for the proxy of the monetary investment of GEA engagements during the year.
- $RG_{it}$  is a dummy variable that identifies the organizations  $i$  that received a resilience grant in year  $t$ .
- $\sum_k \beta_k X_{it}$  represents a summation over control variables  $X_{it}$ , which include:
  - Hectares cultivated by producers.
  - Number of full-time equivalent employees.
  - Number of agronomist technicians.
  - A dummy variable to identify gender inclusive organizations (for those models in which the dependent variable is not related to gender inclusion).
- $\sum_{t=2020}^{2024} \gamma_t \cdot year_t$  are year dummy variables controlling for unobserved factors varying over time.
- $\alpha_i$  are client-specific fixed effects (time-invariant characteristics).
- $\epsilon_{it}$  is the error term, capturing unobserved within-client variation over time.

## Fixed effects regression parameters of interest

Table 10. Fixed-effects regressions. GEA parameters of interest – model (A1.1)

a) Gender Inclusion Outcomes

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	Women-led				Gender Inclusive	Gender Inclusive	Gender Inclusive	Gender Inclusive
GEA client	-0.1169 (0.18548)		0.0432 (0.15846)		0.0088 (0.04519)		0.0015 (0.04088)	
GEA days		0.0159 (0.01930)		0.0163 (0.01956)		0.0008 (0.00714)		0.0008 (0.00714)
Observations	85	53	70	41	119	74	101	74
	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)
	Women producers (log)	Women producers (log)	Women producers (log)	Women producers (log)	Women Part. Rate Advisory Services	Women Part. Rate Advisory Services	Women Part. Rate Advisory Services	Women Part. Rate Advisory Services
GEA client	0.0399 (0.07637)		0.0629 (0.07554)		<b>4.8072**</b> (2.33625)		<b>5.2462**</b> (2.56366)	
GEA days		0.0096 (0.00896)		0.0111 (0.00955)		<b>0.4254*</b> (0.25449)		<b>0.4571*</b> (0.25903)
Observations	811	516	628	456	1,241	1,241	1,030	1,030
Full Sample	Yes	Yes	No	No	Yes	Yes	No	No
Coffee & cacao	No	No	Yes	Yes	No	No	YES	YES
	(17)	(18)	(19)	(20)	(21)	(22)	(23)	(24)
	Women Part. Rate ACRA	Women Part. Rate BMA	Women Part. Rate DBI	Women Part. Rate YLD	Women Part. Rate ACRA	Women Part. Rate BMA	Women Part. Rate DBI	Women Part. Rate YLD
GEA client	<b>0.0616*</b> (0.03518)	-0.0327 (0.02604)	0.0086 (0.03760)	-0.1334 (0.20232)	0.0294 (0.03634)	-0.0200 (0.02788)	0.0332 (0.03870)	–
Observations	406	1,098	473	81	366	904	457	52
Full Sample	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Coffee & cacao	No	No	No	No	No	No	No	No
	(25)	(26)	(27)	(28)	(29)	(30)	(31)	(32)
	Women Part. Rate ACRA	Women Part. Rate BMA	Women Part. Rate DBI	Women Part. Rate YLD	Women Part. Rate ACRA	Women Part. Rate BMA	Women Part. Rate DBI	Women Part. Rate YLD
GEA days	<b>0.0088**</b> (0.00344)	-0.0012 (0.00278)	0.0035 (0.00425)	0.0097 (0.02126)	<b>0.0067**</b> (0.00340)	-0.0004 (0.00281)	0.0047 (0.00436)	<b>0.1107***</b> (0.02708)
Observations	406	1,098	473	81	366	904	457	52
Full Sample	No	No	No	No	No	No	No	No
Coffee & cacao	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Standard errors in parentheses. Asterisks denote statistically significant parameters: \*\*\* p<0.01, \*\* p<0.05, \* p<0.1.

**b) Financial and Loan Performance Outcomes**

	(33)	(34)	(35)	(36)	(37)	(38)	(39)	(40)
	Sales (log)				Average payment prod. (log)	Average payment prod. (log)	Average payment prod. (log)	Average payment prod. (log)
GEA client	0.0461 (0.08924)		0.0645 (0.09143)		0.0003 (0.10137)		0.0214 (0.09134)	
GEA days		<b>0.0173*</b> (0.00964)		<b>0.0185*</b> (0.00995)		0.0158 (0.00962)		0.0151 -0.00924
Observations	787	509	617	449	794	510	623	617
	(41)	(42)	(43)	(44)	(45)	(46)	(47)	(48)
	Average wages (log)	Average wages (log)	Average wages (log)	Average wages (log)	DGX score	DGX score	DGX score	DGX score
GEA client	0.0090 (0.15484)		0.0899 (0.16071)		<b>0.0650*</b> (0.03861)		<b>0.0819**</b> (0.03306)	
GEA days		0.0002 (0.01025)		0.0018 (0.01011)		0.0036 (0.00824)		0.0050 (0.00851)
Observations	776	509	617	450	135	115	118	99
	(49)	(50)	(51)	(52)	(53)	(54)	(55)	(56)
	DGX score Equity & Inclusion	DGX score Equity & Inclusion	DGX score Equity & Inclusion	DGX score Equity & Inclusion	Financial Fund. score	Financial Fund. score	Financial Fund. score	Financial Fund. score
GEA client	0.0632 (0.06218)		0.0840 (0.06244)		-0.4507 (0.57664)		-0.6925 (0.63049)	
GEA days		0.0012 (0.01572)		0.0030 (0.01665)		-0.0722 (0.04574)		-0.0870* (0.05145)
Observations	135	115	118	99	356	327	304	288
	(57)	(58)	(59)	(60)	(61)	(62)	(63)	(64)
	Lending Client Reached	Lending Client Reached	Lending Client Reached	Lending Client Reached	Client Reached	Client Reached	Client Reached	Client Reached
GEA client	0.9620 (0.66125)		0.0680 (0.04201)		-0.7004 (0.83443)		0.0004 (0.00096)	
GEA days		0.0046 (0.00832)		0.0021 (0.00694)		0.00001 (0.00099)		0.0001 (0.00021)
Observations	254	145	218	123	180	89	157	76
	(65)	(66)	(67)	(68)	(69)	(70)	(71)	(72)
	Loan Size (log)	Loan Size (log)	Loan Size (log)	Loan Size (log)	Disbments. (log)	Disbments. (log)	Disbments. (log)	Disbments. (log)
GEA client	0.1622 (0.10104)		<b>0.1750*</b> (0.10376)		0.2426 (0.18082)		<b>0.3175*</b> (0.18055)	
GEA days		<b>0.0243***</b> (0.00778)		<b>0.0235***</b> (0.00770)		<b>0.0352*</b> (0.02097)		<b>0.0352*</b> (0.02091)
Observations	421	353	383	324	414	346	376	317
Full Sample	Yes	Yes	No	No	Yes	Yes	No	No
Coffee & cacao	No	No	Yes	Yes	No	No	YES	YES

Standard errors in parentheses. Asterisks denote statistically significant parameters: \*\*\* p&lt;0.01, \*\* p&lt;0.05, \* p&lt;0.1.

**Table 11. Fixed-effects regressions. GEA parameters of interest – model (A1.2)**
**a) Gender Inclusion Outcomes**

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	<b>Women-led Women-led Women-led Women-led</b>				<b>Gender Inclusive</b>	<b>Gender Inclusive</b>	<b>Gender Inclusive</b>	<b>Gender Inclusive</b>
GEA client	0.3397 (0.86483)		0.9099 (1.10986)		0.1468 (0.70675)		0.1408 (0.73045)	
GEA days		0.0960 (0.12514)		0.1295 (0.15276)		0.0176 (0.09854)		0.0176 (0.09854)
Observations	98	63	62	43	119	74	101	74
	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)
	<b>Women producers (log)</b>	<b>Women producers (log)</b>	<b>Women producers (log)</b>	<b>Women producers (log)</b>	<b>Women Part. Rate Advisory Services</b>	<b>Women Part. Rate Advisory Services</b>	<b>Women Part. Rate Advisory Services</b>	<b>Women Part. Rate Advisory Services</b>
GEA client	0.0379 (0.07570)		0.0594 (0.07536)		<b>4.4980**</b> (2.25530)		<b>5.1141**</b> (2.50775)	
GEA days		0.0084 (0.00940)		0.0105 (0.00984)		<b>0.4268*</b> (0.25322)		<b>0.4638*</b> (0.25847)
Observations	811	516	628	456	1,241	1,241	1,030	1,030
Full Sample	Yes	Yes	No	No	Yes	Yes	No	No
Coffee & cacao	No	No	Yes	Yes	No	No	YES	YES
	(17)	(18)	(19)	(20)	(21)	(22)	(23)	(24)
	<b>Women Part. Rate ACRA</b>	<b>Women Part. Rate BMA</b>	<b>Women Part. Rate DBI</b>	<b>Women Part. Rate YLD</b>	<b>Women Part. Rate ACRA</b>	<b>Women Part. Rate BMA</b>	<b>Women Part. Rate DBI</b>	<b>Women Part. Rate YLD</b>
GEA client	0.0560 (0.03518)	-0.0191 (0.02504)	0.0031 (0.03630)	-0.1667 (0.22012)	0.0235 (0.03640)	-0.0077 (0.02706)	0.0296 (0.03790)	-0.1667 (0.17014)
Observations	406	1,098	473	81	366	904	457	52
Full Sample	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Coffee & cacao	No	No	No	No	No	No	No	No
	(25)	(26)	(27)	(28)	(29)	(30)	(31)	(32)
	<b>Women Part. Rate ACRA</b>	<b>Women Part. Rate BMA</b>	<b>Women Part. Rate DBI</b>	<b>Women Part. Rate YLD</b>	<b>Women Part. Rate ACRA</b>	<b>Women Part. Rate BMA</b>	<b>Women Part. Rate DBI</b>	<b>Women Part. Rate YLD</b>
GEA days	<b>0.0088**</b> (0.00340)	-0.0012 (0.00278)	0.0033 (0.00416)	0.0014 (0.02325)	<b>0.0069**</b> (0.00342)	-0.0004 (0.00281)	0.0047 (0.00428)	<b>0.0438**</b> (0.02048)
Observations	406	1,098	473	81	366	904	457	52
Full Sample	No	No	No	No	No	No	No	No
Coffee & cacao	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Standard errors in parentheses. Asterisks denote statistically significant parameters: \*\*\* p&lt;0.01, \*\* p&lt;0.05, \* p&lt;0.1.

**b) Financial and Loan Performance Outcomes**

	(33)	(34)	(35)	(36)	(37)	(38)	(39)	(40)
	Sales (log)				Average payment prod. (log)	Average payment prod. (log)	Average payment prod. (log)	Average payment prod. (log)
GEA client	0.0409 (0.08622)		0.0514 (0.08955)		0.0095 (0.09415)		0.0114 (0.08698)	
GEA days		<b>0.0176*</b> (0.00964)		<b>0.0186*</b> (0.01000)		<b>0.0172*</b> (0.00970)		<b>0.0158*</b> (0.00933)
Observations	787	509	617	449	794	510	623	451
	(41)	(42)	(43)	(44)	(45)	(46)	(47)	(48)
	Average wages (log)	Average wages (log)	Average wages (log)	Average wages (log)	DGX score	DGX score	DGX score	DGX score
GEA client	0.0032 (0.13687)		0.0743 (0.14760)		<b>0.1038***</b> (0.03508)		<b>0.1170***</b> (0.03058)	
GEA days		0.0007 (0.01022)		0.0019 (0.01015)		0.0040 (0.00847)		0.0054 (0.00868)
Observations	776	509	617	450	135	115	118	99
	(49)	(50)	(51)	(52)	(53)	(54)	(55)	(56)
	DGX score Equity & Inclusion	DGX score Equity & Inclusion	DGX score Equity & Inclusion	DGX score Equity & Inclusion	Financial Fund. score	Financial Fund. score	Financial Fund. score	Financial Fund. score
GEA client	0.1139 (0.08277)		0.1232 (0.07818)		-0.4907 (0.57484)		-0.7183 (0.62856)	
GEA days		0.0009 (0.01481)		0.0024 (0.01516)		-0.0666 (0.04612)		-0.0818 (0.05182)
Observations	135	115	118	99	356	327	304	288
	(57)	(58)	(59)	(60)	(61)	(62)	(63)	(64)
	Lending Client	Lending Client	Lending Client	Lending Client	Client Reached	Client Reached	Client Reached	Client Reached
GEA client	0.9620 (0.66125)		0.6802 (0.69228)		-0.7004 (0.83443)		-0.2751 (0.96893)	
GEA days		0.0312 (0.07891)		0.0191 (0.08123)		-0.0170 (0.09734)		0.0154 (0.10953)
Observations	254	145	218	123	180	89	157	76
	(65)	(66)	(67)	(68)	(69)	(70)	(71)	(72)
	Loan Size (log)	Loan Size (log)	Loan Size (log)	Loan Size (log)	Disbments. (log)	Disbments. (log)	Disbments. (log)	Disbments. (log)
GEA client	0.1512 (0.09711)		0.1613 (0.09891)		0.2195 (0.17824)		0.2791 (0.18033)	
GEA days		<b>0.0231***</b> (0.00777)		<b>0.0223***</b> (0.00771)		0.0327 (0.02051)		0.0329 (0.02040)
Observations	421	353	383	324	414	346	376	317
Full Sample	Yes	Yes	No	No	Yes	Yes	No	No
Coffee & cacao	No	No	Yes	Yes	No	No	YES	YES

Standard errors in parentheses. Asterisks denote statistically significant parameters: \*\*\* p&lt;0.01, \*\* p&lt;0.05, \* p&lt;0.1.

**Table 12. Fixed-effects regressions. GEA parameters of interest – Proxy of GEA investment, model (A1.1)**

<b>a) Gender Inclusion Outcomes</b>								
	(1) <b>Women- led</b>	(2) <b>Women- led</b>	(3) <b>Women- led</b>	(4) <b>Women- led</b>	(5) <b>Gender Inclusive</b>	(6) <b>Gender Inclusive</b>	(7) <b>Gender Inclusive</b>	(8) <b>Gender Inclusive</b>
Proxy - GEA investment	-	-	-	-	-	-	-	-
Observations	20	16	20	16	27	27	27	27
	(9) <b>Women producers (log)</b>	(10) <b>Women producers (log)</b>	(11) <b>Women producers (log)</b>	(12) <b>Women producers (log)</b>	(13) <b>Women Part. Rate Advisory Services</b>	(14) <b>Women Part. Rate Advisory Services</b>	(15) <b>Women Part. Rate Advisory Services</b>	(16) <b>Women Part. Rate Advisory Services</b>
Proxy - GEA investment	0.0007 (0.00142)	0.0010 (0.00158)	0.0009 (0.00133)	0.0010 (0.00156)	<b>0.0013***</b> (0.00032)	<b>0.0016***</b> (0.00042)	<b>0.0013***</b> (0.00032)	<b>0.0016***</b> (0.00042)
Observations	273	236	273	236	901	740	901	740
Full Sample	Yes	Yes	No	No	Yes	Yes	No	No
Coffee & cacao	No	No	Yes	Yes	No	No	YES	YES
	(17) <b>Women Part. Rate ACRA</b>	(18) <b>Women Part. Rate BMA</b>	(19) <b>Women Part. Rate DBI</b>	(20) <b>Women Part. Rate YLD</b>	(21) <b>Women Part. Rate ACRA</b>	(22) <b>Women Part. Rate BMA</b>	(23) <b>Women Part. Rate DBI</b>	(24) <b>Women Part. Rate YLD</b>
Proxy - GEA investment	0.0005 (0.00049)	-0.0002 (0.00047)	-0.0001 (0.00057)	0.0003 (0.00057)	0.0005 (0.00047)	-0.0002 (0.00047)	-0.0001 (0.00058)	0.0009 (0.00067)
Observations	327	793	395	81	327	793	395	81
Full Sample	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Coffee & cacao	No	No	No	No	No	No	No	No
	(25) <b>Women Part. Rate ACRA</b>	(26) <b>Women Part. Rate BMA</b>	(27) <b>Women Part. Rate DBI</b>	(28) <b>Women Part. Rate YLD</b>	(29) <b>Women Part. Rate ACRA</b>	(30) <b>Women Part. Rate BMA</b>	(31) <b>Women Part. Rate DBI</b>	(32) <b>Women Part. Rate YLD</b>
Proxy - GEA investment	-0.0005 (0.00059)	0.0001 (0.00055)	0.0008 (0.00059)	0.0019 (0.00126)	-0.0004 (0.00059)	0.0000 (0.00053)	0.0008 (0.00059)	<b>0.0054***</b> (0.00131)
Observations	296	644	379	52	296	644	379	52
Full Sample	No	No	No	No	No	No	No	No
Coffee & cacao	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Standard errors in parentheses. Asterisks denote statistically significant parameters: \*\*\* p&lt;0.01, \*\* p&lt;0.05, \* p&lt;0.1.

**b) Financial and Loan Performance Outcomes**

	(33)	(34)	(35)	(36)	(37)	(38)	(39)	(40)
	Sales (log)	Sales (log)	Sales (log)	Sales (log)	Average payment prod. (log)	Average payment prod. (log)	Average payment prod. (log)	Average payment prod. (log)
Proxy - GEA investment	0.0023 (0.00176)	0.0030 (0.00184)	0.0021 (0.00175)	0.0030 (0.00184)	0.0026 (0.00217)	<b>0.0038*</b> (0.00218)	0.0021 (0.00211)	<b>0.0038*</b> (0.00218)
Observations	271	234	271	234	272	235	272	235
	(41)	(42)	(43)	(44)	(45)	(46)	(47)	(48)
	Average wages (log)	Average wages (log)	Average wages (log)	Average wages (log)	DGX score	DGX score	DGX score	DGX score
Proxy - GEA investment	-0.0077 (0.00534)	-0.0073 (0.00577)	-0.0079 (0.00531)	-0.0073 (0.00569)	-0.0014 (0.00234)	-0.0014 (0.00236)	-0.0005 (0.00136)	-0.0005 (0.00137)
Observations	270	234	270	234	73	65	73	65
	(49)	(50)	(51)	(52)	(53)	(54)	(55)	(56)
	DGX score Equity & Inclusion	DGX score Equity & Inclusion	DGX score Equity & Inclusion	DGX score Equity & Inclusion	Financial Fund. score	Financial Fund. score	Financial Fund. score	Financial Fund. score
Proxy - GEA investment	-0.0043 (0.00280)	-0.0043 (0.00282)	<b>-0.0032*</b> (0.00168)	<b>-0.0032*</b> (0.00169)	0.0049 (0.01060)	0.0043 (0.01185)	0.0107 (0.01211)	0.0083 (0.01233)
Observations	73	65	73	65	190	160	190	160
	(57)	(58)	(59)	(60)	(61)	(62)	(63)	(64)
	Lending Client	Lending Client	Lending Client	Lending Client	Client Reached	Client Reached	Client Reached	Client Reached
Proxy - GEA investment	-	-	-	-	-	-	-	-
Observations	28	18	28	18	20	14	20	14
	(65)	(66)	(67)	(68)	(69)	(70)	(71)	(72)
	Loan Size (log)	Loan Size (log)	Loan Size (log)	Loan Size (log)	Disbments. (log)	Disbments. (log)	Disbments. (log)	Disbments. (log)
Proxy - GEA investment	<b>0.0042*</b> (0.00248)	0.0030 (0.00217)	<b>0.0045*</b> (0.00259)	0.0033 (0.00224)	<b>0.0080**</b> (0.00355)	<b>0.0082**</b> (0.00348)	<b>0.0088**</b> (0.00367)	<b>0.0088**</b> (0.00351)
Observations	193	176	193	176	189	172	189	172
Full Sample	Yes	Yes	No	No	Yes	Yes	No	No
Coffee & cacao	No	No	Yes	Yes	No	No	Yes	Yes

Standard errors in parentheses. Asterisks denote statistically significant parameters: \*\*\* p&lt;0.01, \*\* p&lt;0.05, \* p&lt;0.1.