1. Introduction

STUDY GOALS AND METHODOLOGY

The Small Firm Diaries is a global research initiative to understand the role of low-income small firms in poverty reduction, and the barriers to growth and productivity of those firms that limit their contribution to local economies. The study uses financial diaries, a high frequency quantitative and qualitative data collection process. In each country, a team of locally-hired field researchers visited a sample of small firms weekly for a year, gathering data about financial flows and the decisions behind those flows. From 2021 to 2023, the project was active in 7 countries: Colombia, Ethiopia, Kenya, Nigeria, Indonesia, Fiji, and Uganda. For more details on the study methodology, see *Methodology and Process: An Introduction to the Small Firm Diaries*, available at smallfirmdiaries.org.

FSD-Kenya funded the Kenyan arm of the study, and served as the local research and engagement partner. FAI worked closely with the FSD-Kenya team, led by CEO Tamara Cook and Research Director Amrik Heyer, on Kenya-specific elements of the research design; Cook and Heyer are Principal Investigators of the Kenya Small Firm Diaries. We drew from FSD-K's extensive experience during the data collection process, relied on their networks to engage with stakeholders through all stages of the project, and collaborated in creating research outputs, including this report.

The financial diaries methodology allows us to explore crucial areas of knowledge on the firms that are a central part of the economies of low-income populations with a new level of detail. For example we use high frequency cash flow data to see the volatility firms face, and combine survey data on aspirations with growth measurements based on financial data.

By tracking cash flows and listening to small firm owners themselves, the Small Firm Diaries study offers insight into a segment of low-income economies that has, until now, been little studied and less understood. The Small Firm Diaries attempts to fill in several blind spots—between large formal firms and the non-employer household businesses that are the focus on microfinance; between the "snapshot" data of large, nationally-representative surveys and the focused data of individual business case studies. Our goal in this study is to inform policy and practice by a wide variety of actors: financial services providers, business support organizations, government policy makers, funders and other researchers can all use the data and findings of the Small Firm Diaries project to deeply understand and address challenges of small firms in low- and middle-income countries.

PURPOSE OF THIS REPORT

The Kenya Country Report presents data on key study topics, including financial access, aspirations, and employment, and shares findings on a subset of firms that participated in business training programs, and on women-led firms. This report is intended to be an overview of the data gathered during the study. This report may be updated with additional in-depth analysis in the future. We

will also publish more detailed analysis on specific topics, and individual firm profiles. The current version of this report and any additional reports using data from the Kenya sample will be published at smallfirmdiaries.org.

2. Sample Overview

SUMMARY

In this section, we provide an overview of the Small Firm Diaries Kenya sample, including gender, location, and sector distribution along with an overview of firms' cash flows.

In Kenya, the study was conducted in three cities: Nairobi, Kisumu, and Kwale. In each site, we selected low-income neighborhoods, conducted censuses of firms, and selected firms to participate to meet the study's goals in terms of size, industry and ownership. We recruited 166 firms to participate in the study from three research sites; our final sample contains 142 firms, roughly evenly spread across the cities.Data collection began in November 2021 and was completed in November 2022. In this context it is difficult to have a consistent and objective definition of firm ownership; consequently the study allowed participants to self-define the owner of the firm. Based on the self-description, 33% of the firms are owned by women (the study protocol set a floor of 30% of firms with a female owner), and 8% are co-owned by a man and a woman; the remaining firms are owned by men. The study was limited to firms in three industries: light manufacturing, agri-processing and services. In Kenya, half of the firms are engaged in small-scale manufacturing (e.g. carpentry, metal works, and construction materials) ; 20% in services (e.g. printing, repair and maintenance, and food preparation); and 26% in agri-processing (e.g. leather goods, food preservation).

SAMPLING METHODOLOGY

The Small Firm Diaries was designed to illuminate a class of firms that are little studied and even less understood: firms in low-income neighborhoods where owners, employees and customers are likely to be near poverty lines that have employees (typically a major distinction between types of small businesses in high income countries) but have not yet reached a scale to have professional management (e.g. employees whose only responsibility is managing other employees).

In other words, the Diaries was focused on firms larger than those that have been the focus of the global microfinance movement, which are typically firms that do not have (and never grow to have) employees, and those that are more formal, higher income and more integrated into the financial system and economy. For more details about the motivation of the study and the methodology, refer to *Methodology and Process: An Introduction to the Small Firm Diaries* published at smallfirmdiaries.org.

The sites for the study—Nairobi, Kisumu and Kwale—were selected in conversation with local partners and advisors to provide a reasonably representative look into the varied regional economies of Kenya. Within each city, we then worked to identify low-income neighborhoods and

were likely to have a density of small firms, particularly firms in the three focus industries. These focus industries: agri-processing, light manufacturing, and services-- purposely excluding retailers, although retailers are a large portion of small firms overall--were selected as these are sectors where short- and medium-term growth in profitability and employment are plausible. To recruit firms, the field team visited each selected neighborhood to conduct an initial census, counting and recording the details of thousands of potentially eligible businesses. They noted the business sector, firm owner gender, number of employees (as reported by the owner), and level of interest in participating in the study. From the results of the census, we selected a set of firms which would allow us to meet the study's objectives in terms of number of employees, industry and ownership.

The field researchers returned to the selected firms to gather more information about the history of the firm, types of employees, revenue patterns, and the firm ownership structure, and we used this data to select the final sample. Of note, very few firms who were invited to participate in the study declined the opportunity.

SAMPLING RESULTS

We began the study with 166 firms: 52 firms from Kisumu, 50 from Kwale, and 54 from Nairobi. Ten firms dropped out prior to recording any transactions. One other firm dropped out later in the study, resulting in 155 active firms. In our cleaning process, we removed 13 firms that were judged to be "untrustworthy" by our field researchers--in other words, for a variety of reasons, the field researcher did not believe that the firm owner was sharing complete and reliable information about their cash flows.

FIGURE 2.1: SAMPLE RESULTS

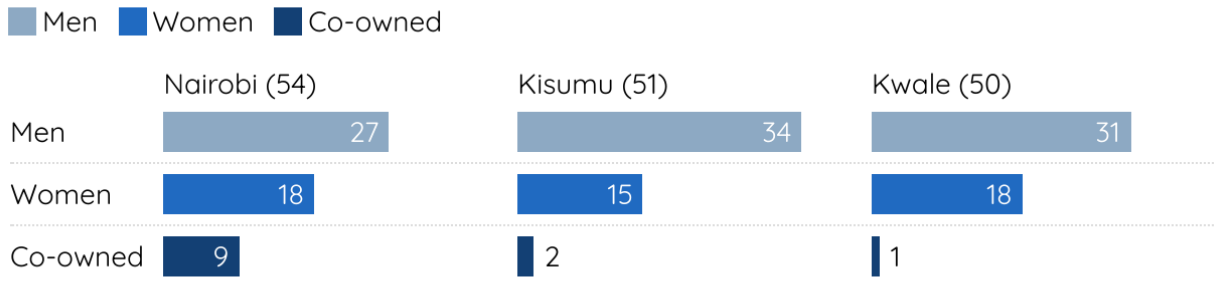
The final sample includes 142 firms, which is 86% of the original sample

All Firms	Dropout Firms	"Untrustworthy" Firms	Post-Cleaning Sample for Analysis
166	11 (7%)	13 (8%)	142 (86%)

Location

As shown in Figure 2.2, the firms included in the final sample were essentially equally distributed across cities. In all cities, there were more men-owned than women-owned firms, although Nairobi has a slightly more balanced proportion of firms by gender than the other cities. In Nairobi, of the total 54 firms 27 were men-led, 18 were women-led, and 9 were co-owned.

FIGURE 2.2: SAMPLE DISTRIBUTION BY GENDER AND FIRM LOCATION



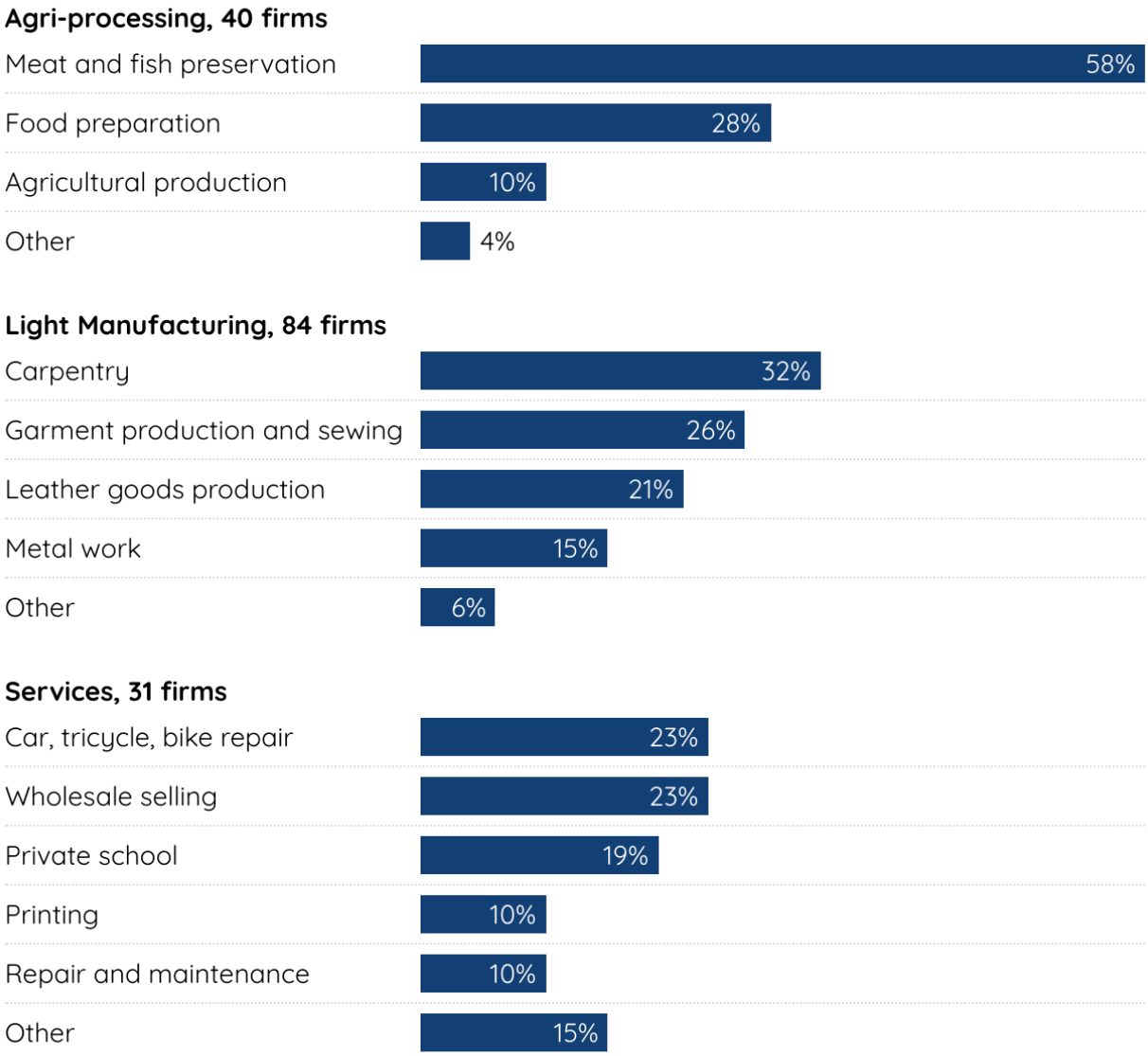
Kenya

Chart: Financial Access Initiative - NYU Wagner • Source: Small Firm Diaries

Industry

We selected firms from three sectors: agri-processing, light manufacturing, and services (Figure 2.3). Twenty percent of the firms are in the services sector, and are engaged in activities such as printing, repair and maintenance, health clinics, and private school. Light manufacturing (including carpentry, metal works, and construction materials) constitutes half of the total firms. The remaining 26% of firms are in the agri-processing sector (food preparation, food preservation, meat and fish preservation, agricultural input products, and dairy/farm production).

FIGURE 2.3: SECTORS AND SUB-SECTORS IN THE KENYA SAMPLE



Cash Flows

The Small Firm Diaries is explicitly focused on the role of small firms in poverty alleviation and inclusive growth. However, using revenue or profit measures to define a sample ex-ante is fraught. What research has uncovered about the micro-firms[1] that are a notch below the firms in this study suggests that small firms revenues and profits were likely to be highly variable and that extrapolating annual revenue or profit from short-term measures was unlikely to be reliable. We also were unsure whether owners' estimates of their firms annual revenues or profits would be accurate. Nevertheless, these are important measures for understanding the firms that are in the

[1] Within the Small Firm Diaries, "micro" always means firms with 0 non-family employees.

study. Here we present the sample distribution on revenues, expenses and operating margins (see box) based on the data gathered during the study.

OPERATING MARGIN AS AN APPROXIMATION OF PROFIT

Measuring the profits of firms without formal accounting mechanisms and practices is very difficult. Accounting standards call for profit measures to include amortized values of assets, loans and future commitments (not to mention the use of cash flow or accrual methods)—something well beyond the ability of a study like ours to accurately measure. Given that, our measures focus not on "profit" as formally defined, but on operating margins: monthly revenues less monthly expenses. Of note, our measure of expenses excludes any payments the owners make to themselves; we also exclude any measure of the value of owners' time.

Median annual revenue and median annual operating margin for participating firms was KES 930,710 and KES 389,798 respectively. Given the month-to-month variability in these figures (see Section 3 on firm finances), however, we think it is much more instructive to focus on monthly measures.

The monthly median revenue of all firms in the final sample was KES 89,950. This of course obscures the differences between firms and the distribution of revenues. More than half (58%) of our sample has a median monthly income lower than KES 150,000 and 43% of our sample has a median monthly income lower than KES 75,000.

Firms' monthly median operating margin was KES 37,120. Of all firms, 94.8% (147) had positive monthly median margins. While most firms had positive operating margins, their margins were slim. Three quarters of the firms with positive median monthly margin (85) have a median monthly operating margin below KES 100,000, and half have a median monthly operating margin below KES 43,000. Only 9% of firms have a monthly operating margin above KES 300,000. Of the 8 firms from our sample who had a negative median monthly operating margin, they ranged from KES 1,150 to KES 26,240 in losses. Financial performance will be outlined in further detail in the following section.

3. Firm Finances Overview

SUMMARY

Data collected through the financial diaries methodology allows us a detailed glimpse into the weekly cash flows of a firm, as well as their financial and operational performance across the full year. We typically use monthly figures to understand a firm's cash flows in a summarized form. In part, this is because of the inevitable difficulty in precisely dating all reported flows—firms often bundle several days worth of revenues or transactions, or be uncertain about the exact day a payment was made or received.

In this section we describe our firms' monthly cash flows in more detail and explore whether there are meaningful demographic differences in the patterns of cash flows. We also introduce our preferred growth metric: linear slope of monthly revenue. The majority of our sample shows little change over the year on this measure (neither exhibiting rapid growth or large declines), which is in itself significant given the context of the study in the midst of the global pandemic. Little in the cash flows of small firms is linear, so we explore volatility of cash flows extensively. To measure volatility in firms, we use the coefficient of variation or CV[2]. Our firms experience significant volatility in revenue and expenses, and extremely high levels of variability in operating margins. Growth itself can cause high levels of measured volatility—consistent with our overall growth measure we find that volatility is not driven by growth. There is no relationship between variability and growth rates.

FINANCIAL PERFORMANCE DATA

Revenue, Expenses, and Operating Margin

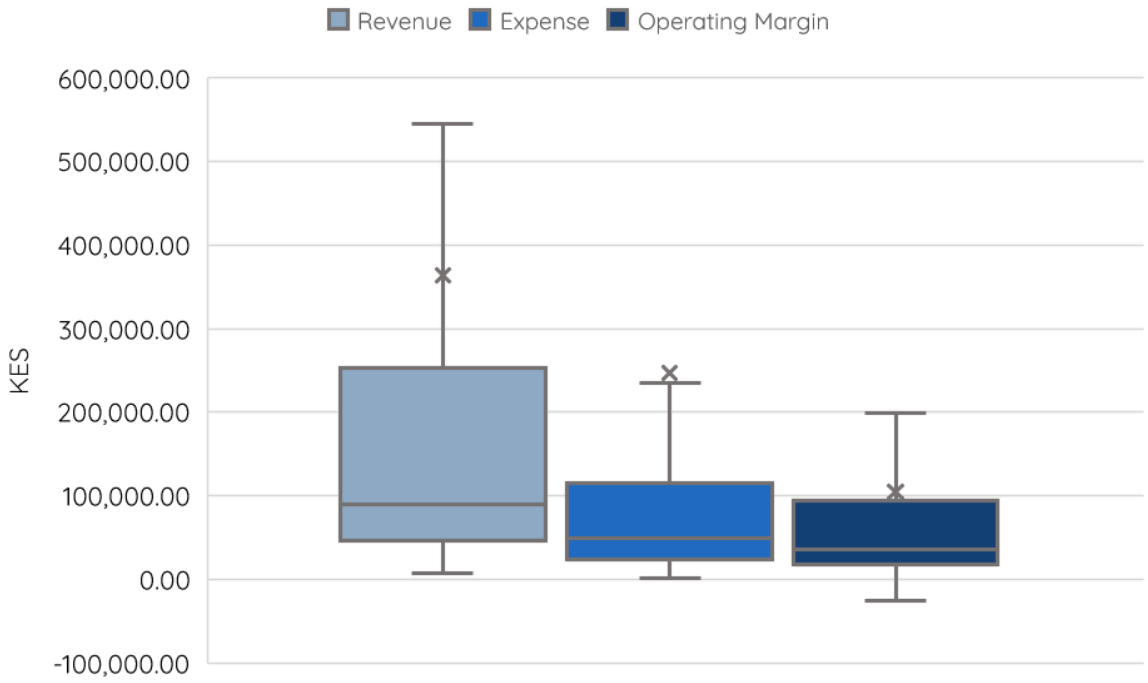
The median monthly revenue of our sample firms ranges from KES 7,570 to KES 4.8 million. Half have a median monthly revenue of KES 90 thousand or less, and around 75% of them KES 239 thousand or less.

The range of the median monthly expense distribution across our sample firms is as wide as that of the revenue: from KES 2,700 to KES 4.7 million. Half of the firms have a median monthly expense of KES 55 thousand or less, and around 75% have a median monthly expense of KES 123 thousand or less.

With respect to operating margin, half of our firms have a median monthly margin between KES 17.5 thousand and KES 92.4 thousand. Most of our firms have operating margins of less than KES 100 thousand a month. Eight firms show a negative median monthly margin, going as low as KES 26 thousand of negative median monthly margin.

[2] The coefficient of variation (CV) is a statistical measure defined as the ratio of the standard deviation to the mean. It is a useful way of comparing variation between months given the dispersion in sizes of cash flows.

FIGURE 3.1: MEDIAN MONTHLY REVENUE, EXPENSE, AND OPERATING MARGIN



While medians are useful for understanding the size of the small firms, they obscure one of the key findings of the study: the very large amount of volatility the firms experience from month-to-month. The coefficient of variation (CV) is a measure used to understand the spread of data, especially when comparing different subjects with different ranges of values. The median CV of monthly revenue is 0.44. To better understand CV, consider the case of a particular firm as seen in Figure 3.2.

FIGURE 3.2: OPERATING MARGIN VOLATILITY

Cash flow (KES) for garmet production firm, months 3 to 12

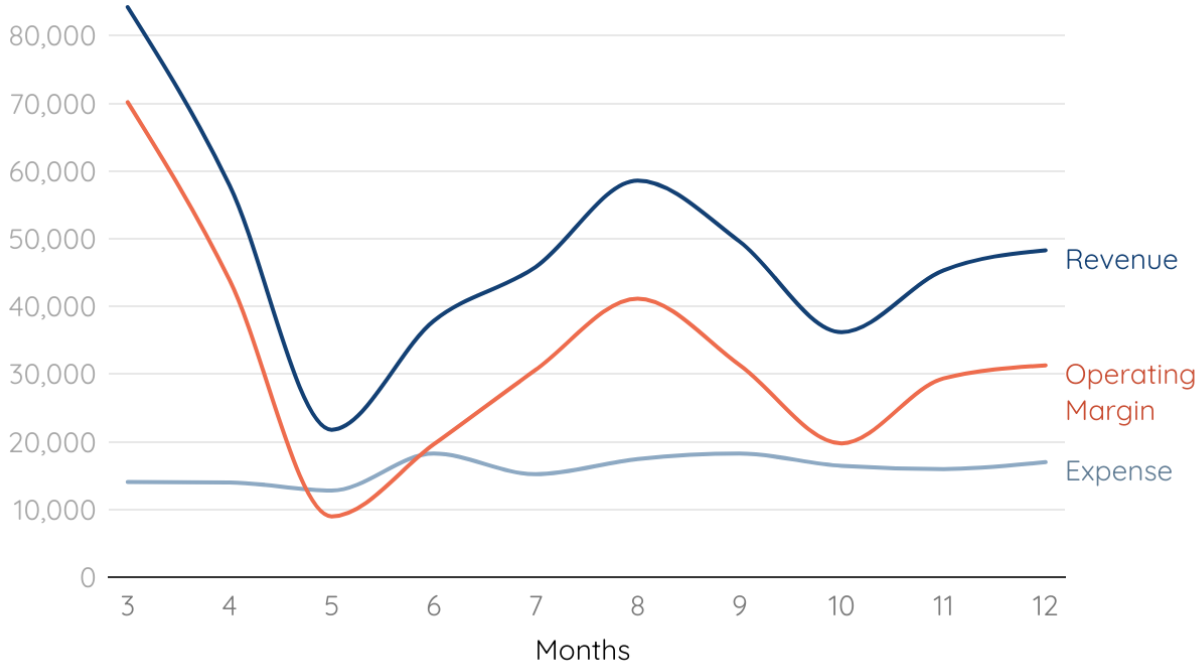


FIGURE 3.3: GARMENT PRODUCER CASH FLOW

	Monthly Average	Monthly St. Dev.	Monthly CV
Operating Margin	KES 32,615	KES 16,735	0.51
Revenue	KES 48,556	KES 16,541	0.34
Expenses	KES 15,941	KES 1,888	0.12

This firm's monthly average revenue is about KES 32,000, but rarely is the actual monthly figure within KES 10 thousand of that average; specifically the standard deviation tells us that monthly income tends to be about KES 17 thousand from the average. Standard deviations are hard to compare across firms that may be of radically different sizes in terms of monthly revenue.

This is where the CV comes in. The CV is found by dividing the standard deviation by the mean, and it tells us how distance the data points are from the mean, expressed as a proportion of the mean value.

For example, if the garment production firm has a revenue CV of 0.34, it means that on average, the monthly revenues are about 37% greater or lesser than the average monthly revenue. This reflects the high volatility of that firm's monthly revenues. The median CV of monthly revenue for all the firms in the study is 0.44, meaning that, on average, the monthly revenue of all the firms tends to be 44% greater or lesser than their average monthly revenue.

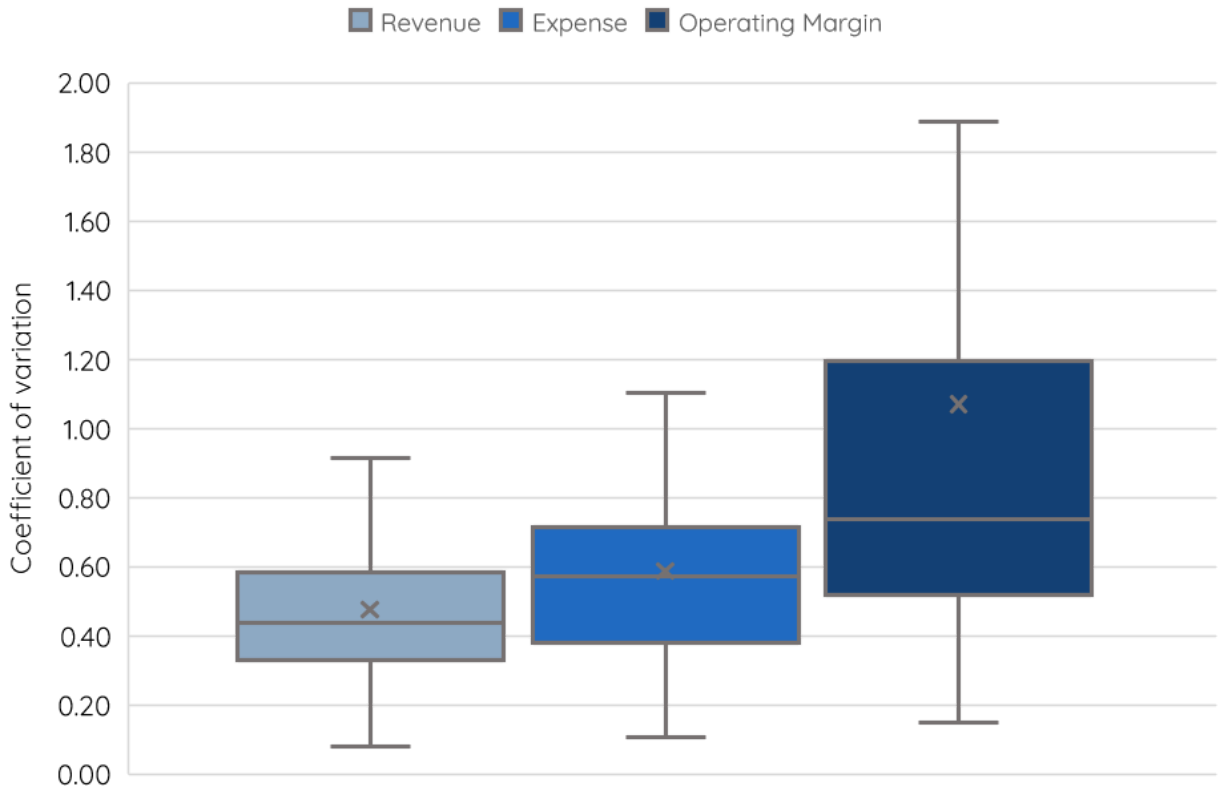
Our qualitative work provides little to no evidence that the volatility of revenue is planned, desired or predictable. A major theme of the Small Firm Diaries, therefore, is the challenges that firms' encounter managing this amount of volatility.

There are two main ways that a firm could manage revenue volatility. A firm that has reserves of working capital or ready access to credit could essentially ignore revenue volatility and keep expenses constant, drawing on working capital or credit when revenues were low and topping up those accounts when revenues were high. A firm without those tools would adjust expenses to the extent possible (some expenses may be fixed) to match revenues. In our data we see that the variability of expenses is higher than that of revenue, with a median CV of monthly expense of 0.57.

Firms are not able to perfectly match the volatility of revenue by managing expenses up and down. Operating margin volatility is much larger—the median CV of monthly margin is 0.74—and also has a higher range (indicating that firms have different capacity to manage expenses).[3]

[3] No measure of volatility is perfect, CV included. The higher volatility of operating margin is in part driven by operating margins being necessarily smaller than revenue, making the mean lower.

FIGURE 3.4: COEFFICEINT OF VARIATION FOR REVENUE, EXPENSE, AND OPERATING MARGIN



Gender and Industry

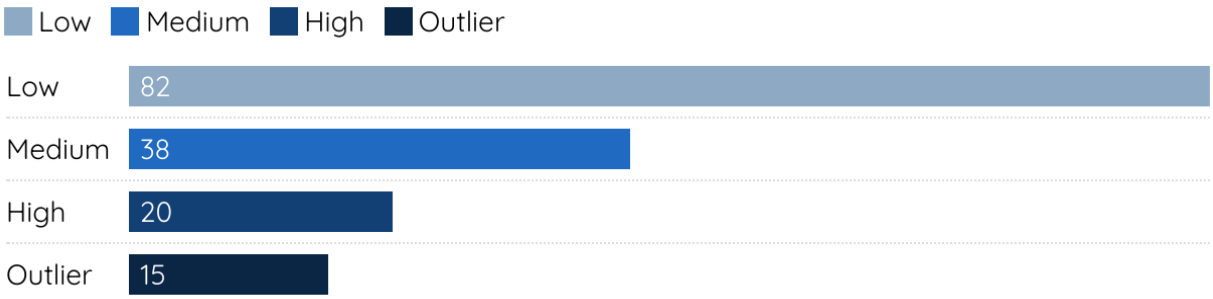
To better understand how our sample differs across revenue levels, we use the sample median monthly revenue distribution to categorize our firms into four buckets: low, medium, high and outlier revenue firms (exact cutoffs in Figure 3.5 and 3.6)[4]. The majority of our firms typically have revenue less than KES 239 thousand per month (~1,800 USD).[5]

[4] Buckets were created based on natural breaks in the sample wide distribution of median monthly revenues
[5] For context, GDP per capita in Kenya is 2,081 USD but minimum monthly wages are 116.6 USD on average.

FIGURE 3.5: REVENUE CATEGORY THRESHOLDS

Bucket	Median Monthly Income
Low	< KES 100k
Medium	[KES 100k, KES 300k)
High	[KES 300k, KES 700k)
Outlier	>= KES 700k

FIGURE 3.6: NUMBER OF FIRMS IN EACH REVENUE CATEGORY



Large gender differences persist globally when it comes to firm ownership, size, income and wealth. According to the World Bank[6], the global average of firms with female participation in ownership is 32.9%. In Kenya, the average of small firms with female representation in ownership is 47.5%[7]. The gap increases in large firms, where female ownership was reported to be 32.2%. Additionally, there appears to be a considerable difference between licenced and unlicenced firms in Kenya. While 47.9% of licenced establishments are owned solely by males and 31.4% are owned by women, 60.7% of unlicenced firms are owned by women, as reported by the Kenya National Bureau of Statistics (KNBS) MSME Survey.

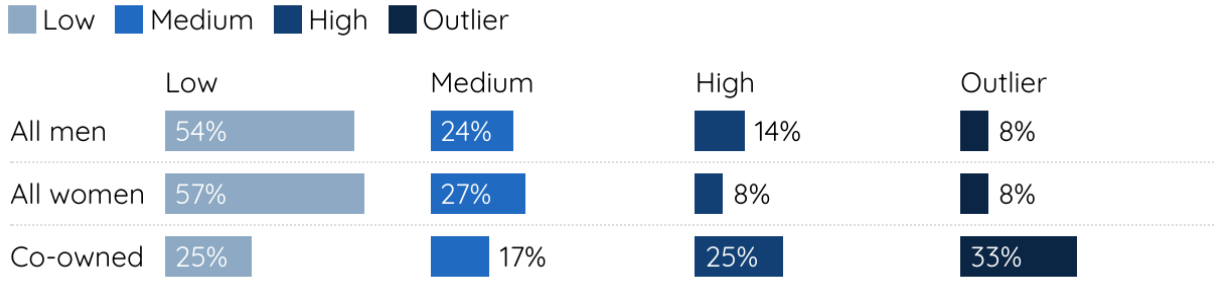
Given this background, we specifically sought to have at least a third of our sample made up of women-owned firms so we could gain insight into the performance, challenges, and successes of women-led small firms in Kenya. Ultimately we were somewhat surprised that we see relatively few meaningful gender gaps in our sample. This is discussed in more detail in the section that focuses on women-led firms. Here we'll describe the basic measures of firm size and operations.

The distribution of firms across the revenue categories above is close to equal between men and women owned firms; the co-owned category shows a different pattern possibly due to the low

[6] World Bank Gender Data Portal, "Firms with female participation in ownership (% of firms)"
[7] *The World Bank Enterprise Survey: Kenya 2018 Country Profile, page 11*

sample size of only 12 firms (Figure 3.7). About 50% of men and women-owned firms are low earners. Women are slightly less represented among high earners, where around 8% of women typically earn "high" monthly revenue compared to 14% of men. There is a significant gap between women-owned firms and men-owned firms in terms of median monthly operating margin, but the total difference is driven by the top and bottom of the distributions: there are a small number of women-owned firms who have significantly negative operating margins, while there are some men-owned firms who have much higher positive operating margins than all other firms. When we compare only firms with positive operating margins, men-owned firms have median monthly operating margins of KES 42.3 thousand compared to KES 33.2 thousand for women-owned firms. Of note, women-owned firms have the same median number of monthly employees (2 employees) as men-owned ones, which we discuss more in Section 7 on employment and in the Focus on women-led firms.

FIGURE 3.7: REVENUE CATEGORY DISTRIBUTION ACROSS GENDERS



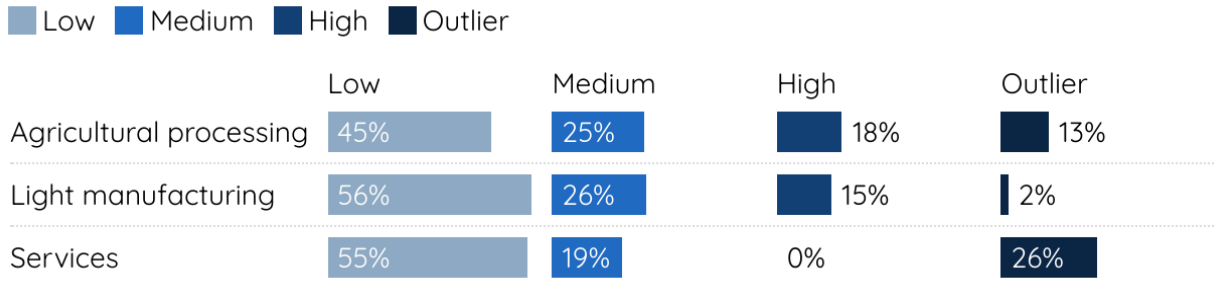
We believe that the general parity between men and women in our sample is in large part a function of the selection criteria for our study: women who start and own firms with employees are those that have already overcome many of the gender gaps that exist and are responsible for women being overrepresented among microenterprises. For comparison, according to the World Bank Enterprise Survey (2018), 32.2% of Kenyan large firms have female participation in ownership, compared to 45.5% and 57.5% for small and medium firms respectively.

There was less ex-ante expectation of an industry gap than a gender gap and we see that there are few meaningful differences between firms across the three industries that we study. The percentage of Agri-processing firms that are classified as low income is 10% less than that of the other two industries (Figure 3.8). No Services firms are "high" earners but the proportion of them that are "outliers" is over 10% higher than for Agri-processing firms, and 24% higher than light manufacturing firms, while the proportion of "medium" and "high" earners is similar for Agri-processing and Light Manufacturing industries.

We do find differences in terms of operating margin. In all industries around half of the firms are concentrated below KES 100 thousand, but the distribution changes between industries for the firms that earn higher median monthly margins than the sample median. In the light manufacturing sector the margin range goes up to KES 630.8 thousand. In Agri-processing the

margin ranges up to KES 963.5 thousand, while in the Services sector the margin range reaches KES 1.6 million.

FIGURE 3.8: REVENUE CATEGORIES ACROSS INDUSTRIES

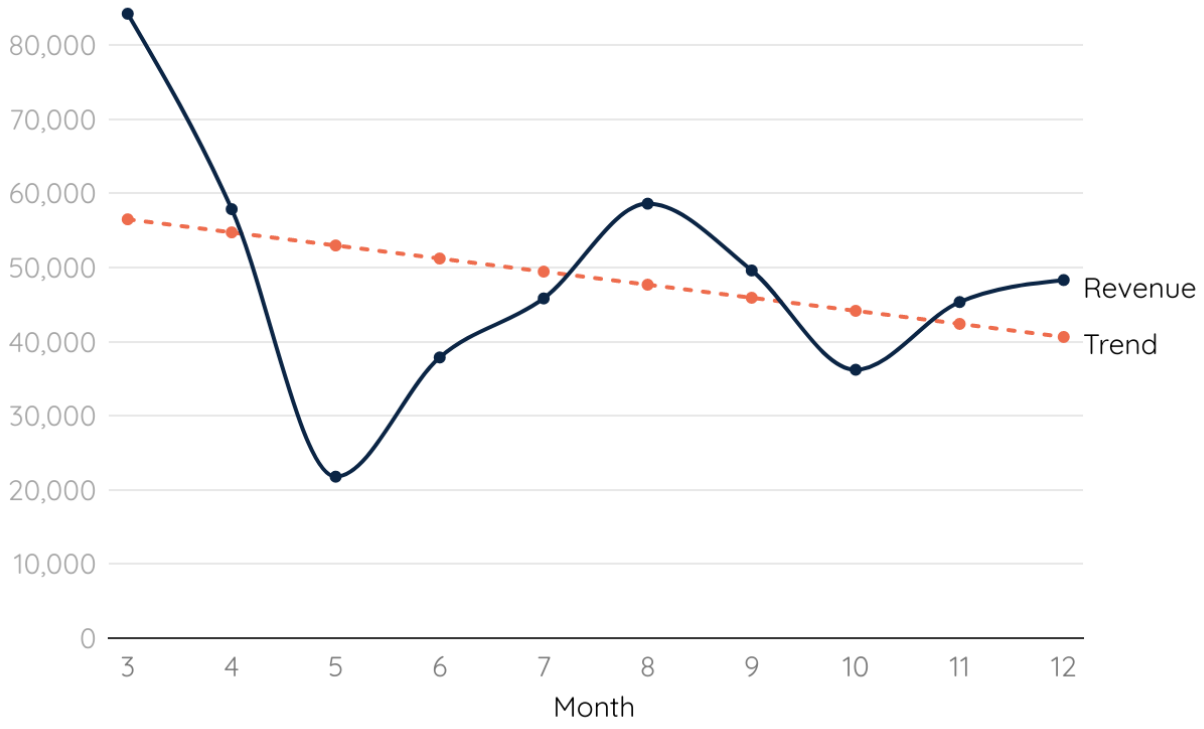


Growth

Measuring growth (by revenue or operating margin) is a challenge in an environment with such high volatility. Comparing first month to last month revenues or margins is not reliable as these months may be arbitrarily higher or lower, for instance. To best measure the direction of change, while accounting for month-to-month volatility, we use the slope for the best linear fit for monthly revenue. To do so, we regress monthly revenue totals to find the best match as if monthly revenues were more consistent.

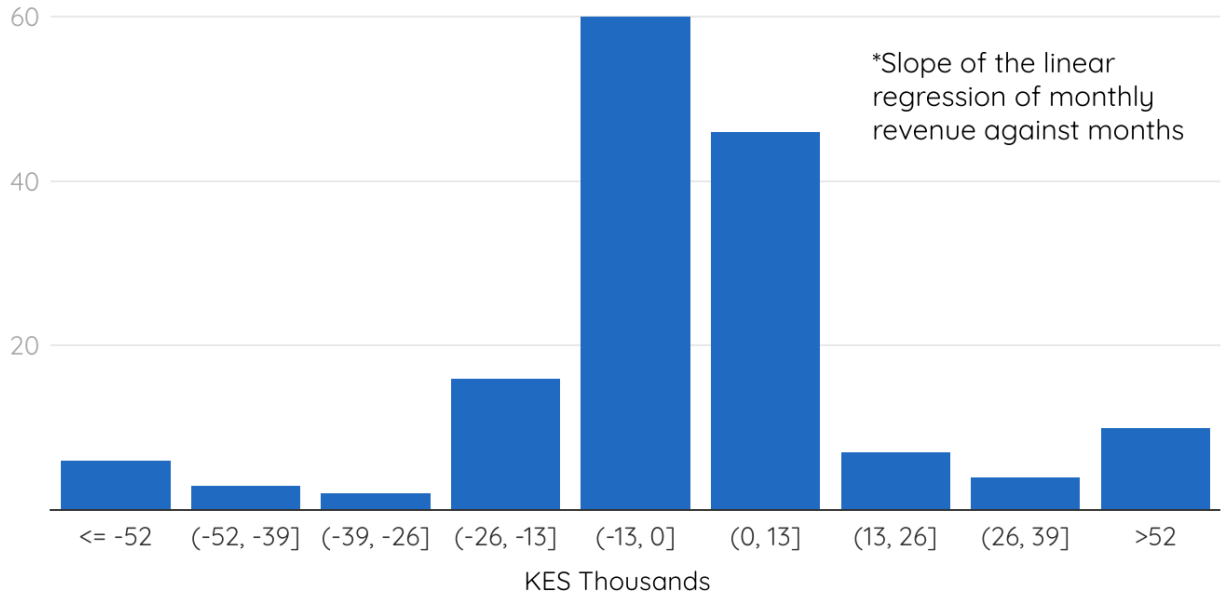
We see an example firm in Figure 3.9 which shows the monthly revenue for months 3 through 12 (we disregard the first 2 months of data as part of the cleaning process). If we only compared the two data points of months 3 and 12, we would categorize this firm as a "not-grower" as the revenue in month 12 was 42% lower than the revenue in month 3. However, this would be an oversimplification of the high levels of volatility the firm experienced throughout the year, evidenced by the peaks in months 3 and 8, and valleys in months 5 and 10. Taking the average of the monthly change (i.e., how much has this firm grown between month 3 and month 4?) would miscategorize the high volatility as growth. This firm's average monthly change is 2%; in other words, on average, the firm's revenue grows by 2% from one month to the next. Once again, looking at the graph, we can see that this is an overestimation of their sustained revenue growth. Because of these shortcomings in the other measurements, we have chosen to look at the slope of the monthly revenue trend to (1) account for months without revenues (e.g., due to temporary firm closings) and (2) utilize our full year's worth of data rather than comparing two point-in-time data points such as month 3 and month 12. The line of best fit for this firm shows a negative slope of KES -1.76 thousand, suggesting an average decline in monthly revenue by KES 1.76 thousand. Using the slope, we categorize the firm as a "not-grower."

FIGURE 3.9: MONTHLY REVENUE (KES) FOR EXAMPLE FIRM, MONTHS 3-12



Using this metric we find that most firms do not see much change over the course of the year. As seen in Figure 3.10, 69% of our firms are either slightly declining (KES -13,000 to KES 0 monthly revenue) or slightly increasing (KES 0 to KES 13,000). The remaining firms are spread across the distribution with 10 outlier firms increasing higher than KES 54,000 a month.

FIGURE 3.10: DISTRIBUTION OF FIRMS BY MONTHLY REVENUE GROWTH*



The growth measure helps confirm that the measures of volatility of revenues and operating margins are not simply because firms are growing (a rapidly growing firm would show a high CV). Instead, we find that there is a very weak negative relationship between variability of revenues and growth in revenues.

FOCUS: Women-Led Firms

SUMMARY

Throughout the Kenya Country Report we discuss gender-disaggregated data. In this section we summarize those analyses of differences and similarities between men-owned and women-owned[8] firms in the study, and we examine the entrepreneurial motivations and confidence of our women-owned sample.

As noted at the beginning of the report, on the most basic measures of revenue we do not see meaningful differences between men- and women-owned firms. There is a gap in median operating margin, but the total difference is driven by the top and bottom of the distributions: There are a few women-owned firms who have significantly negative operating margins, while there are a few men-owned firms who have much higher positive operating margins than other firms. We believe that the general parity between men and women in our sample is in large part a function of the selection criteria for our study: Women who start and own firms with employees are those who have already overcome many of the existing gender gaps that are responsible for women being

[8] Women-owned firms have one or more female owners while co-owned firms have mixed-gender ownership with at least one man and one woman.

overrepresented among microenterprises. However on some measures there are notable differences. For instance, women are unbanked at higher rates than men and less formal in terms of official registrations.

We must say clearly at the outset that our sample is not representative of either men- or women-led small firms in Kenya, much less of men and women globally. The findings we note here should not be directly extrapolated to other contexts or to the sector as a whole. However, we do believe that these comparisons help illuminate areas for further study, and for gender-specific approaches to the challenges of small firms.

OVERVIEW

Throughout this report we look at the role gender plays in the core aspects of running a small firm. Below is a summary of the points addressed in the other sections of this report.

Firm Finances

Using median monthly revenue to group our firms into earning categories, we find about 50% of both men and women-owned firms are low earners. Women are slightly less represented among high earners, where around 8% of women typically earn "high" monthly revenue compared to 14% of men.

While there is a large gap between all women-owned and men-owned firms in terms of median monthly operating margin, the difference is driven by outlier firms in both groups. When we compare only firms with positive operating margins, the difference falls by about 25%; among these, men-owned firms have median monthly operating margins of KES 42.3 thousand compared to KES 33.2 thousand for women-owned firms.

Financial Access

Women firm owners have the highest rates of being unbanked, at 44%, while 36% of men firm owners are unbanked. Otherwise, women and men are similarly distributed across levels of formal financial integration. Female firm owners and male firm owners use their bank accounts in a similar frequency —the median percent of transaction value into or from a bank account is 19% for banked women, compared to 12% for banked men.

A higher proportion of our female firm owners (56%) took loans than male firm owners (48%). Across both genders, cost was the most frequently cited barrier to credit.

Digitalization

A higher percent of men use mobile wallets than women (70% vs. 57%). However, in terms of firms that use mobile wallets, about a third of both men- and women-owned firms are moderate or super users.

Formalization

Levels of perceived formalization were similar across genders. However, a higher percent of men-owned businesses reported Annual Business Permits than women (76% vs. 58%), as well as KRA certificates (26% vs. 14%).

Employment

Women-owned firms have the same median number of monthly employees (2 employees) as men-owned ones.

Business Practices

On the McKenzie and Woodruff Business Practices Index score, women in our sample typically score the same as men. Among our firms, record keeping was the most common set of practices: 80% of firms reported keeping written business records, one important practice in this domain, with women and men being equally likely to report doing so (77% of the women vs. 80% of the men). Practices in the stock control category were also quite common and reported equally by men and women (59% and 58% respectively).

Aspirations

Growth in profit and stability were the two most common answers for every type of firm, without meaningful differences between firms based on gender of owners.

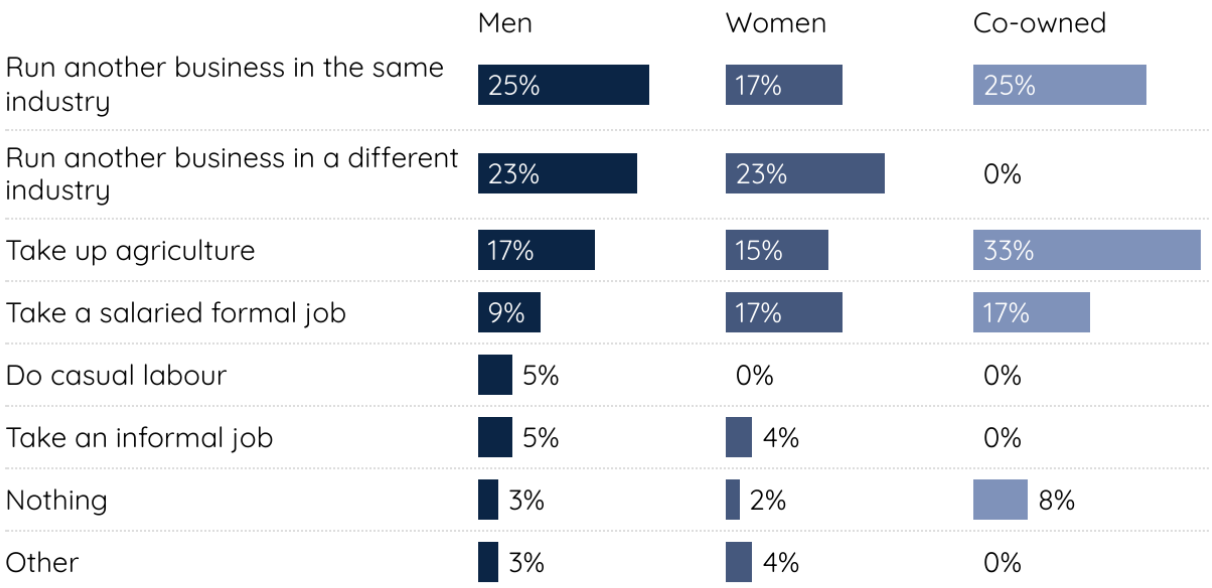
ENTREPRENEURIAL CONFIDENCE AND PERFORMANCE: A CLOSER LOOK

We wanted to understand if firm owners of different genders had differing motivations for starting a business that might impact their management practices and performance. Most of our sample opened their business due to the need to earn a living, usually driven by difficulties finding jobs. The second most common reason was the desire to be independent from an employer or own a business of any kind. Women were more likely to be driven by the former (56% open their businesses out of the need to earn a living, compared to 45% of men), whereas men were more likely to be motivated by entrepreneurial drive (27% vs. 13% of women).

Perhaps due to differing motivations for opening the business, when we asked firm owners what they would do for income if they were not running their current small firm (Figure W.1) we saw that women said they would be more likely to take a formal job, while men said they would be more likely to try to start a new small business. There are several possible explanations for this disparity, including that women may find it harder to secure the necessary capital to start a new firm, or that the women who have run employer firms are more employable in the formal sector due to the same factors that allowed them to start and run a small business.

FIGURE W.1 ALTERNATIVE TO SMALL FIRM OWNERSHIP

If you were not running this business, what would you do instead to earn income?

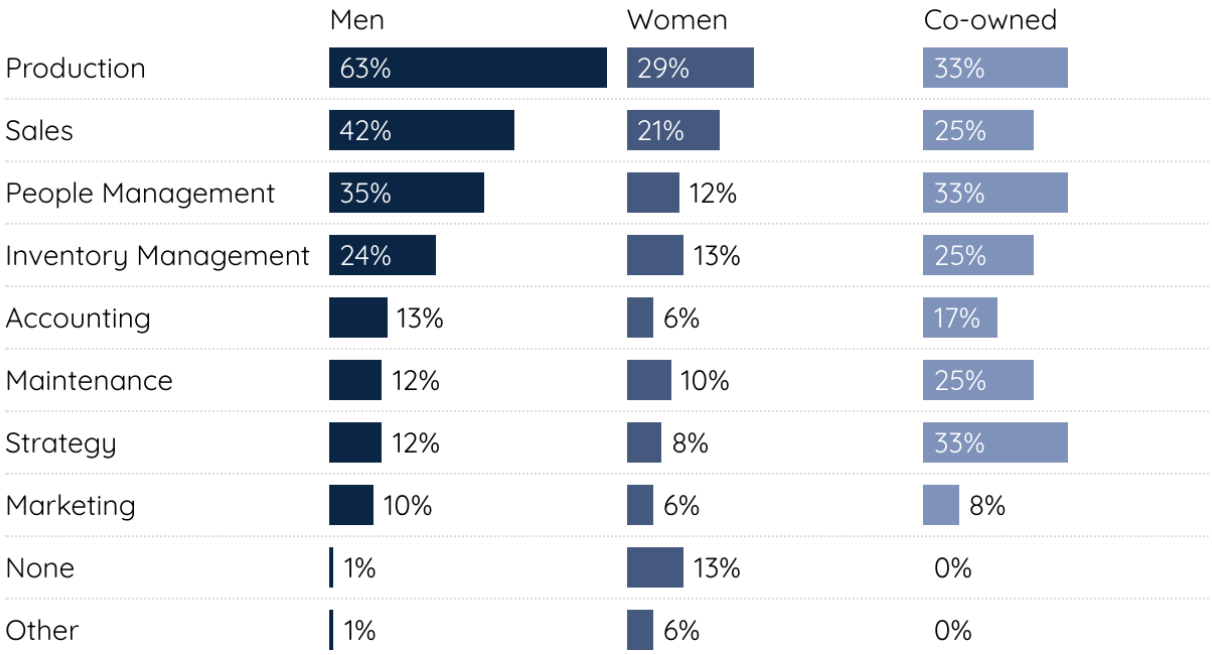


When asked about specific business practices, women reported the same levels of confidence in their specific business skills as men. For instance, about half of both men and women reported a "very strong ability" to manage financial accounts.

Of note, and deserving of additional investigation, is that one of the few places where we do see large differences between male and female owners is in their time use reports. Across the board men report spending time on more business activities over the prior two weeks than women. Note that this is not a report of the amount of time spent, but on the number of activities where any time was spent. , often 50% more, though men reported spending time on key business activities like accounting and strategy at higher rates than women (Figure W.2).

FIGURE W.2: TIME USE

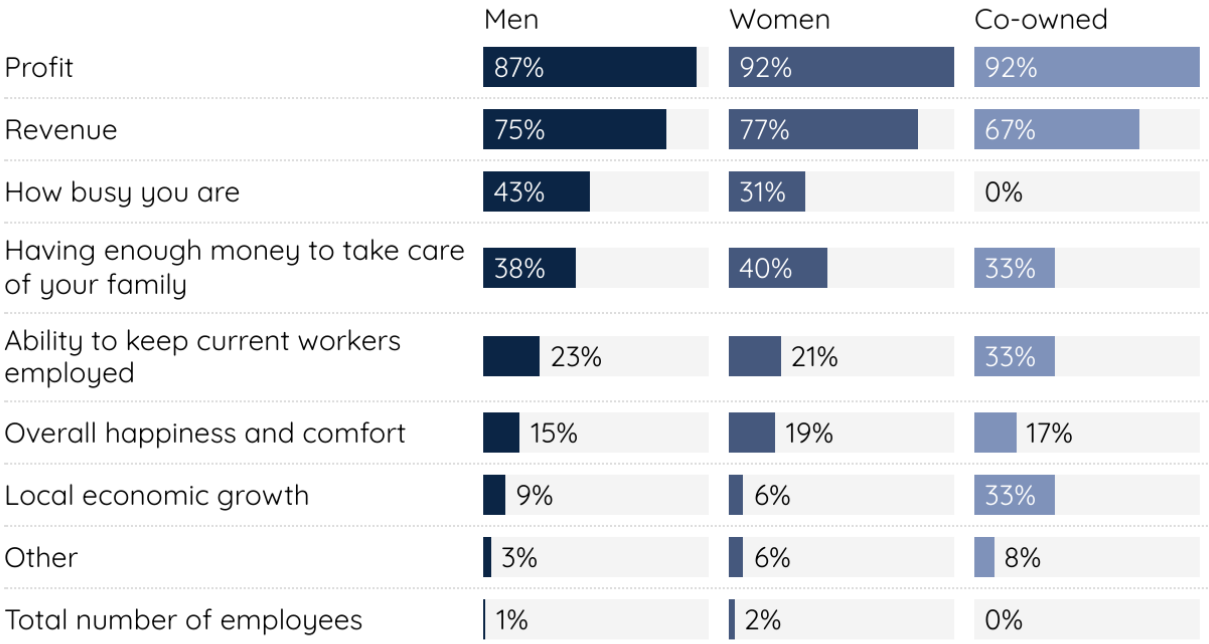
Which of the following activities did you spend time on in the past two weeks?



The disparity in reported time use, however, is not reflected in differences in how the owners measure success. Profit was the most important metric for both men and women. On measures that could be expected to skew significantly towards women ("Having enough money to take care of your family" and "Overall happiness") there were only small differences. The only measure where there was a marked difference was "How busy you are" with men reporting considering that metric at a rate more than 10 percentage points higher than women (Figure W.3).

FIGURE W.3: METRICS OF BUSINESS SUCCESS

How do you measure how your business is doing?



4. Financial Access

SUMMARY

A major policy focus for the last decade has been bringing more people into the formal financial sector, spurred on by findings that half the world was "unbanked." In this section, we explore how "banked" our firms are in terms of account ownership and then dive deeper into how truly integrated firms are into the formal financial system by looking at account usage, separation of finances, and access to credit. The findings here are an abbreviated version of the Kenya Issue Brief on Financial Access, *Financial Services: How small firms in Kenya manage their finances,* available on smallfirmdiaries.org.

We find that 62% of the firms in our sample own bank accounts *and* use them at least once. Using the percent of value of transactions through a bank account to categorize a firm's financial integration, we see that 38% of our sample is unbanked, 38% is marginally integrated (less than 25% of activity through a bank account), 17% are partially integrated and 8% highly integrated (more than 75% of activity) into the formal financial system. We also find that firms at different levels of integration use bank accounts for differing values of transactions. Highly and partially integrated firms use bank accounts for higher value transactions, while marginally integrated firms use cash boxes for higher value transactions than their bank accounts. Nearly half of employee payments remain in cash, even among banked firms, due to employee preferences. The exception is the most highly banked firms who use bank transfers for essentially all employee payments. In

terms of separation of finances, just over 88% of our total sample (including firms that are unbanked) report keeping specific separate accounts for their business.

Less than half (49%) of our firms reported holding a loan of any kind during the study and mobile money lenders and commercial banks (27% and 25% respectively) were the most common loan source. While increased integration in the formal system does not correlate with higher loan usage, we did find that being banked is a prerequisite for access to bank credit—only 3 unbanked firms report having a commercial bank loan. Use cases for loans varied across the sample, with the most popular needs being to expand stock, take advantage of an opportunity, or make an investment. Deeper dives on what firms consider an investment showed that most of the time an "investment" is a large purchase of raw materials and inventory. Thus, we believe that the vast majority of the expressed interest in borrowing is for working capital purposes.

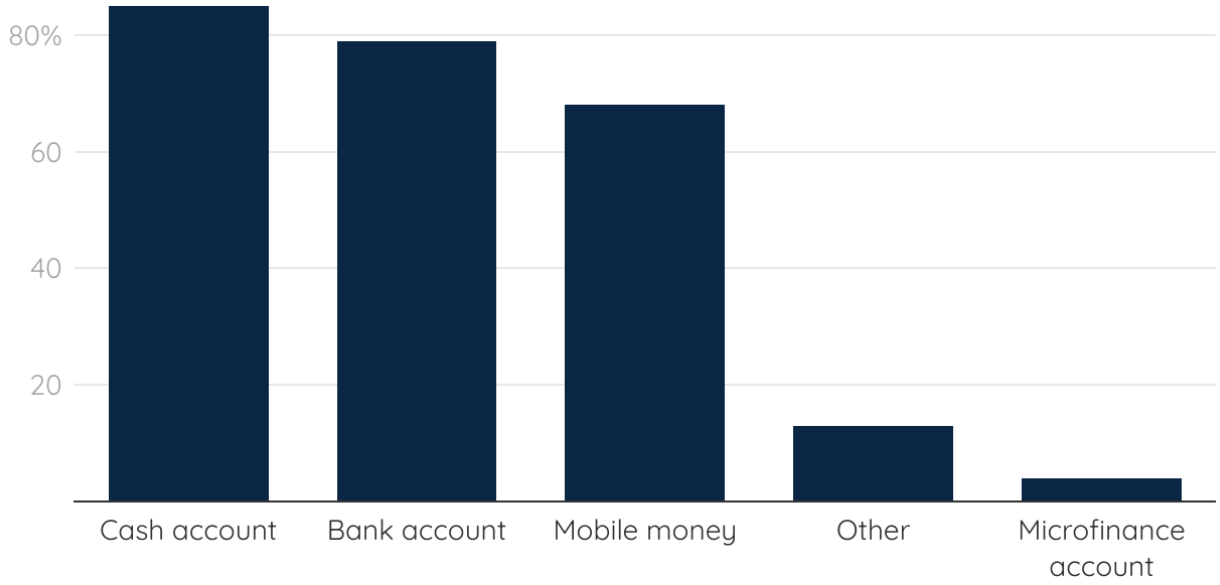
Given this need for working capital, we explore the use of supply chain finance, including getting credit and giving credit. About half of our firms use supply chain finance and a higher proportion of users give credit than take it.

LEVEL OF BANKEDNESS

Efforts to bring more people into the formal banking system have borne fruit in many parts of the world as shown in the 2021 Global Findex, with the number of unbanked people cut in half globally; in Kenya the number of people over the age of 15 who do not have any account stands at 20%.

Originally measurements of formal financial inclusion focused on account ownership, but researchers realized that simply owning an account did not mean much if the account is rarely or never used. More recently, measures of inclusion have attempted to incorporate measures of use, not just ownership. In our sample, 69% of firms report that they own at least one bank account (Figure 4.1). We can also look at whether a bank account was used even once during the study. As with many other measures of household bank account ownership and usage, we see a gap: just 62% of all firms—7% less than firms that report owning an account—use their bank accounts at least once.

FIGURE 4.1: ACCOUNT OWNERSHIP BY FIRMS



Using an account once is a better measure than just ownership, but it still falls far short of understanding how integrated into the formal financial system a firm is. The financial diaries methodology allows us to record all of a participant's financial flows, regardless of what form (e.g. bank transfer or cash) or accounts (e.g. a bank account, mobile wallet, or cash box)are used. We're also able to ask whether a firm owner separates firm and household finances, and about desire for and happiness with formal accounts. All of this data allows us to construct a novel measure not just of whether a firm is "banked" but the degree to which they are integrated into the formal financial system. Specifically we use both account ownership and percent of value of transactions through a bank account to categorize a firm's formal financial integration (we conduct this same exercise on use of mobile money in Section 5).

Using this measure we see that 38% of our sample is unbanked (zero value of transactions through a bank account), 38% is marginally integrated (less than 25% of value through a bank account), 17% are partially integrated (25% to 75%) and 8% highly integrated (more than 75% of value) into the banking system.

In sum, there are two important dimensions for integrating small firms like those we studied more firmly into the formal banking system: 1) increasing the usage of formal finance of the firms (about 80%) who are using formal finance but for less than half of their financial activity, and 2) reducing the portion of the firms (about 30%) that are still unbanked and operating outside formal financial systems. It will likely be much easier to increase usage for firms who are already partially integrated than it will be to bring unbanked firms into the system. The former can likely be addressed through marketing and product design tweaks; the latter probably requires more significant interventions and potentially policy changes.

A second key metric for understanding the finances of small firms is the degree to which owners separate their finances from their household finances. This is a fundamental business practice that has been shown to be important to firm performance, and obviously is important for understanding administrative data about small firms' accounts. Nearly all—88%—of our total sample (including firms that are unbanked) report keeping specific separate accounts for their business. Unbanked firms report keeping separate finances at higher rates than the total sample: 95%. They do this via maintaining a cash box (100%) and mobile wallets (97%); the use of digital financial services is discussed in more detail in Section 5. Counterintuitively, we do not find that firms that own and use bank accounts are more likely to keep their finances separate; indeed 17% of firms that report at least owning a bank account commingle household and firm finances. Size of firm (by revenue) is not a better proxy: 86% of firms in our highest revenue segment separate finances, and similarly, 88% of those in the lower two tiers of revenue segmentation do so.[9] Interestingly, the combined group of women-owned and co-owned firms are more likely to separate their finances than men-only owned firms (85% compared to 76%, respectively). This may reflect household gender dynamics in which women risk losing control of commingled funds.

We did not ask owners or verify the legal status of the bank accounts they told us about. However, we do ask owners about their registrations and their perceptions of whether the firm is formal. While requirements to register a business bank account vary across banks, the most common requirement was a KRA Pin Certificate, an ID number issued by the Kenya Revenue Authority. Since only a quarter of the firms have a KRA registration, we surmise that the vast majority of the accounts are not legally registered to the business, but to the owner. There is an important interplay between separation of finances, integration into the financial system, and firms' self-perceptions of formality: Firms that are highly integrated are both more likely to separate their finances and to perceive themselves as formal. For instance, ¾ of the firms who have tax registrations/KRA pin certificates have a separate business account, and 90% of firms who perceive their firms as formal have a separate business bank account.

FORMAL FINANCIAL INTEGRATION

In this section we examine how firms differ across levels of formal financial integration, across gender, sector, formality, and earnings. We also examine the different ways firms use their bank accounts in terms of income and expenses.

In general, banked firms have higher revenues than unbanked firms. The relationship between financial integration and revenues is not as clear cut—partially integrated firms have higher monthly revenues than highly integrated firms and there is a large overlap in the distribution of median monthly revenues across all levels of financial integration. Clearly, then, there is opportunity to significantly increase the banking integration of firms at all levels of the revenue distribution.

[9] Firms are categorized based on median monthly revenue. The cutoffs are: Low - less than KES 100,000; medium - KES 100,000 to 300,000; and high - KES 300,000 to 700,000. Firms with revenue above KES 700,000are considered outliers.

FIGURE 4.2: REVENUE PARAMETERS BY LEVELS OF FINANCIAL INTEGRATION

Level of Integration	Minimum	Median	Maximum	Standard Deviation
High	25,705	250,325	4,407,850	1,404,045
Partial	26,790	361,000	4,734,735	1,205,657
Marginal	22,575	115,861	4,787,931	654,532
Unbanked	11,730	54,573	963,545	170,774

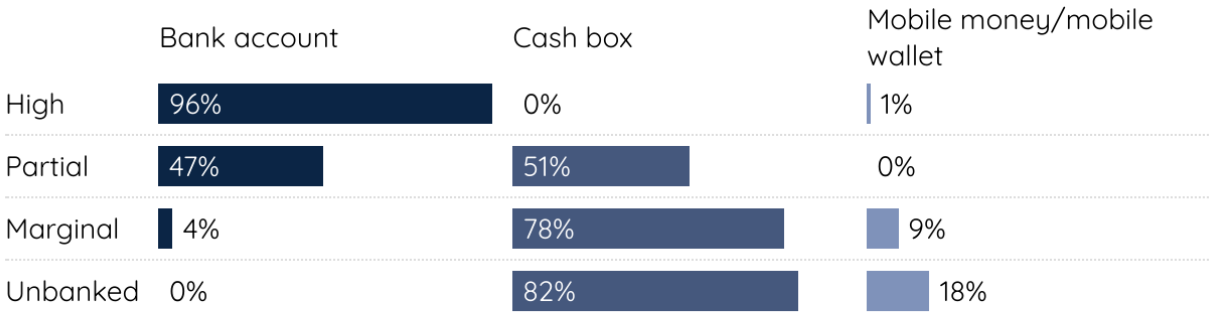
Using our measure of growth (the slope of the linear best fit line of monthly operating margin), we examined the relationship between growth and formal financial integration and found no clear patterns. As shown in Figure 4.3, we find no relationship between growth and formal financial integration—only 25% of our highly integrated firms are growers, compared to over a third of marginally integrated firms.

FIGURE 4.3: LEVEL OF FINANCIAL INTEGRATION OF "GROWER" VERSUS "NON-GROWER" FIRMS

Level of Integration	Grower (%)	Non-Grower (%)
High	25	75
Partial	31	69
Marginal	40	60
Unbanked	43	57

We also examine how firms at varying levels of banking integration use their accounts and find that the small firms tend to concentrate their use in just one type of account. Obviously, the highly integrated firms are channeling most of their business through bank accounts. But unbanked firms and marginally integrated firms that don't use bank accounts or use them very little consolidate their use in just cash, with some supplemental use of mobile wallets, rather than spreading their activity across different tools. Similarly, the firms who are at least partially integrated do not spread their use to bank alternatives such as mobile wallets or MFIs for any of their business—the bank accounts are a pure substitute for these other types of accounts (Figure 4.4).

FIGURE 4.4: MEDIAN PERCENT OF TRANSACTIONS MOVING THROUGH ACCOUNTS BY LEVEL OF BANKING INTEGRATION



We also find that firms at different levels of integration use bank accounts for differing values of transactions. Highly and partially integrated firms use bank accounts for higher value transactions—the median transaction value per firm into or from a bank account is KES 2.7 million and KES 966,00 for highly and partially integrated firms respectively, compared to KES 0 and KES 798,000 into or from a cash box. In contrast, marginally integrated firms use cash boxes for higher value transactions than their bank accounts (median transaction value of KES 835,000 vs. KES 65,000). In addition, marginally integrated and unbanked firms use their cash boxes for higher value transactions than their mobile wallets. The median transaction value per firm into or from a mobile wallet is KES 188,000 and KES 125,000 for marginally integrated and unbanked firms respectively, compared to KES 835,000 and KES 371,000 from a cash box.

To confirm the implications of the consolidation pattern, we looked at what types of transactions the firms made from each account. For revenue, cash plays the largest role (51% of all transaction values); on the other hand, bank accounts are more common for paying expenses (62% of all transaction values). We looked specifically at the use of types of accounts for employee payments and how predominant cash is. By value, 44% of all payments to employees are made in cash, similar to the proportion from bank accounts (38%). Mobile wallets made up less than a fifth of payments (Figure 4.5). However, when we look at the use of cash for employee payments by the level of financial integration, we find that highly integrated firms essentially never use cash to pay their employees, and a large proportion of partially integrated firms use cash for less than two-thirds of their employee payments. While there is use of mobile money for employee payments among marginal and unbanked firms, this is driven by most of these firms using mobile wallets for a small portion of payments, rather than a few outlier firms using mobile wallets as their primary payment tool (Figure 4.5).

FIGURE 4.5: PERCENT OF TOTAL EMPLOYEE PAYMENTS THROUGH EACH ACCOUNT TYPE

Level of Integration	Bank Account	Cash Box	Mobile Wallet	Other
High	90%	1%	9%	0%
Partial	70%	22%	8%	0%
Marginal	12%	65%	22%	2%
Unbanked	1%	64%	36%	0%

This pattern of paying employees and managing employee payments in cash likely comes from employee preferences, though we do not have complete data on employee preferences that would answer this question definitively. That the most integrated firms do use bank accounts for employee payments does provide hope that once firms are deeply integrated into the banking system, they can "pull" employees into the formal financial system as well.

FIGURE 4.6: PERCENT OF GROSS EMPLOYEE PAYMENTS BY MODE OF TRANSACTION

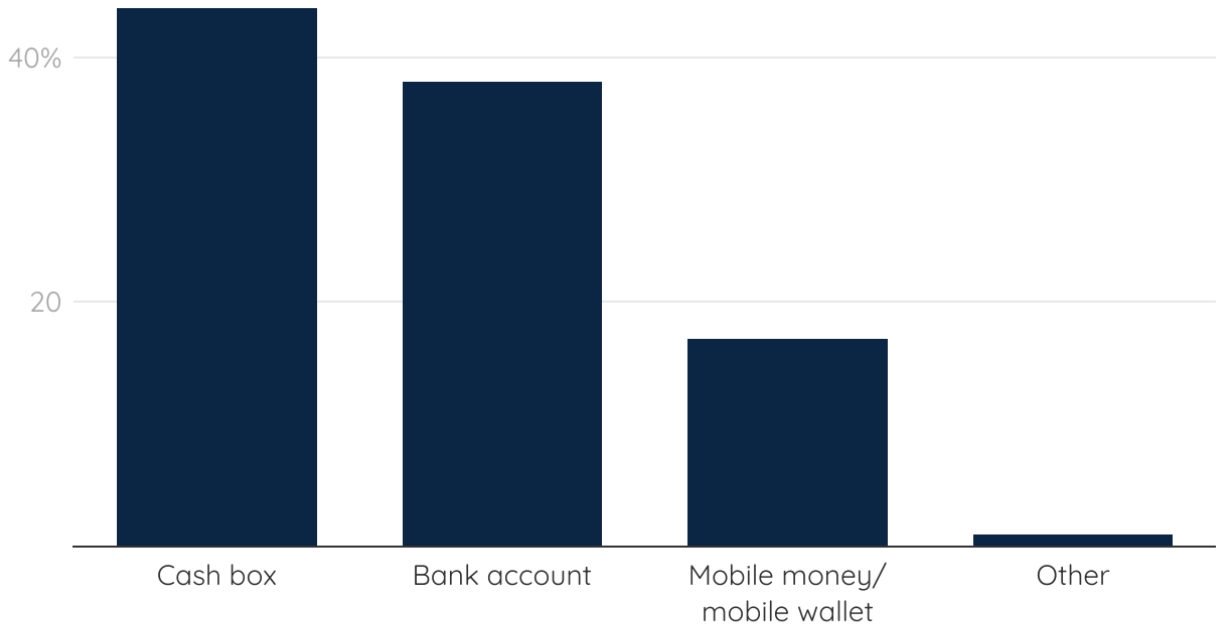
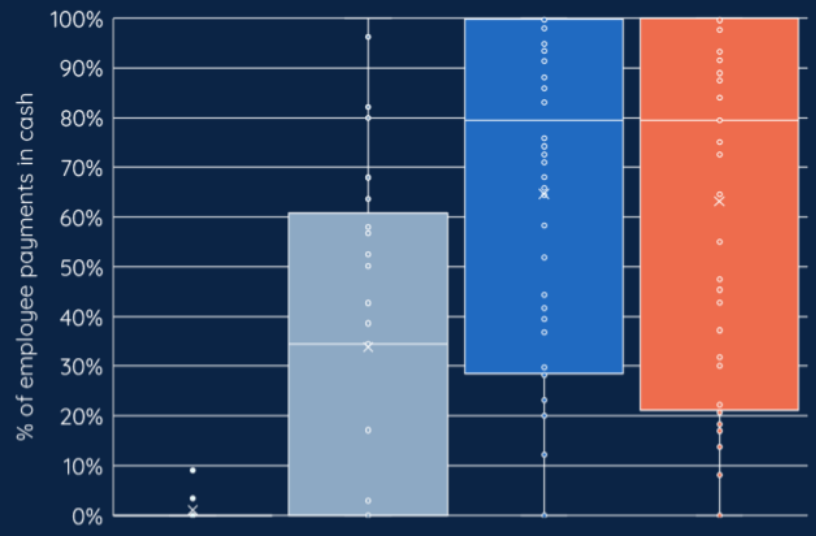


Chart: Financial Access Initiative - NYU Wagner • Source: Small Firm Diaries

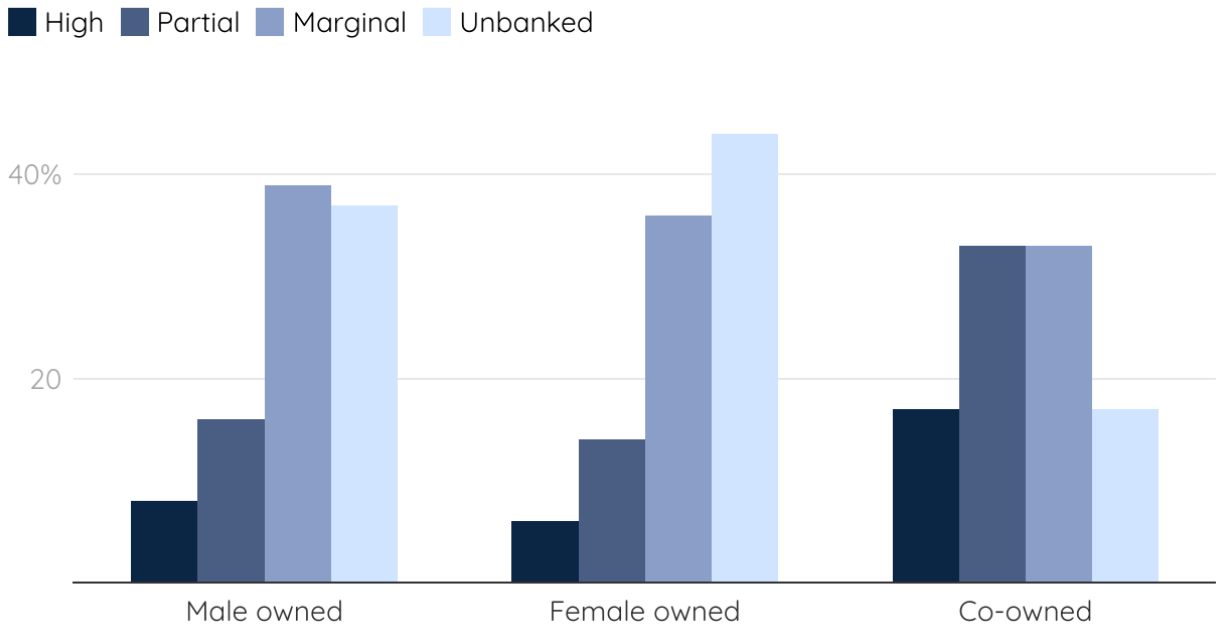
FIGURE 4.6B: EMPLOYEE CASH PAYMENTS BY FIRM LEVEL OF FINANCIAL INTEGRATION



INTEGRATION AND FIRM/OWNER CHARACTERISTICS

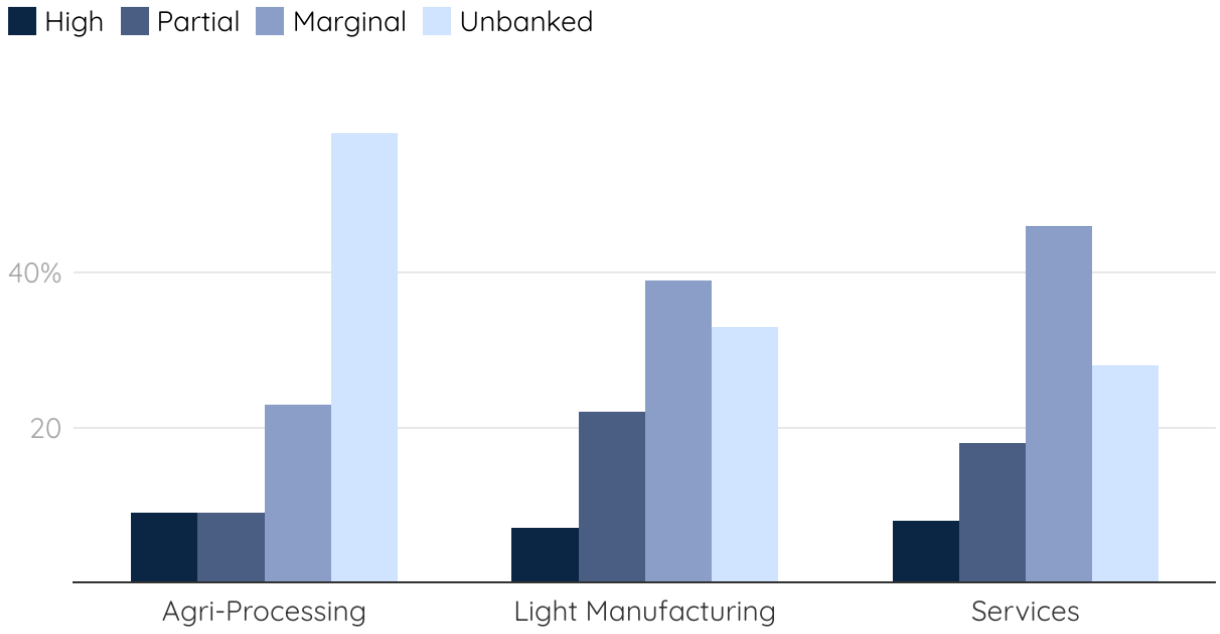
Women firm owners have the highest rates of being unbanked, at 44%, while 36% of men firm owners are unbanked. Otherwise, women and men are similarly distributed across levels of financial integration (Figure 4.8). Female firm owners and male firm owners use their bank accounts at a similar frequency —the median percent of transaction value into or from a bank account is 19% for banked women, compared to 12% for banked men. Our results here align with global trends, as well as national data. Findex 2021 reported that in Kenya, men were banked at a higher level than women, 83% vs. 75%.

FIGURE 4.8: BANKING ACTIVITY LEVEL BY GENDER



In terms of industry, agri-processing firms are unbanked at higher rates than light manufacturing and services (Figure 4.9). These firms also have the lowest levels of banking activity. Services have the lowest proportion of unbanked firms. The median percent of value flowing through a bank account is also lower for banked agri-processing firms, at 11%, compared to 19% and 15% for light manufacturing and services firms respectively.

FIGURE 4.9: BANKING ACTIVITY LEVEL BY INDUSTRY



Looking at formalization, we find that, while firms with a tax registration (KRA pin certificate) are much less likely to be unbanked, having a tax registration does not perfectly predict financial system integration, as partially integrated firms are most likely to have tax registration (Figure 4.10).

FIGURE 4.10: PERCENT OF FIRMS WITH TAX REGISTRATION BY LEVEL OF BANKING ACTIVITY

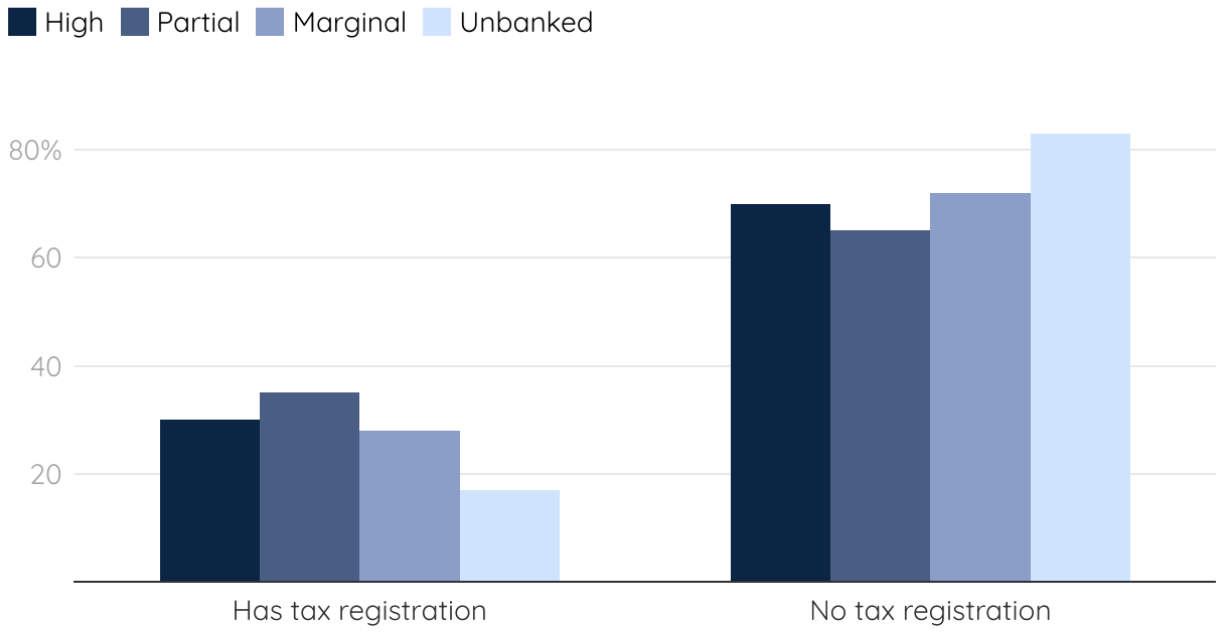
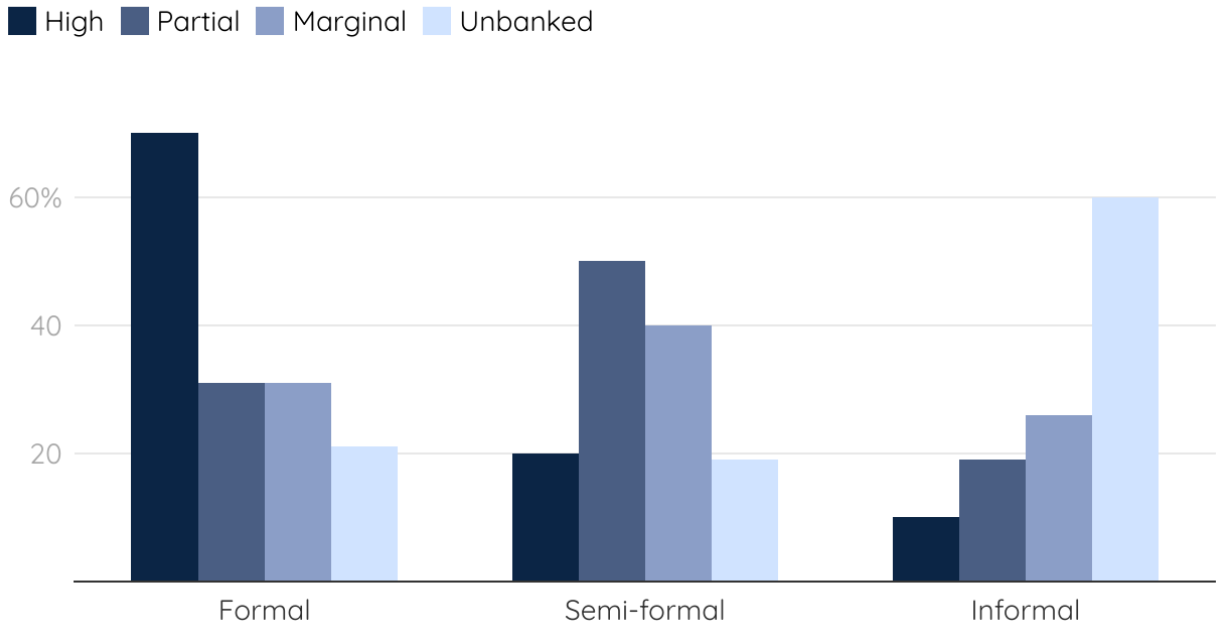


Figure 4.11 shows that there is a close correlation between level of integration with the firms' own perceptions of their formality.

FIGURE 4.11: SELF-REPORTED FORMALIZATION STATUS BY LEVEL OF BANKING ACTIVITY

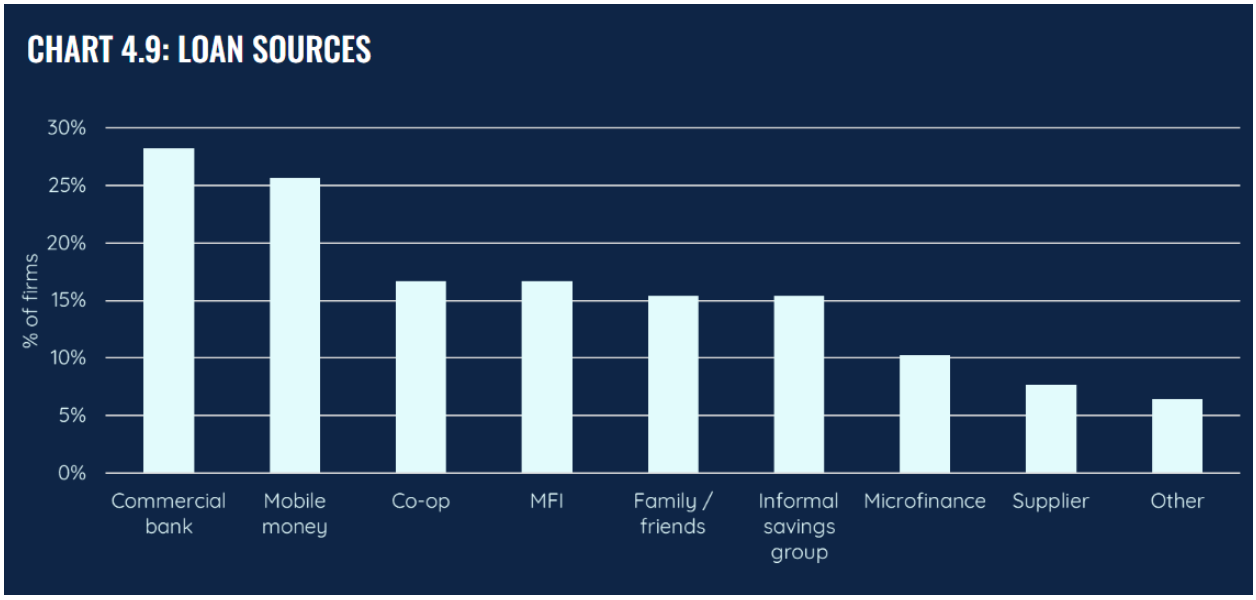


CREDIT

In the Small Firm Diaries we were eager to understand the credit access, needs and behaviors of small firms. Were the firms "graduates" of microfinance programs? Did they have access to credit at all? If so, where was the credit coming from? How big of a barrier was credit access to their growth and aspirations? The answers to these questions turned out to be surprising, especially given what we saw in terms of the number of firms who were partially or highly integrated into the formal financial system.

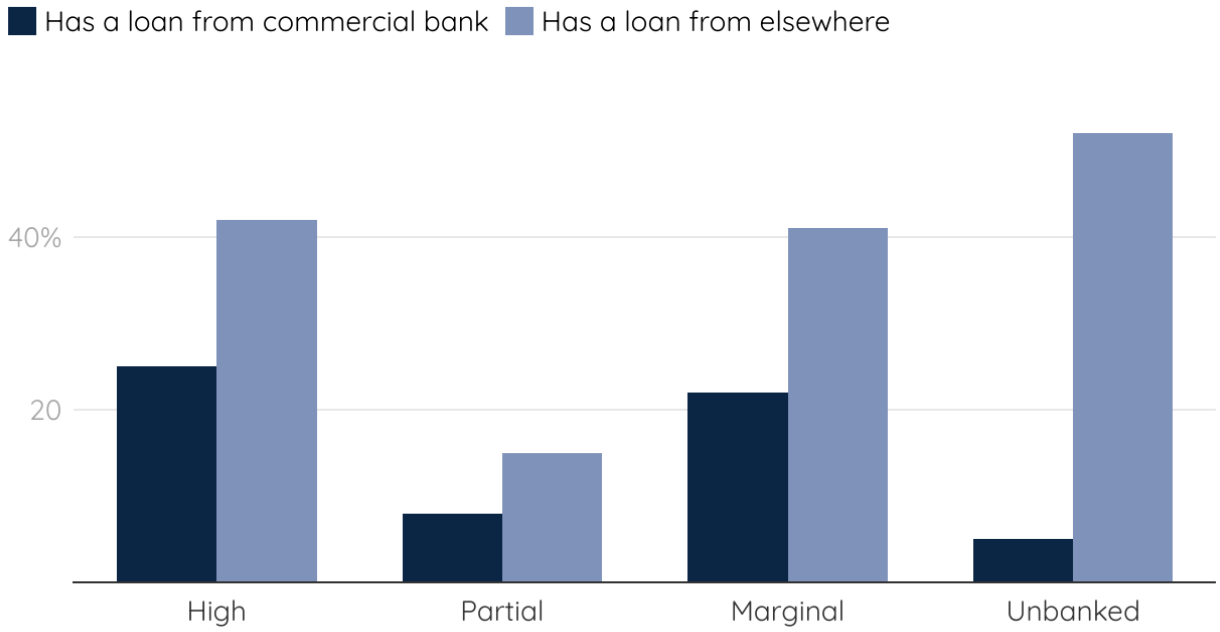
About half (50%) of our firms reported holding a loan of any kind during the study. A higher proportion of our female firm owners (56%) took loans than male firm owners (48%). There were some differences across industries: services firms were most likely to take a loan at 55%, compared to 48% for light manufacturing firms, and 42% of agri-processing firms.

Commercial banks and mobile money lenders are the most common loan source in Kenya, closely followed by mobile money lenders (see Figure 4.12). In other countries in the Small Firm Diaries, we find that firms rely on supplier loans or friends and family more often than bank loans.



Being significantly integrated into the formal system is not a prerequisite for access to bank credit. While the highly integrated firms have the most loans from commercial banks, marginally integrated and even a few unbanked firms also have loans from commercial banks (Figure 4.13).

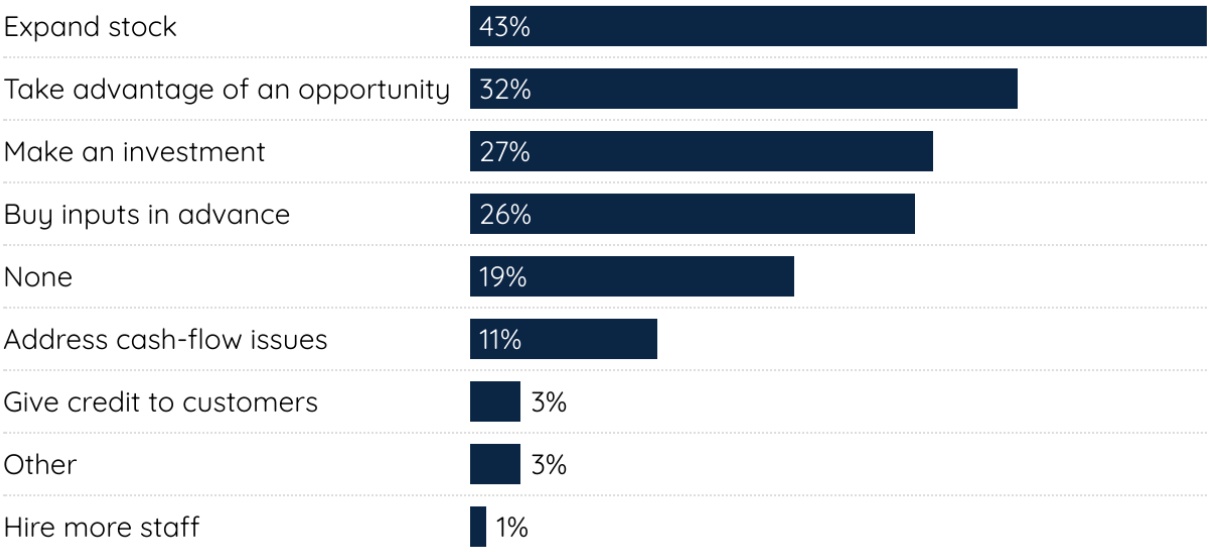
FIGURE 4.13: COMMERCIAL LOAN USAGE BY LEVEL OF BANKING ACTIVITY



CREDIT USAGE

During the study, we asked firm owners what they use or would want to use a loan for, with a variety of options. The possible answers were not fully mutually exclusive—for instance, a firm owner could respond "Address cash-flow issues" and "buy inputs in advance" (Figure 4.14). The most popular response was "Expand stock", followed by "take advantage of an opportunity", "make an investment", and "buy inputs in advance".

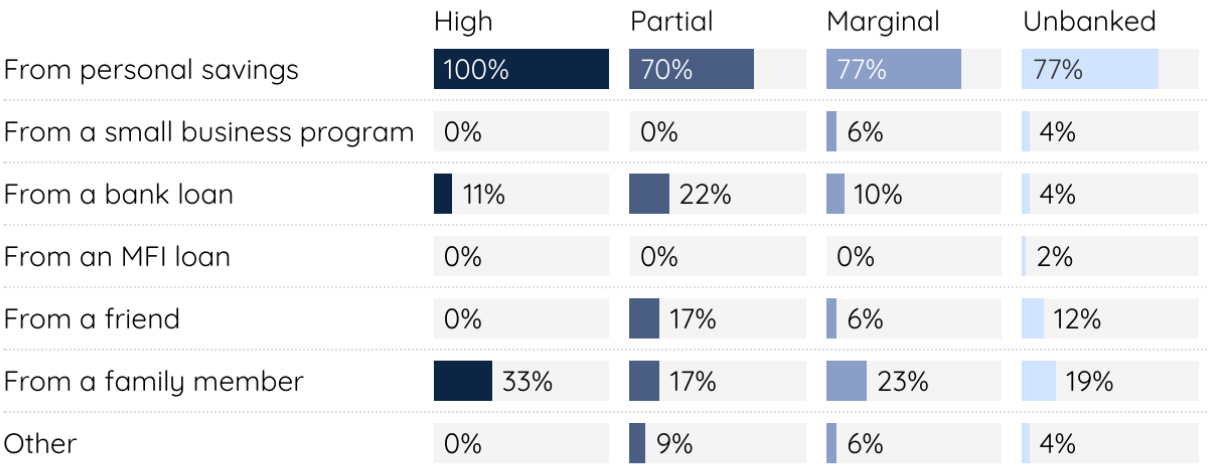
FIGURE 4.14: DESIRED USES FOR LOANS



In total, the desired uses for loans are predominantly within what could be categorized as working capital, rather than for purchasing assets. This is particularly true if at least some portion of the "Take advantage of an opportunity" answers are related to purchases of raw materials or paying for such things as labor or transportation of raw or finished goods, which seems likely given what we see of firms' spending patterns. Specifically, we see that most large purchases are for raw materials/inventory.

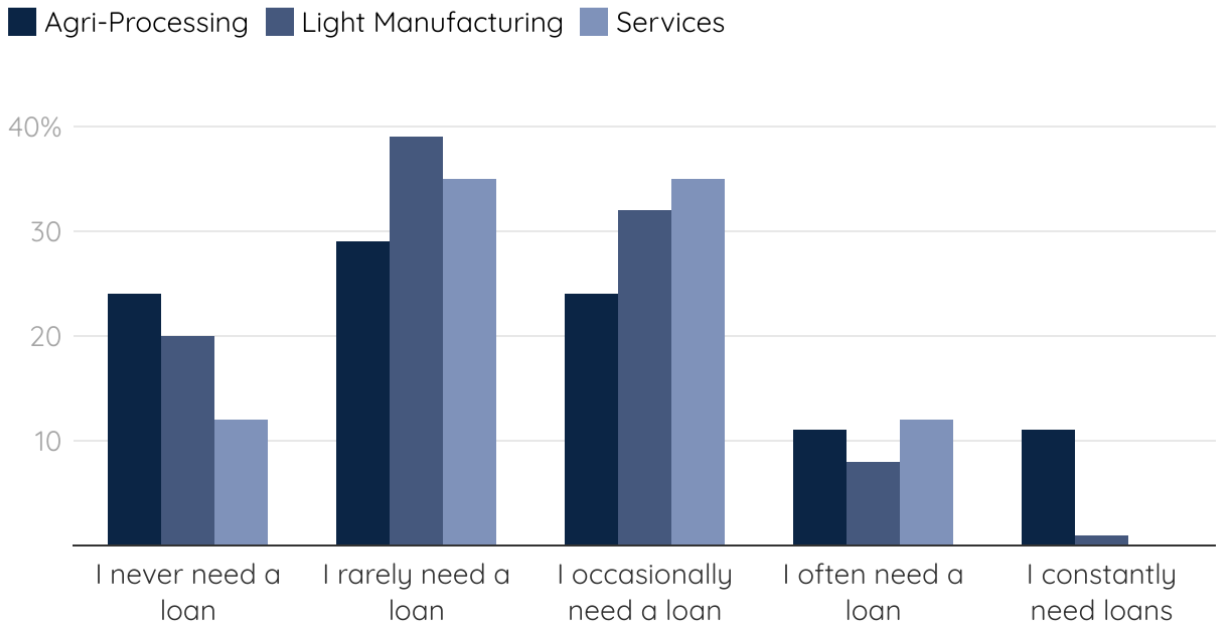
Consistent with global studies of entrepreneurship and small business finance—but in marked contrast to popular conceptions of small business credit—firms reported low usage of any form of credit, notably including MFI loans, to start their businesses. Regardless of banking activity, the majority of firm owners used their own savings for start-up capital. (Figure 4.15)

FIGURE 4.15: SOURCES OF START UP CAPITAL BY LEVEL OF BANKING ACTIVITY



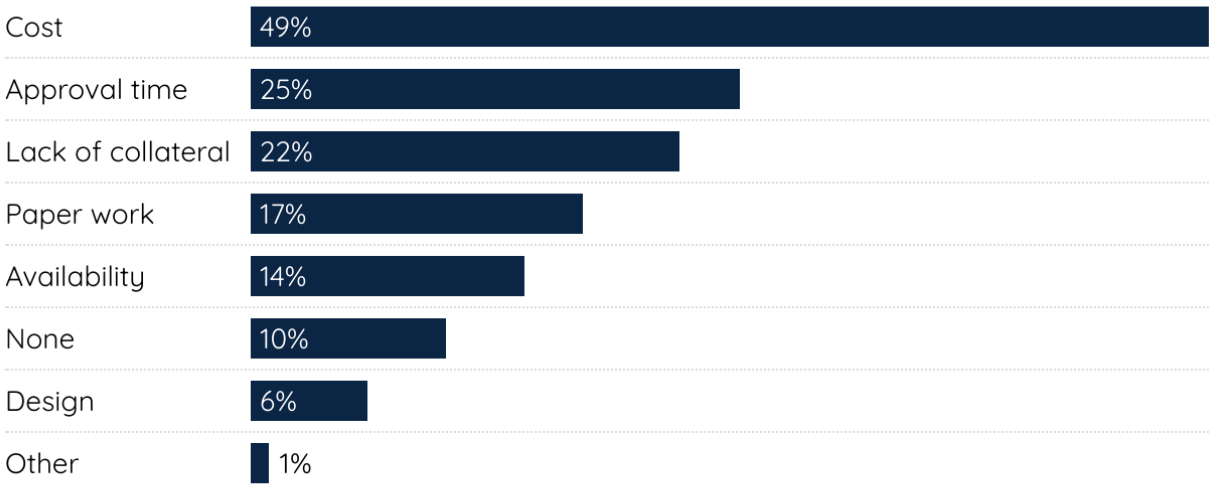
Most firms report relatively low desire to actively use credit, noting only an occasional, rare, or nonexistent need for a loan. A quarter of agri-processing firms report never needing a loan and roughly 30% say they rarely need a loan (Figure 4.16). Light manufacturing firms mostly need loans "rarely", while 70% of service firms need a loan only "occasionally" or "rarely". Overall, we do not see differences in stated desire for loans between firm owners by gender; specifically very few firms across both genders report needing loans constantly or often.

FIGURE 4.16: DESIRE FOR LOANS BY INDUSTRY



Cost was the most frequently cited barrier, reported by close to half of firms. Notably, other issues at the forefront of policy discussion, such as lack of collateral, availability, and design were reported infrequently (24%, 21%, and 6% respectively) (Figure 4.17).

FIGURE 4.17: PERCEIVED BARRIERS TO ACCESSING CREDIT



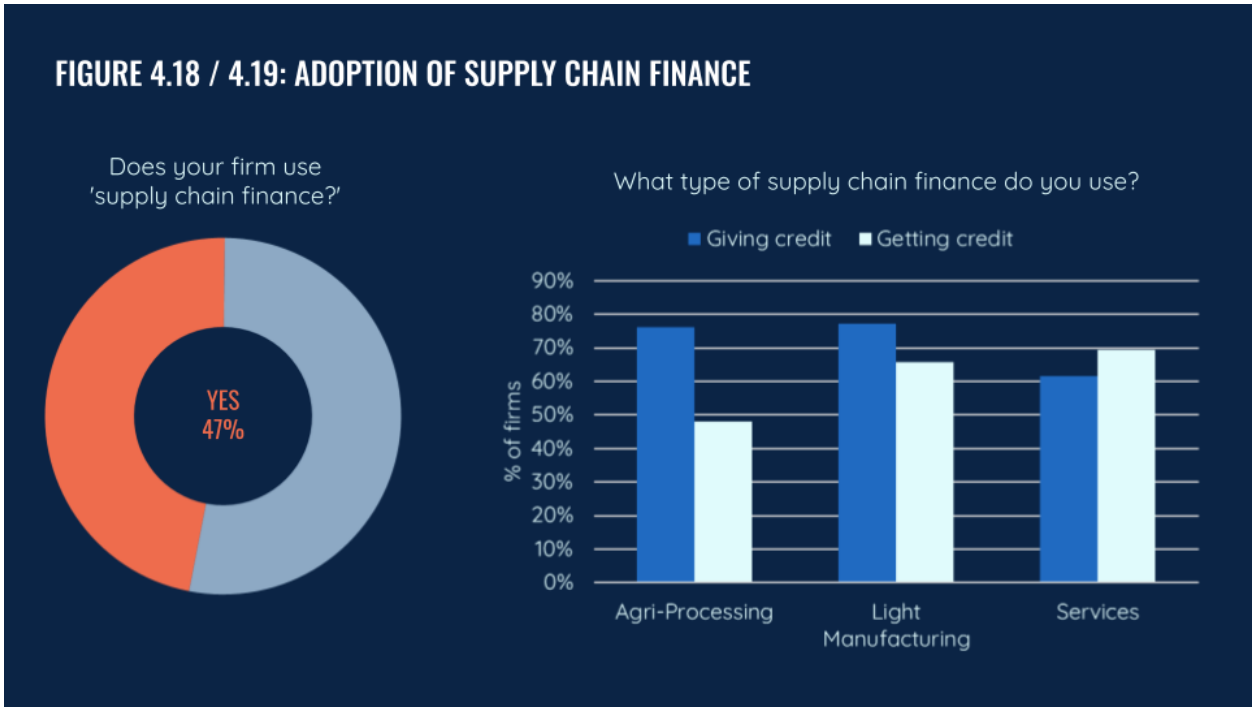
In addition to looking at firms' perceptions of barriers to credit, we can also look at other firm characteristics to see which firms are less likely to use credit. Based on a firm's perceived level of formality, 48% of informal firms have no loans, compared to 56% of formal and 49% of semi-formal firms. Between perceived formal and semi-formal firms, we see few differences in the usage rate of "informal loans"; 41% and 35% of informal and semi-formal firms, respectively, took an informal loan during the study, compared to 38% of formal firms. This suggests that formal firms that may have access to institutional sources of credit still rely on informal credit due to cost or other barriers noted above.

SUPPLY CHAIN FINANCE

Understanding the opaque domain of supply chain finance for small firms is particularly interesting. We attempt to get a complete picture of supply chain finance as it illuminates the tools, challenges and opportunities around working capital and liquidity management for small firms. We define supply chain finance broadly to include both financial flows and tacit or in-kind transfers, and find that about 47% of our firms use supply chain finance (essentially equal to the use of bank credit). Given the flexibility or informality of many supply chain finance arrangements, we believe our measures of supply chain finance flows are an underestimate—there is likely more liquidity being exchanged in this way, and our measures can be better thought of as a lower bound.

We can separate out the use of supply chain finance into two categories: getting credit and giving credit. Based on the struggles with liquidity that firms face it is at first glance surprising that the firms (with the exception of services firms) give credit—transferring liquidity to customers—more than they receive it (Figure 4.18). On further thought however, it is likely true that the firms are serving low-income customers who have even greater liquidity challenges than the firms themselves. Thus, while these firms are liquidity constrained, they are providing a lot of liquidity to their customers and play a very large role in the financial lives of low-income households and

neighborhoods. Overall use of supply chain finance is fairly similar across industries, but agri-processing firms receive less credit than light manufacturing or services.



Firms see a variety of advantages of supply chain finance compared to other sources of credit (see Figure 4.19) but both users and non-user of supply chain finance most frequently mention that it strengthens business relationships. Unsurprisingly, users of supply chain finance are much more likely to perceive that it can strengthen relationships than non-users, as well as that it creates mutual benefits. Of course there are risks as well as advantages (Figure 4.20). Non-users and users of supply chain finance alike believe that it poses a risk to their relationships with suppliers and customers.

FIGURE 4.20: ADVANTAGES OF SUPPLY CHAIN FINANCE

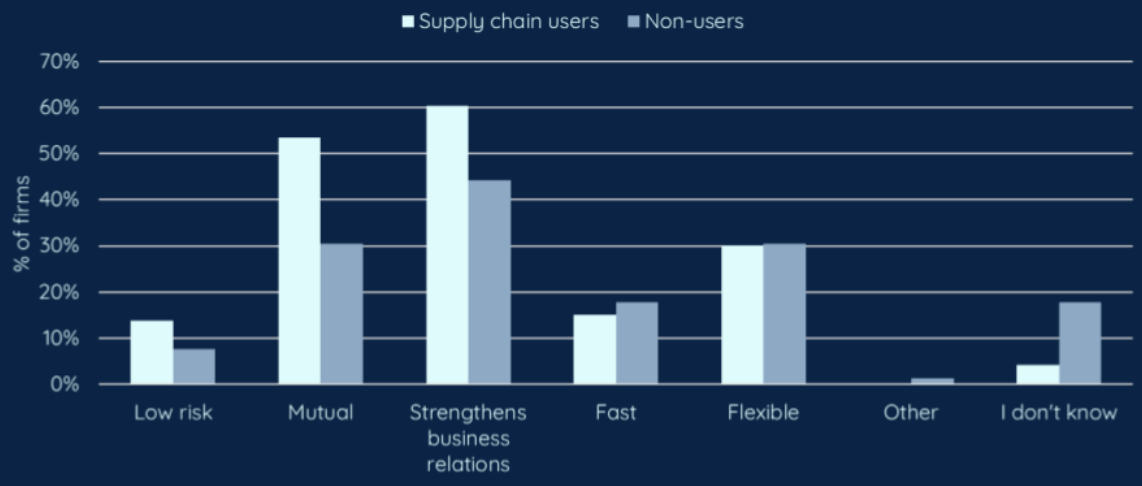
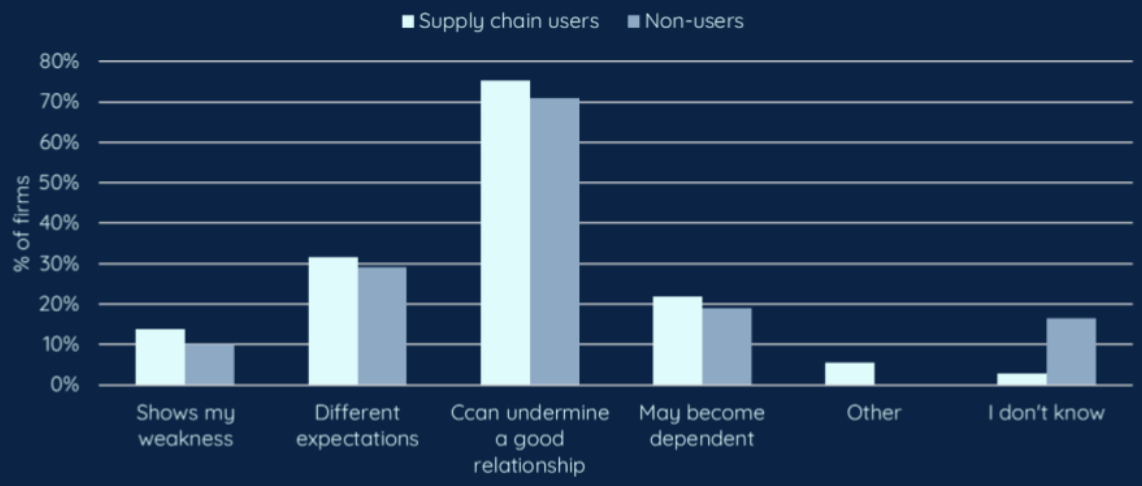


FIGURE 4.21: DISADVANTAGES OF SUPPLY CHAIN FINANCE



Overall, supply chain finance seems to be an underexploited opportunity for supporting small firms and their customers. Using the knowledge of suppliers can solve one of the major challenges of business lending—understanding credit risk in the context of limited and incomplete information. Providing liquidity to suppliers to enhance their provision of credit or gathering information from

suppliers in order to underwrite working capital loans to the firms themselves would also likely trickle-down to the firms' customers by allowing the firms to offer more credit than they already do.

5. Digitalization

SUMMARY

In this section we examine our sample's adoption of mobile money and digital financial services, as well as other digital business tools. Here we use the term "mobile money" or "mobile wallets" only for payment accounts accessed through a mobile phone. We use Digital Financial Services (DFS) as an umbrella term that includes banking and payments services delivered through the internet (which may be accessed via a smartphone or a PC), banking apps accessed via a smartphone, and what might be called "traditional" alternatives to cash like credit cards and debit cards that allow non-cash payments (as opposed to simply being used for withdrawing physical cash from an ATM).

While mobile money has spread to more than 50 countries, it's become clear that East Africa and South Asia are outliers rather than templates for the rest of the world. That is in part because many different types of service providers quickly recognized the potential uncovered by mobile money's rapid growth in a few countries, leading to both rapid expansion and market fragmentation in many countries. However, the subtle distinctions between the terms, which are often used interchangeably, make conducting research difficult as users don't always make clear cut differentiations between types of services. We offer our own categorizations and statistics while we try to be clear about the exact questions we asked in case others would categorize or analyze the responses differently.

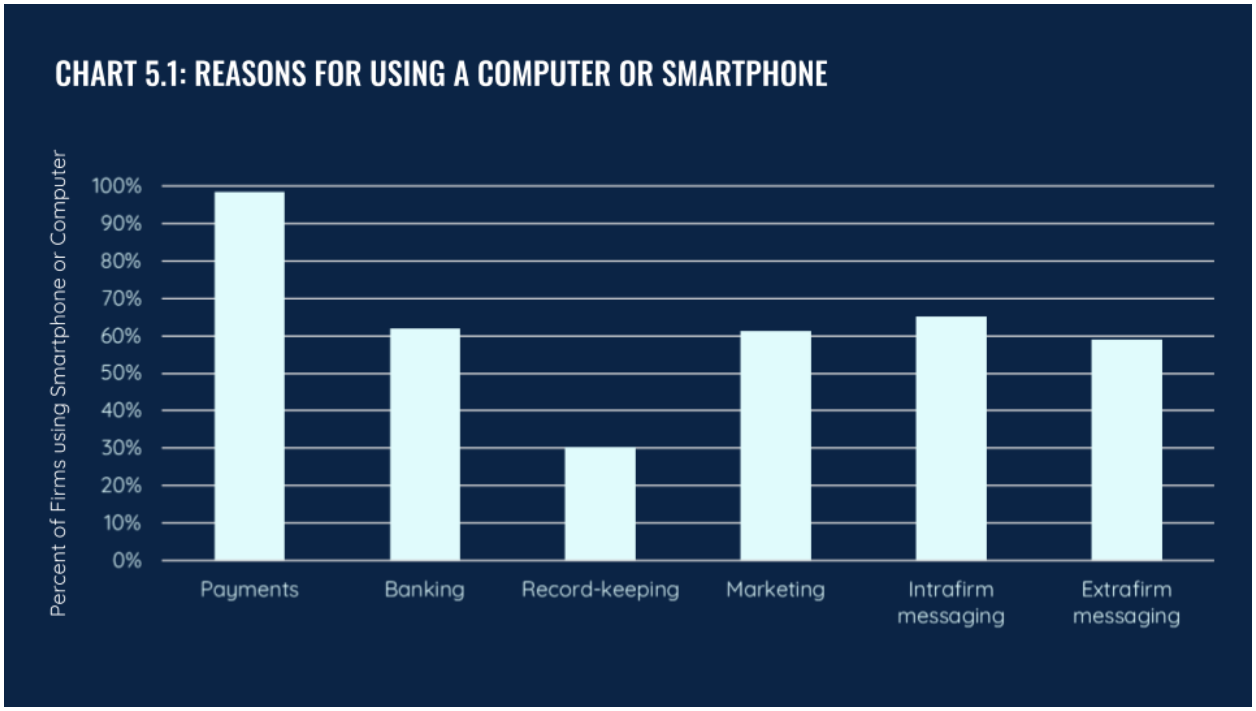
Digital Financial Services offer significant possibilities for bringing households and firms into, or further into, the formal financial system. DFS also potentially enables business models for delivering financial services to customers who have been viewed as too expensive or unprofitable to serve by financial services providers. Thus, a key area of investigation for the Small Firm Diaries was the extent to which the small firms used DFS, the reasons they did or didn't use DFS, and the factors that might induce them to use DFS more.

In summary, we find that the small firms in the study were generally proficient users of technology and had high reported usage of digital financial services, but had lower usage of mobile money in their businesses than may be expected in Keya. For more details on digital adoption, read the Kenya Issue Brief on Financial Access, *Financial Services: How small firms in Kenya manage their finances*, available on smallfirmdiaries.org.

USE OF TECHNOLOGY

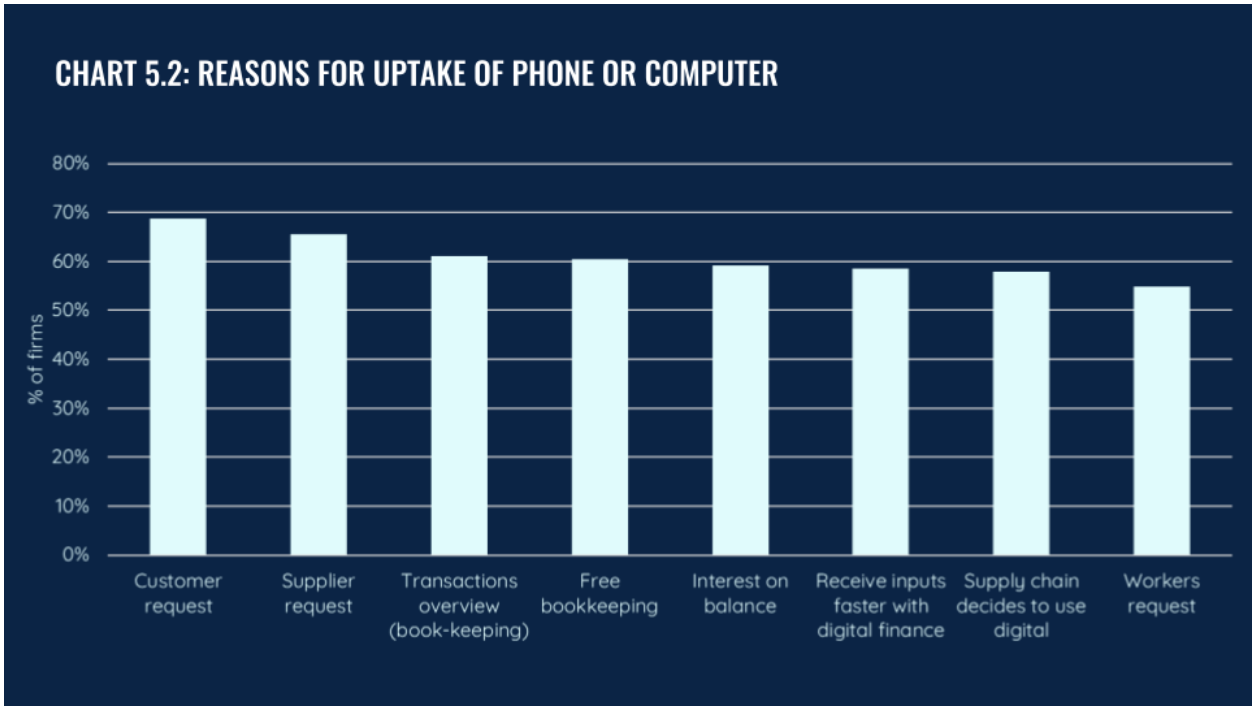
Smartphones are important tools for the majority of businesses in our Kenyan sample. Over 80% of our firms use either a smartphone or computer or both for their business. Almost all firms that use a computer also use a smartphone. Of computer/smartphone users, nearly 100% report using a

smartphone for digital payments (Figure 5.1). There are 48 firms (38%) who report using smartphones or computers for payments but not for banking.

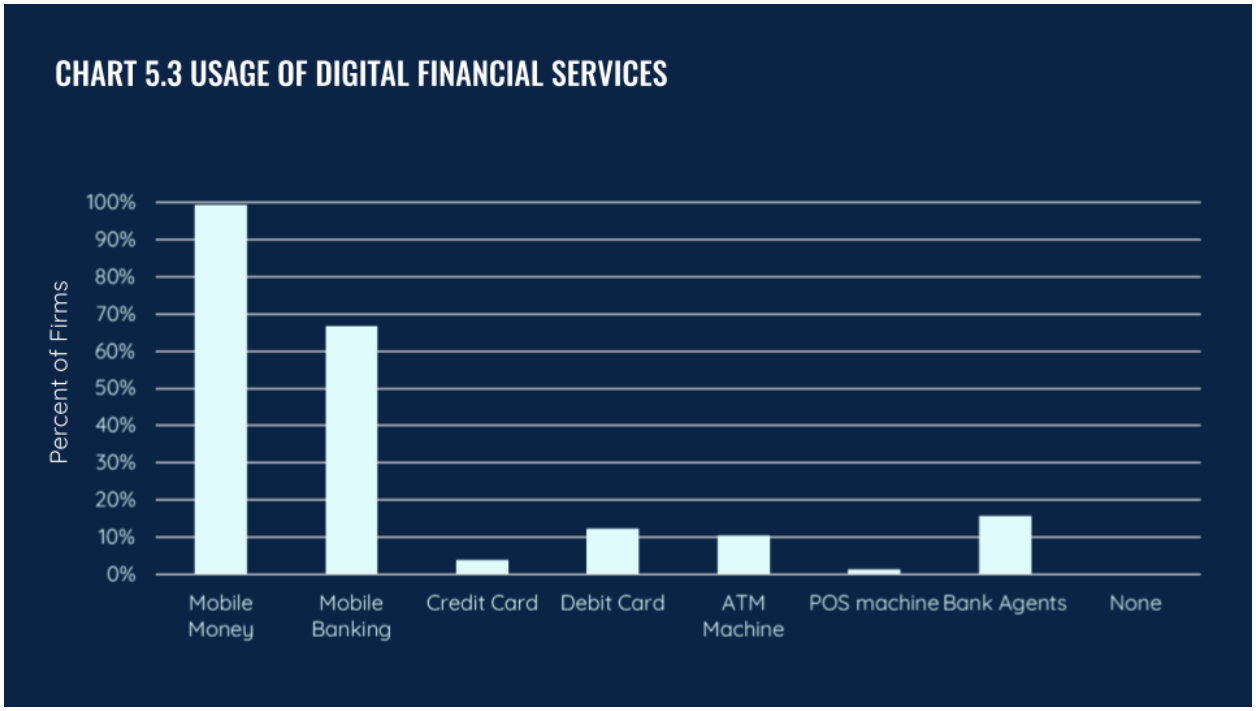


In a separate survey on attitudes towards and adoption of technology, we asked firms what prevents them from using technology. Over half of firms reported cost as a barrier to using technology, while about a third reported a skills barrier. Interestingly, less than 20% of firms reported concerns over privacy and fraud.

We also asked the firms who used a smartphone/computer for business purposes why they had begun using the tool. Firms could report multiple reasons for uptake, which many chose to do. It was as common for firms to report uptake for self-driven reasons, such as seeing the value of efficient services and bookkeeping, as uptake driven by other stakeholders, such as customers and workers requesting it. Most importantly, there was not a clear single driver behind technology adoption(Figure 5.2). Two thirds of firm owners reported 4+ reasons for adoption.

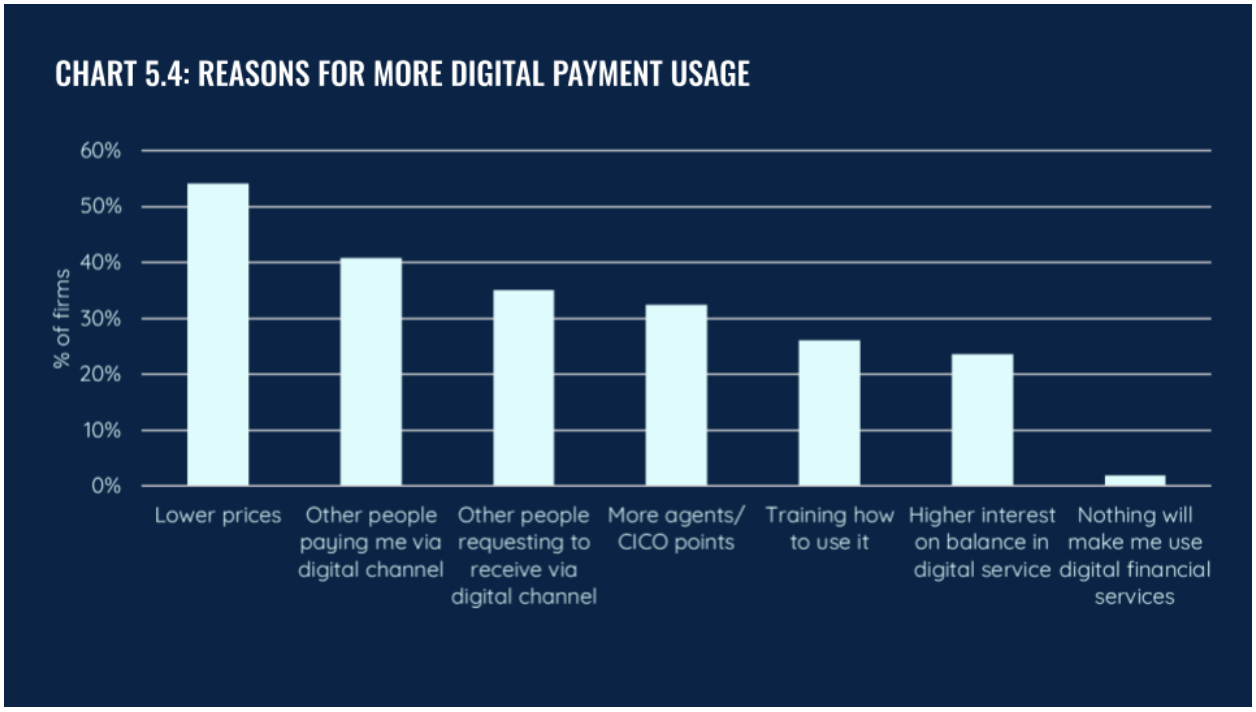


In addition to general business technology usage, we specifically ask all firms, regardless of whether they report using a smartphone/computer for business, about what forms of digital financial services they use including in their home life. There is a wide disparity in the use of DFS technologies: POS terminals and credit cards, staples of the move away from cash in high-income countries, are much less in use than mobile money, and mobile banking (Figure 5.3).



We also asked the above users of DFS what challenges they've experienced. Over half of our sample of DFS users reported experiencing issues with the services. The most common issues reported were similar across financial integration levels. All levels most commonly experienced delayed funds and money sent to the wrong address. At a sample level, the most common challenge was money being sent to the wrong address (78%), followed by money arriving late (51%). Other issues, such as unauthorized fees, fraud, or missing funds were reported by less than 20% of the sample.

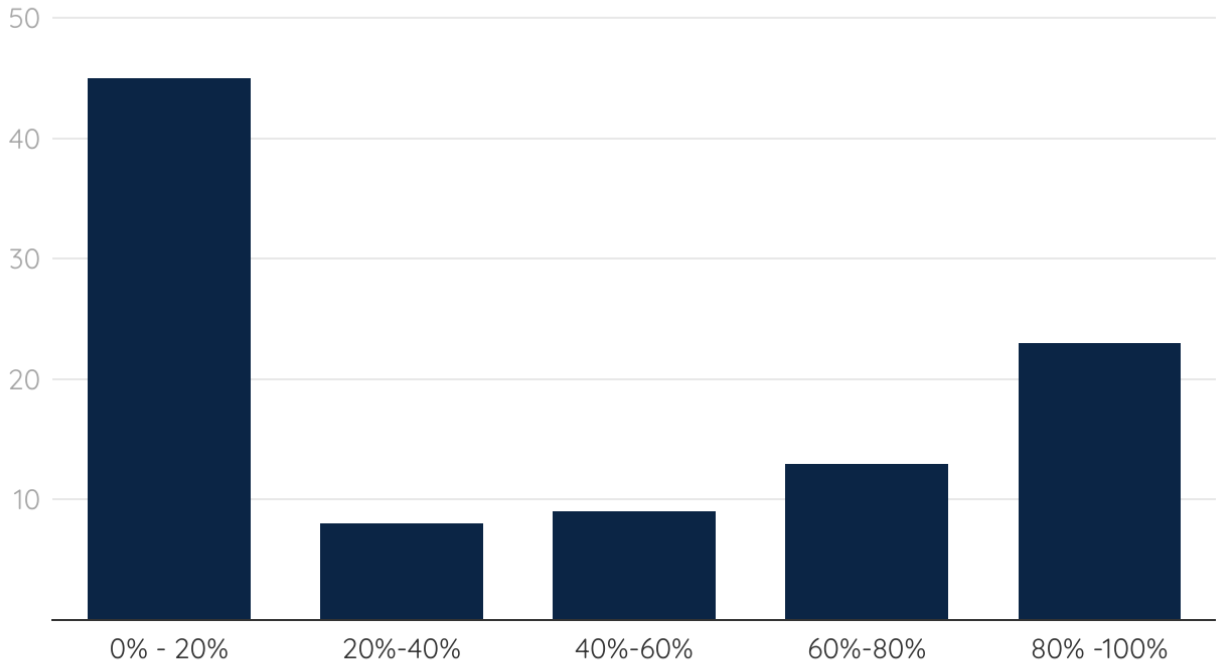
In a set of questions on attitudes towards and adoption of technology, we asked about what changes to digital payments, specifically, would increase firms' usage (Figure 5.4). Over half of firms report lower prices would increase their use of digital payments. The second most common drivers of increased usage were other people, like suppliers or customers, requesting to send or receive a digital payment, closely followed by more agents or CICO points.



DRILLING DOWN ON MOBILE MONEY

Overall, 64% of our sample used a mobile wallet during the study. Of those firms, 39% used their mobile wallets for more than 50% of the value of their business transactions (see Figure 5.5). The discrepancy between mobile wallet usage in our financial data (64%) and that reported in the survey (99%, Figure 5.3) is likely driven by the use of mobile money in a firm owner's personal life rather than for the business. It is also possible that some of this discrepancy is driven by reporting having a mobile money account but not using it.

FIGURE 5.5: FIRMS BY PERCENT OF VALUE THROUGH A MOBILE WALLET



Taking the same approach as when categorizing a firm's financial integration, we group firms by their usage of mobile wallets. Perhaps the single most surprising finding in the Kenya Small Firm Diaries is that the majority of our sample (68%) do not use or are only marginal users of mobile wallets (Figure 5.6). This is in stark contrast to perceptions about the penetration of mobile money, which based on an initial review of a few studies that have specifically looked at mobile money usage among small firms, seems to be related to a focus in those studies on retailers, while the Small Firm Diaries excludes retail firms.

FIGURE 5.6: USAGE LEVEL FOR MOBILE WALLETS

Level of Integration	Definition	Percent of Sample
Super user	More than 75% of activity conducted into or from a mobile wallet	16%
Moderate user	Between 25% and 74% of activity conducted into or from a mobile wallet	16%
Marginal user	Less than 25% of activity conducted into or from a mobile wallet	32%
Non-user	Do not report using a mobile wallet	36%

To better understand what drives firms' mobile wallet usage, we looked deeper at the characteristics of different user groups. Looking first at revenue size, we see a variable pattern, in which outlier earners are least likely to use mobile wallets at all (non-users), followed by the low earner categories. High earning firms have the highest proportion of super users, but the least moderate users, while medium earners have the highest proportion of moderate and marginal users of mobile wallets (Figure 5.7)

FIGURE 5.7: MOBILE MONEY ADOPTION BY EARNING LEVEL

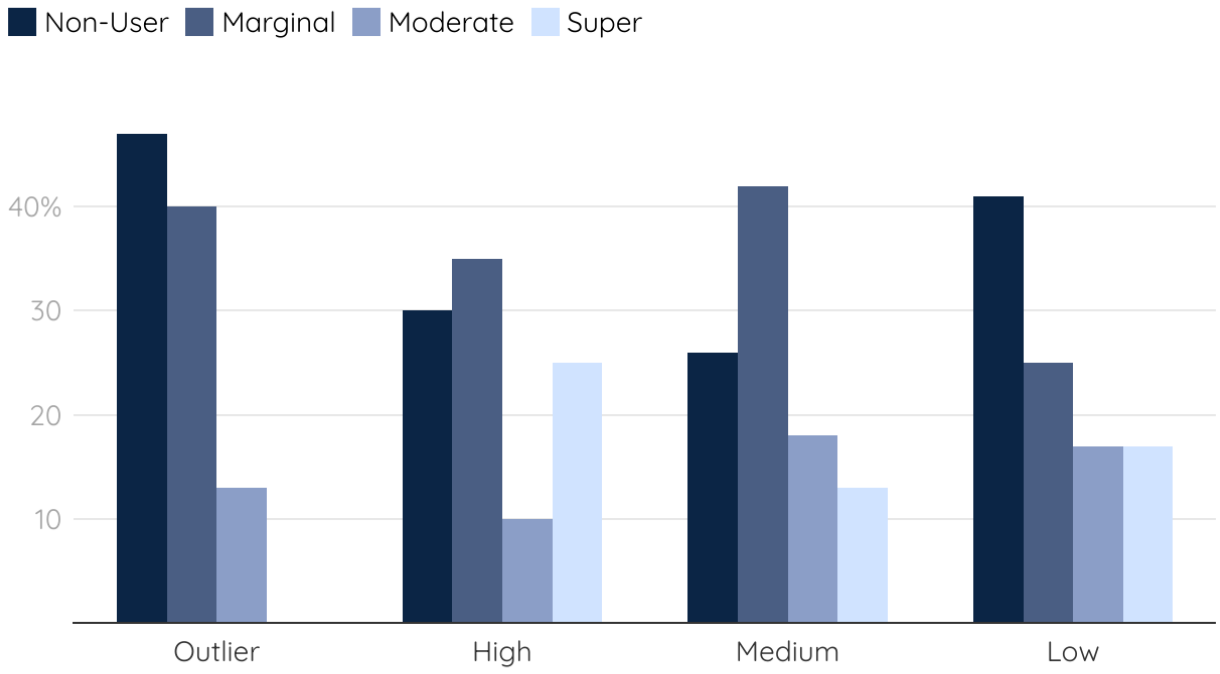
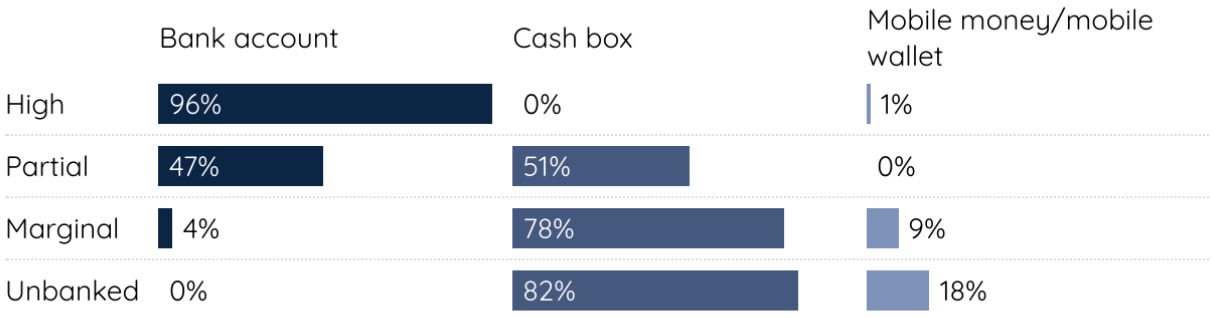


Chart: Financial Access Initiative - NYU Wagner • Source: Small Firm Diaries

The pattern is more clear cut when we examine the relationship between financial integration and mobile wallet adoption (shown in the Financial Access section above, and reproduced here, Figure 5.8). While mobile money has made inroads among the firms that are using bank accounts least, it has still not come close to displacing cash among these firms. There is clear opportunity however, as there is a dispersion of intensity of use particularly among the marginally integrated firms. Marginally banking integrated firms are a mix of marginal, moderate and super users of mobile wallets.

FIGURE 5.8: MEDIAN PERCENT OF TRANSACTIONS MOVING THROUGH ACCOUNTS BY LEVEL OF BANKING INTEGRATION (COPY)



Kenya

Chart: Financial Access Initiative - NYU Wagner • Source: Small Firm Diaries

A higher percent of men use mobile wallets than women (70% vs. 57%). However, in terms of firms that use mobile wallets, about a third of both men- and women-owned firms are moderate or super users. In terms of industry, 83% of agri-processing firms use mobile wallets, compared to 56% of both light manufacturing and services firms (Figure 5.9)

FIGURE 5.9: MOBILE MONEY ADOPTION BY INDUSTRY

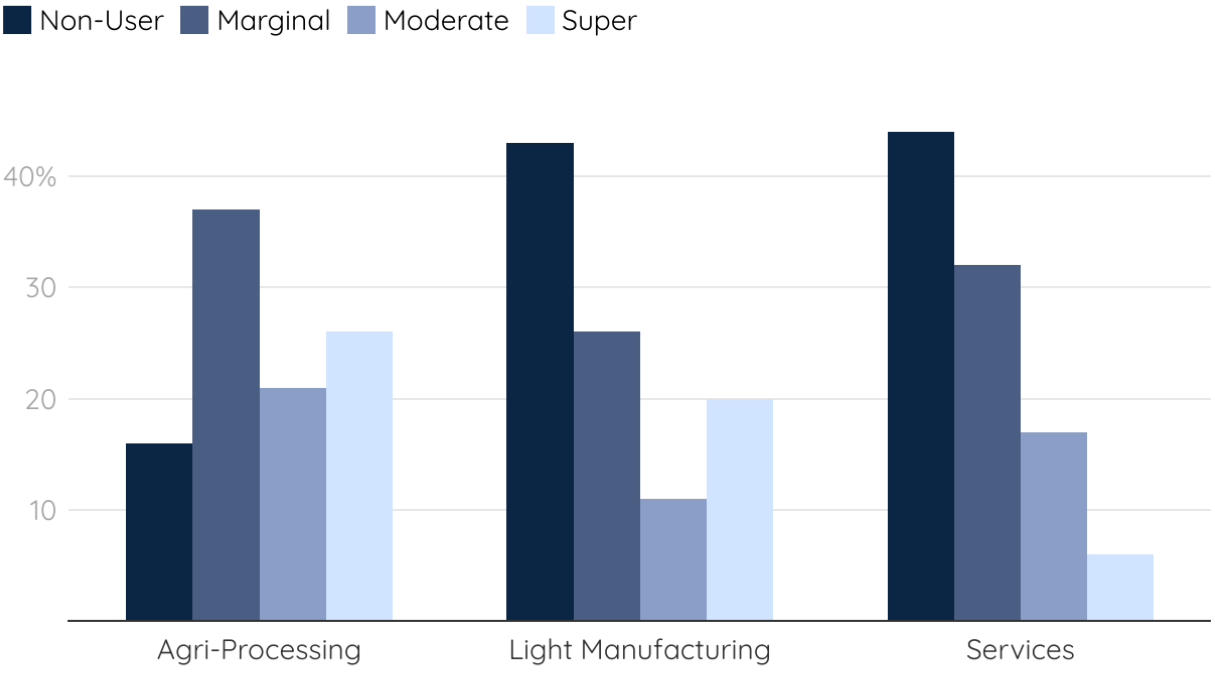


Chart: Financial Access Initiative - NYU Wagner • Source: Small Firm Diaries

Looking at levels of perceived formality (explained further in the following section), informal firms have the usage rates of mobile wallets - 75% compared to 49% of semi-formal firms, and 62% of formal firms. Using KRA registrations instead, the distribution is more equal, 58% of firms with a KRA registration have a mobile wallet compared to 65% of those without a registration.

Overall, firms with high usage of a mobile wallet in our sample tend to be informal, agri-processors, and male. There is also a notable lack of mobile money adoption among the most financially integrated firms, and among the highest revenue firms.

6. Formalization

SUMMARY

For many years, policies and programs for microenterprises and small firms emphasized formalization. Formalization was imagined to be a key step toward growth and access to finance. However, few programs that emphasized formalization seemed to have a discernible effect on the number of firms that pursued formalization; meanwhile, other studies called into question the benefits of formalization for firms. It also became clear that formalization was best thought of as a spectrum rather than a binary. In most countries there are a range of registrations, licenses and interactions with state and financial institutions that are part of being fully formalized.

Given the sampling approach we took to in the Small Firm Diaries, it was unclear whether the firms recruited would be formal or informal, and what their perceptions of formalization would be. In this section, we look at the firms' reported levels of formalization, perceptions of what it means to be formalized, barriers to formalization and the advantages and disadvantages of formalization. Finally, we look at whether levels of actual or perceived formalization are strongly correlated with other firm behaviors or outcomes.

LEVEL OF FORMALIZATION

In Kenya, officially firms must register with their municipality and receive an Annual Business Permit to legally operate. In the study, we did not independently verify any registrations--we simply asked firms to report their registrations and perceptions of formalization. Among our sample, 70% of firms report having an Annual Business Permit. Technically, a pin certificate from the Kenya Revenue Authority is required to receive the municipal business permit, however just just 25% of firms report they have a KRA pin certificate. A higher percent of men-owned businesses reported Annual Business Permits than women (76% vs. 58%), as well as KRA certificates (26% vs. 14%).

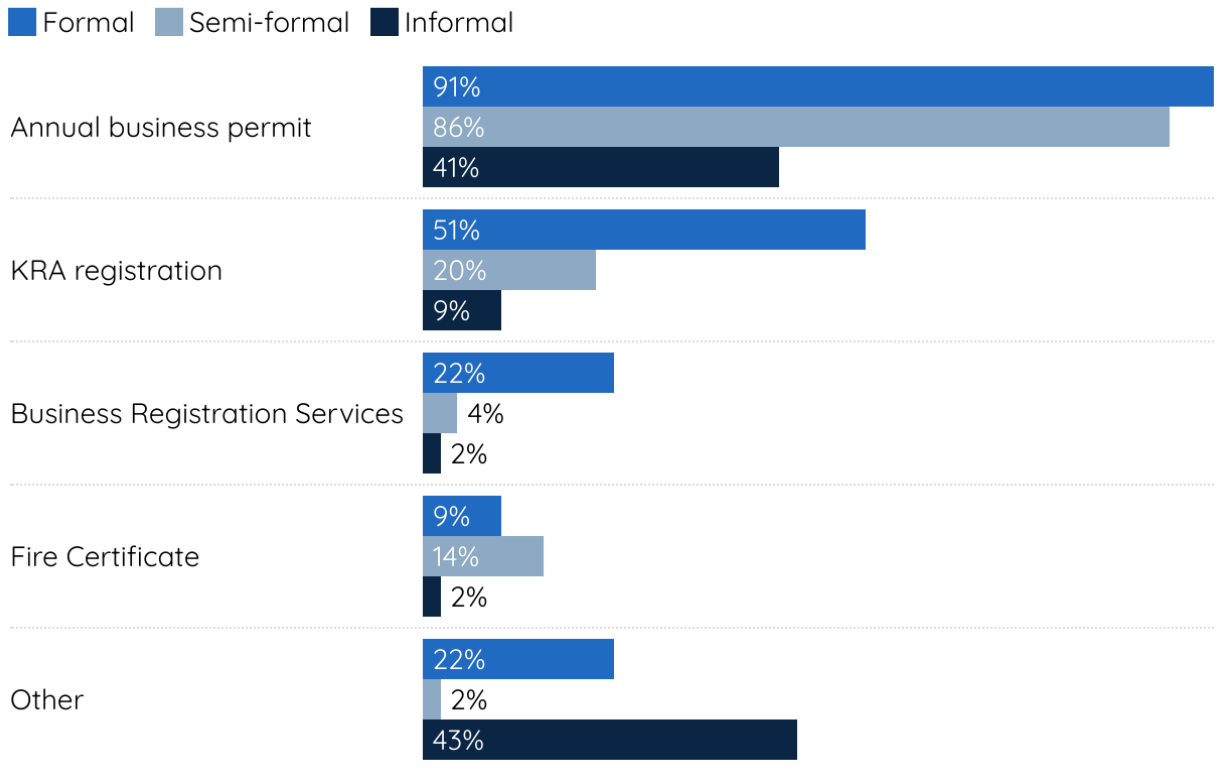
FIGURE 6.1: SELF-REPORTED LEVELS OF FORMALIZATION

Level of Formalization	Percent
Formal	30
Semi-Formal	32
Informal	37

PERCEPTIONS COMPARED TO OFFICIAL FORMALIZATION

We asked firms whether they considered themselves formal, semi-formal or informal. In line with national requirements, the majority of firms reporting a municipal registration consider themselves formal. Firms did not perceive that a KRA registration was required to be formal, only 50% of "formal firms" reported a KRA registration.

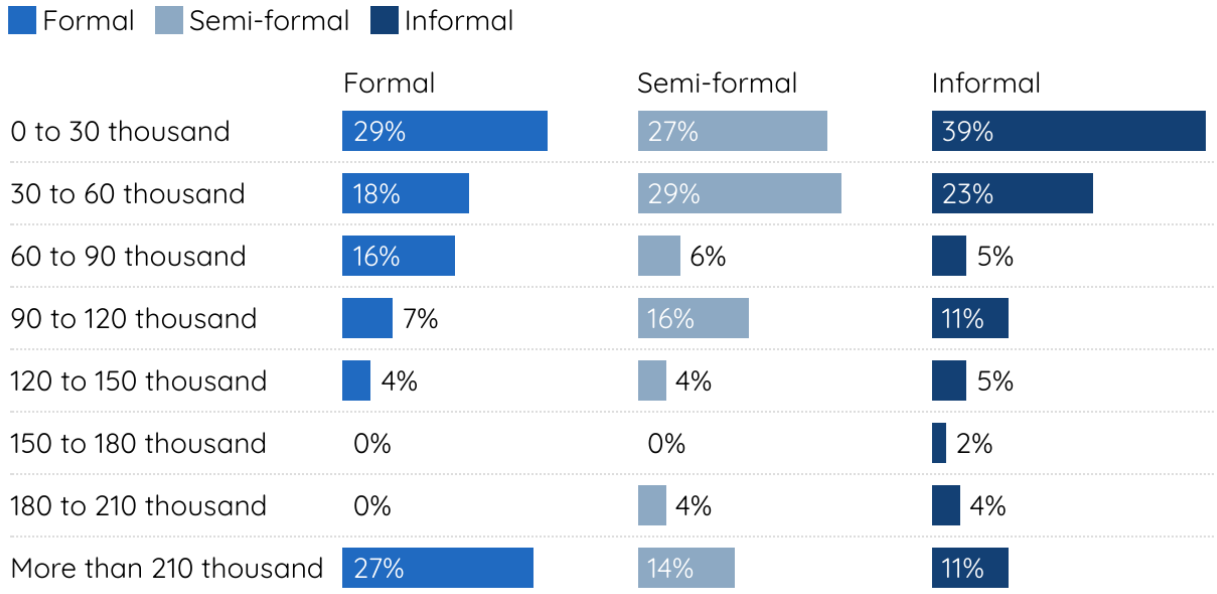
CHART 6.1 FORMS OF REGISTRATION AND SELF-REPORTED LEVELS OF FORMALITY



Unsurprisingly, firms who considered themselves informal were usually the lowest earning: over half of them earn less than KES 60,000 monthly (FIgure 6.3). Services firms were also more likely to report they were formal, while levels of perceived formalization were similar across genders.

FIGURE 6.3: FORMALIZATION AND REVENUE

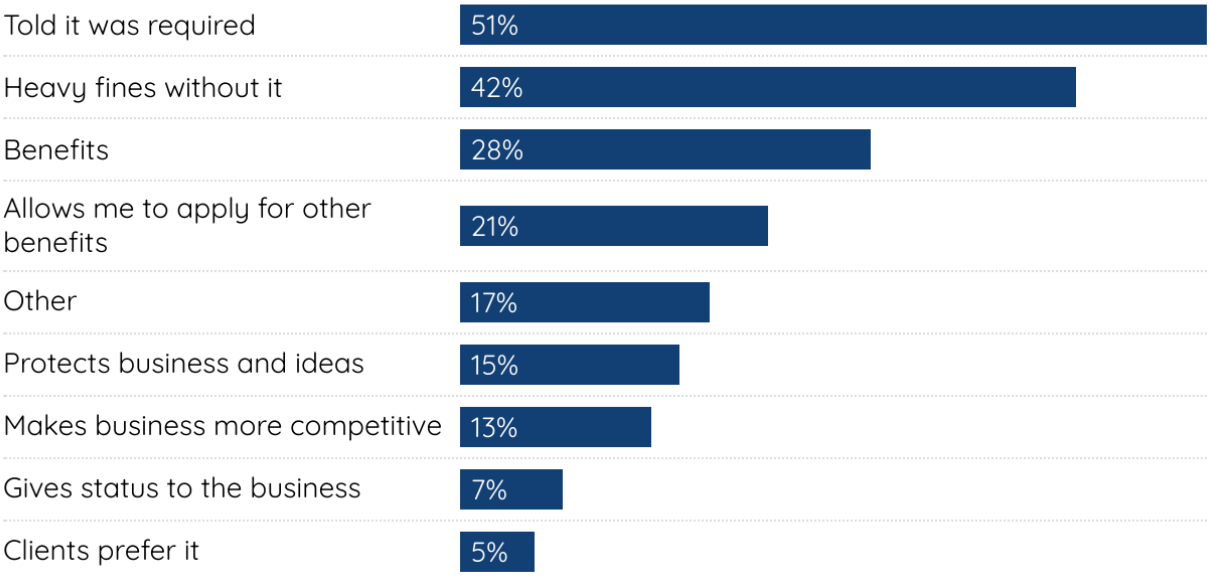
Median monthly revenue in KES based on level of formality



REASONS FOR FORMALIZING

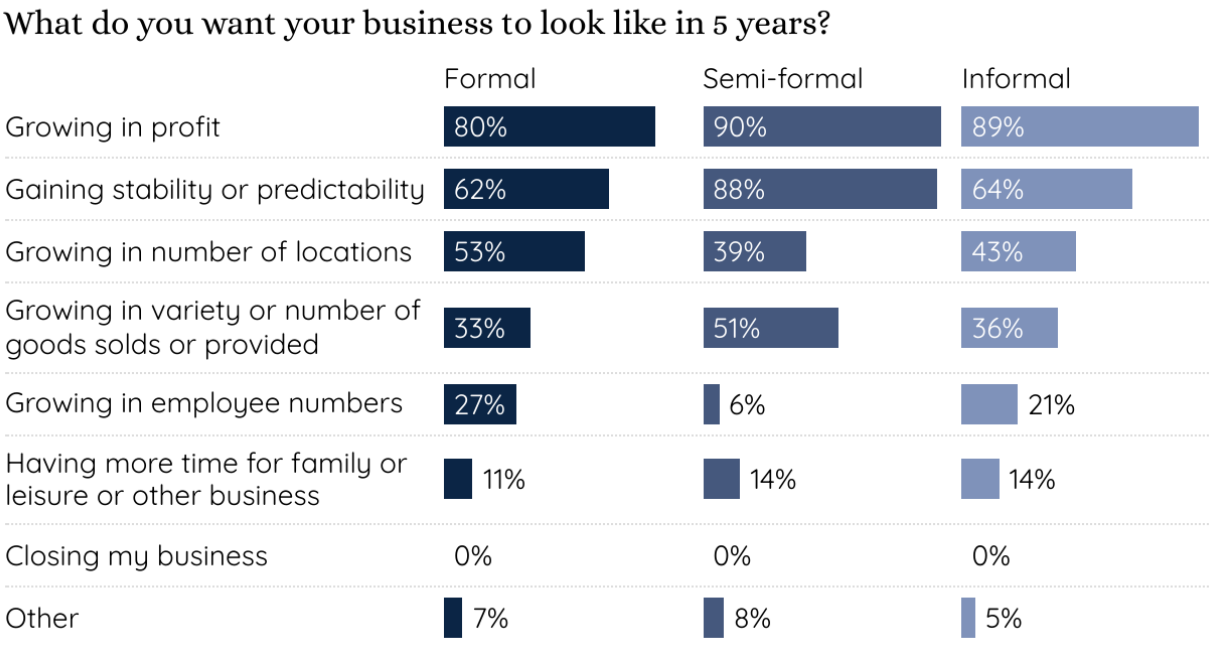
In our module on formalization, we asked firms about their motivations for taking steps toward formalization. The primary reason firms reported for registering is because "A government or local authority told [them] it was required." This was closely followed by the threat of fines for not being registered. Other incentives such as benefits or prestige do not seem to be a significant driver. (Figure 6.4) Meanwhile, the reasons for not registering were largely expected: Direct cost of registering, tax liability, the perceived lack of need, and the lack of knowledge on how to register. Still, these reasons were reported by less than half of informal firms.

FIGURE 6.4: REASONS FOR OBTAINING EXISTING REGISTRATIONS



Formalization also does not appear to be influenced by aspirations (Figure 6.5). Formal and informal firms reported growth aspirations at similar levels (for all forms of growth; see Section 9 for more on firm aspirations). While semi-formal firms were relatively more likely to cite "stability" as a 5-year aspiration for their business, growing in profit was the most common aspiration of all levels of formalization.

FIGURE 6.5: FORMALIZATION AND ASPIRATIONS



ADVANTAGES AND DISADVANTAGES OF FORMALIZATION

We asked about the advantages of formalization to firms that self-identified as formal or semi-formal. Some examples of common answers provided by the firms: :

- Ease of doing business: "Avoid harassment by government officials" *(A formal services firm in Kwale)*
- Consumer confidence: "Creates customer confidence" *(A semi-formal light manufacturing firm in Nairobi)*
- Access to opportunities: "Business is eligible to apply for opportunities such as grants as it is formally registered" (*A formal agri-processing firm in Kisumu*)

On the other hand, self-perceived formal or semi-formal firms cited the following disadvantages:

- Administrative costs:: "Its costs are high" *(A semi-formal agri-processing firm in Kisumu*)
- Tax Burden: "You are on government radar to pay taxes, you cannot escape from that" *(A formal light manufacturing firm in Nairobi)*

The perceptions of informal firms about the advantages and disadvantages of formalization (or the lack thereof) mirrored those of more formalized firms. Formalization allows access to certain government programs and financing opportunities but is costly—too costly to justify taking the step.

Firms' level of actual or perceived formalization, however, did not change their perceptions of barriers to the success of their business, except in a few instances. For both formal and informal firms, rising costs and supply chain issues were the biggest challenge. Meanwhile, formal and informal firms reported access to finance as a barrier at similar rates. A higher proportion of firms that considered themselves formal or semi-formal perceived regional and national issues to be a barrier to growth than informal firms.

7. Employment

SUMMARY

Increasing the number and quality of jobs is a high-ranking priority in most developing countries. The ILO estimates that MSMEs (which they define as firms from 0 to 250 employees) generate more than 50% of the jobs in most countries, and up to 90% of the jobs in some[10]. In Kenya, MSMEs make up 98% of companies in the country, provide 30% of job opportunities, and contribute approximately 40 per cent to the Gross Domestic Product according to the UN Department for Economic and Social Affairs[11].

[10] ILO, "The power of small: How SMEs are driving job creation and inclusive growth"
[11] United Nations, Department of Economic and Social Affairs (2022) https://sdgs.un.org/sites/default/files/2022-07/Impact%20of%20COVID%2019%20on%20MSMEs%20in%20Kenya%20-%20Final%20Report.pdf

However, understanding these jobs at a deeper level—exactly how many there are, how much they pay, the proportion of them in various firm sizes—is very difficult. Estimates of the number of jobs that MSMEs provide typically come from household surveys (not ideal for understanding firm-level measures of employment), and the few that are from firm surveys have a variety of sample and estimation challenges. None of these estimates reveal anything about the nature of the jobs, including such key measures of job quality as pay rates, permanence and outcomes.

A key aim of the Small Firm Diaries was to shed light on employment in small firms, including a better understanding of who the employees of small firms are, and the quality of jobs in the small firm sector. The Diaries include data on employment from the firm and the employee's perspective. From the firm's perspective we gather data on the number of employees, the individuals employed, whether they are paid in kind or in currency, and the payment mechanism, among other features. We also survey owners on their employee management practices and challenges. From the employee's perspective we survey one employee per firm to understand their household income, employment history, and more.

The Small Firm Diaries reveal important facts about employment in small firms:

- The number of jobs in a firm changes from month-to-month.
- The individuals filling those jobs change frequently.
- Employees are largely drawn from a distinct pool whose income is only from working in small firms (e.g. the employees are not running their own microenterprises, or working casually or in larger firms when not employed at the small firm).
- Employee pay varies considerably even during the months they are working at a small firm.

These facts suggest that one-time household surveys and firm surveys obscure important and policy-relevant details of MSME employment—a major source of employment in Kenya.

NUMBER OF EMPLOYEES

Who qualifies as an employee is a challenge to measuring employment in countries where many firms are not fully formal; it's increasingly a problem in high-income countries, as contractor workers and platform work (e.g. delivery apps) proliferate. Given a third of our firms are not formally registered in any way, and the varying definitions of an "employee" in Kenya (see call out box below), we designed the Diaries to allow firm owners to define who is an "employee" according to their perspective, rather than a more objective definition. We asked owners, at the time of our initial census how many "employees" they had (we specifically, however, asked them to exclude "casual workers" such as people hired on a one-off basis to, for instance, deliver a product to a customer), and then at each Diaries visit, to list the "employees" working at the firm at that time.

THE KENYAN LABOR MARKET

The Employment Act stipulates four types of formal arrangements that constitute an employee-employer relationship in Kenya:

1. Indefinite-term or permanent contracts are verbal or written arrangements with no stipulated end date.

2. Fixed-term contracts are written agreements with a specific time limit. The contractual relationship is automatically terminated at the end of the period.

3. Piecework Employment contracts are arrangements where a person is employed for the performance of a specific task.

4. Casual employment refers to an individual that receives a wage at the end of each working day and who is not engaged for a longer period than 24 hours at a time.

Casual employment is common in Kenya and regulated in the Employment Act 2007. In this type of agreement, the worker is not entitled to the same rights and protections that other employment types have such as paid leave, medical coverage, collective bargaining, or termination notice. Because of this, some protections were introduced by the Employment Act. According to article 37, casual employment will be deemed a term contract when the work has been continuous for a month, or when the work cannot be reasonably expected to be completed within a period of three months. Additionally, casual workers must be paid according to the daily minimum wage and get one day of rest for every seven days of work.

We used the responses to our census to select our sample of firms who stated they had 1-20 non-family employees. We then were able to compare this number to the weekly employee payment reports during the study. We find little consonance between the number of employees initially reported and the number of people paid each month. Further, we found that both the number of jobs provided each month and the individuals who filled those jobs fluctuated.

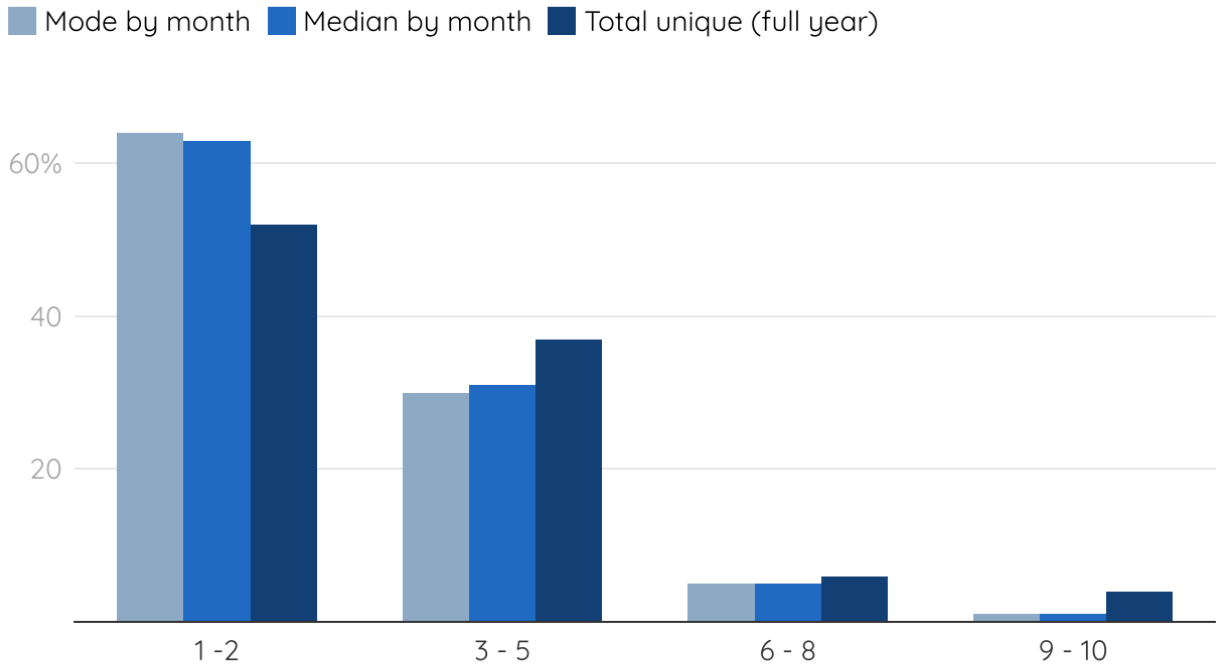
The distribution of reported employment from the baseline census is shown in Figure 7.1; 57% of firms reported more than 3 employees.

FIGURE 7.1: REPORTED NUMBER OF EMPLOYEES FROM BASELINE SURVEYS

Reported employees	Number of firms	Percent of firms
1 to 2	67	43
3 to 5	70	45
6 to 20	19	12

Based on employee payments, however, almost all firms are closer to the lower bound for participation in our study (including a few who reported employees at census, but never recorded a payment to an employee during the study). In any given month, firms paid on average one to two employees. While some firms had low turnover and also paid a total of two unique employees, half our firms had employee turnover: they paid a higher number of total unique employees (most commonly three to five) over the year than they typically paid per month. The average number of employees paid also obscures that the number of employees paid in any given month frequently fluctuated. In Figure 7.2, we show the breakdown of firms in four categories of employee headcount based on the median number of employees in a month and the total number of unique individuals paid during the year. The slight rightward skew in the distribution of the total unique employee category illustrates that some firms have more employees than they are paying on a monthly basis, indicating employee turnover.

FIGURE 7.2: FLUCTUATIONS IN EMPLOYEE COUNT



That some firms have high turnover is further confirmed when analyzing the data from the employee's perspective. Overall, only half of the employees get paid 8 months or more in a 10-month period; a quarter of employees work at the same firm for fewer than 5 months. Turnover was the highest in agri-processing firms, perhaps unsurprisingly, where 27% of employees work for 3 months or less in a 10-month period compared to 18% and 17% in light manufacturing and services industries. It's important to note that this turnover is *not* due to "seasonality"—the firms *do not* show significant spikes in total employment in specific months.

FIGURE 7.3: NUMBER OF MONTHS PAID TO A SINGLE EMPLOYEE

Number of months paid to a single employee	Number of employees	Percent of employees
1 month	20	5
2 to 4 months	91	20
5 to 7 months	115	26
8 to 10 months	218	49

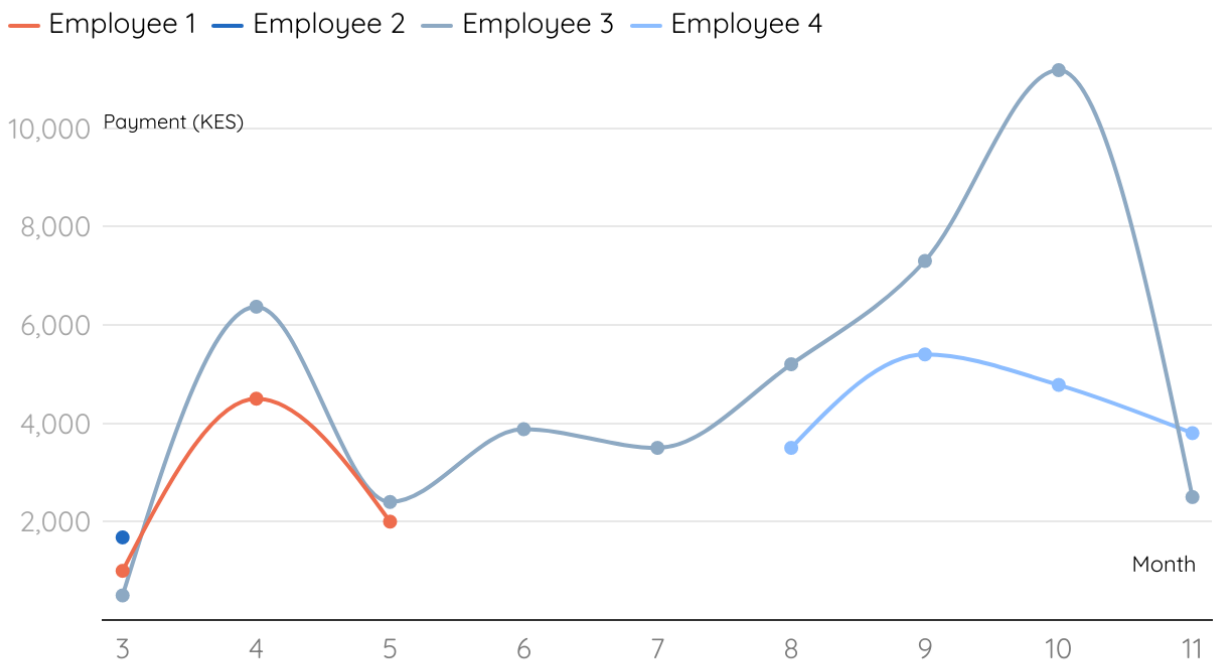
While most employees are short-lived, two-thirds of the firms in our study have at least one "core" employee, defined as an employee who gets paid for 8 months or more in a 10-month period.

FIGURE 7.4: MAXIMUM NUMBER OF MONTHS PAID TO A SINGLE EMPLOYEE

Maximum number of months paid to a single employee	Number of firms	% of firms
1 month	2	1
2 to 4 months	9	6
5 to 7 months	38	26
8 to 10 months	95	66

To better understand the shape of employment, Figure 7.5 gives an example from a single firm. During 1 month of the study (Month 3) the firm reaches its peak employment, and pays 3 workers. During 8 of the months of the study (Months 4, 5, 8, 9, 10, and 11) the firm pays 2 workers (but they are not consistently the same 2 people from month to month). During 2 months of the study (Months 6 and 7) the firm pays just 1 worker. The gray line shows the firm's single "core" employee, who was paid during all 10 months, while the other employees have shorter spells of employment—of 4 months, 3 months and 1 month.

FIGURE 7.5: PAYMENTS PER EMPLOYEE AT ONE AGRI-PROCESSING FIRM IN KISUMU



CASUAL LABOR

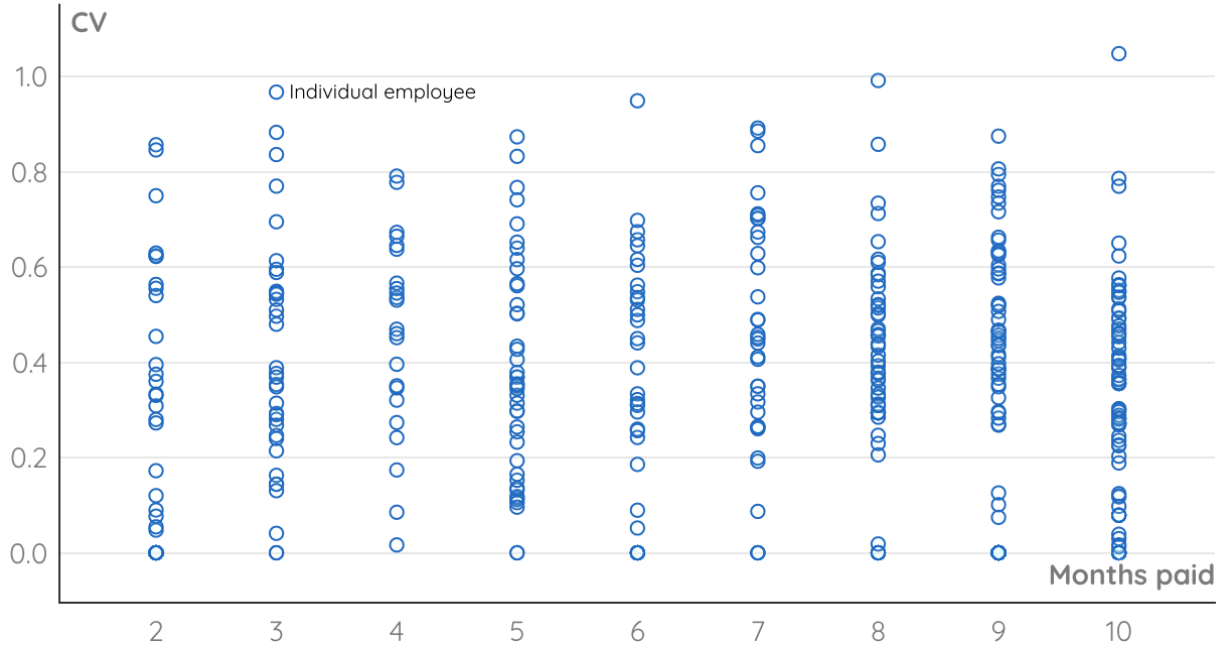
A motivation of the Small Firm Diaries project was better understanding the reality of these types of firms--there is often a large gap between how these firms operate and official and regulatory definitions and categories. That is certainly the case when it comes to "casual" labor, which is defined in Kenyan labor law. Nominally, it would seem that the structure of employment that we see--frequent changes in amount worked, the existence of a job, and who is performing the labor--that these workers would fall in the casual labor definition of labor law. However, as mentioned above, we allow firm owners to define which workers are "employees" and which are casual workers. In each case, the owners then tell us how much is paid to each employee or casual laborer. . Despite the apparent prevalence of casual workers in some industries in Kenya, owners report little spending on this category; only 40 firms chose to report casual labor as a different category than employees. The median monthly amount spent on casual worker wages was KES 1,425 compared to KES 15,000 on employee payments. Comparing only firms who reported casual worker payments it was KES 1,425 and KES 13,525. Moreover, the median number of months for which those firms reported casual worker payments was only two. In terms of percent of total expenses spending on casual workers was also low. For the same subset of firms, in the months that they paid casual workers, the median of casual worker payments as a percent of total expenses was just 2%.

EMPLOYEE PAYMENT

The most common payment arrangements are formal salaries (32% of employees) and piece-rate-pay (39% of employees), with the remaining employees receiving informal or casual salaries. In terms of how these payments are made, 56% of total payment value and 85% of individual employee payments are made in cash.

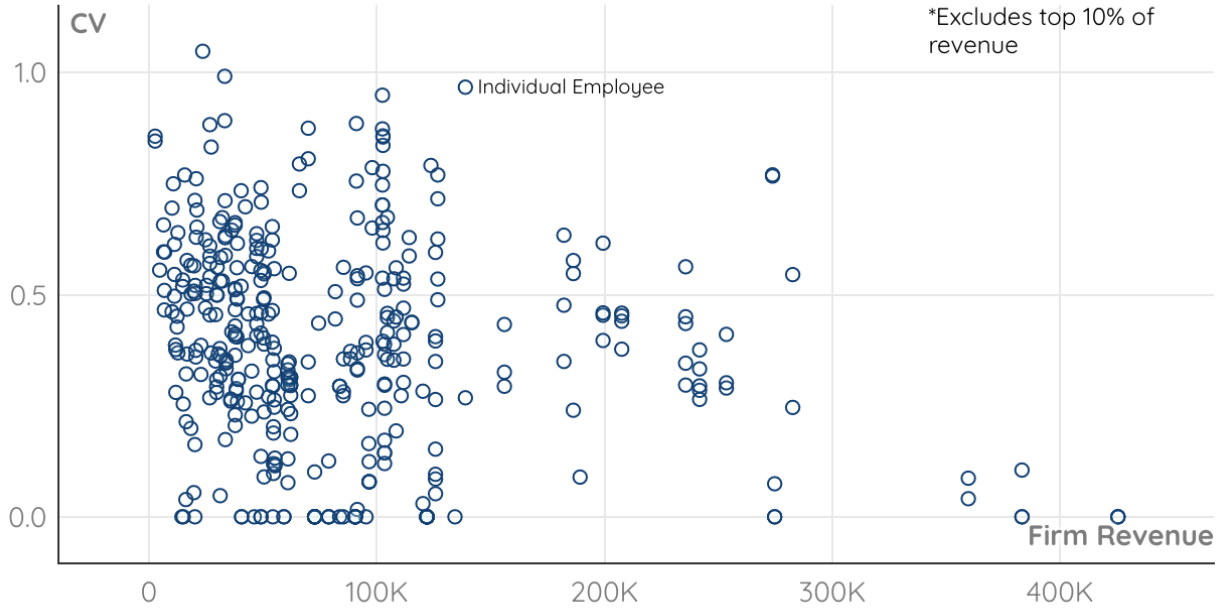
The most important feature of employee payment we uncovered is how much what employees earn changes from month-to-month, even while they remain in a job. Regardless of how many months they were paid, employees face similar levels of payment volatility—employees who are paid in more than 7 months are no less likely to see large swings in their monthly pay than employees who are only paid in 3 months. Figure 7.6 shows the range of CV of each employee's payments by the number of months they were paid—both levels of volatility and the dispersion of CV are similar at each number of months paid.

FIGURE 7.6: VOLATILITY OF MONTHLY EMPLOYEE PAYMENTS BY NUMBER OF MONTHS PAID



It's easy to imagine reasons why employee payment volatility would be higher for smaller firms. Larger, more established firms likely have better systems in place and can weather fluctuating demand with less disruption; it's possible that larger firms have more marginal workers who are brought in (or laid off) to deal with demand spikes, or financial reserves to keep employment steady, whereas small firms with more precarious finances push the volatility onto their regular employees. For the firms in our sample, however, we do not see any relationship between firm size and employee payment volatility (Figure 7.7), implying that any stabilization of employee payments is occurring when firms reach a much greater size than is represented in our sample.

FIGURE 7.7: PAYMENT VOLATILITY FOR FIRMS BY REVENUE LEVEL



There are a number of factors that play into the volatility of employee payments. The first and most obvious is that, as reflected by the volatility of firm revenues, the firms have different levels of demand for labor month-to-month. This is obviously passed along to the 27% of workers who are paid piece-rates, but the data suggests that almost all workers' pay is subject to demand fluctuations. Indeed, preliminary analysis suggests that firms cut labor expenses immediately, with lower monthly employee payments matched directly with lower monthly revenues (as opposed to a one or more months-lag).

However, some of the volatility is due to decisions made by the owners and workers, independent of demand. Firm owners sometimes issue partial payments to employees when short on cash for the business. Interestingly, though, this is not just a one-way street where firm owners are exercising power over their workers. Some employees use their employers as a short-term savings mechanism, asking to be paid when they need it, rather than on a regular schedule. We also anecdotally see instances of employers loaning money to employees when the employee needs cash they have not yet earned.

EMPLOYEES

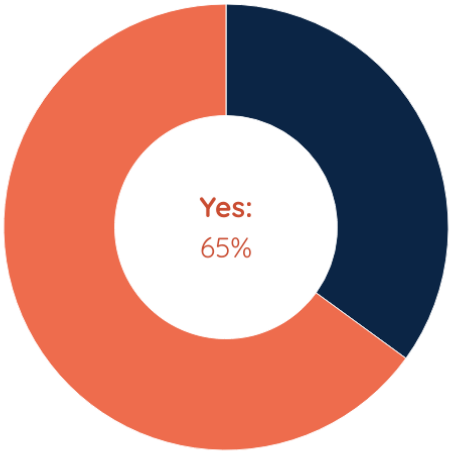
Who are the employees of small firms? Where do they sit in the income distribution? Did they formerly own microenterprises or work in larger firms?

In each firm, we asked the firm owner to allow us to interview one employee about their work at the firm. We were able to successfully interview 94 employees (21% of all paid employees in the study

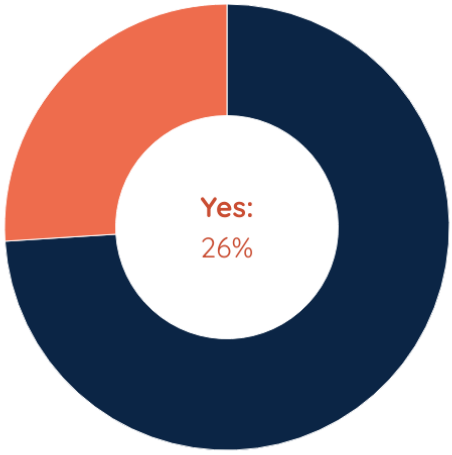
year, 65% of all firms with paid employees). Each employee who consented to an interview completed a slightly modified version of the Progress out of Poverty Index as a proxy for the relative income of small firm employees. Given the firms' location (in low-income neighborhoods), we expected employees to be drawn from low-income households.

Indeed, as we see in Figure 7.8, roughly two-thirds of employees reported difficulties with finances indicative of low-income status, including 26% who reported that a child in their household had not eaten enough in the past week.[12]

FIGURE 7.8: EMPLOYEE WELFARE INDICATORS



Does your household ever run short of money for food or other necessary items?

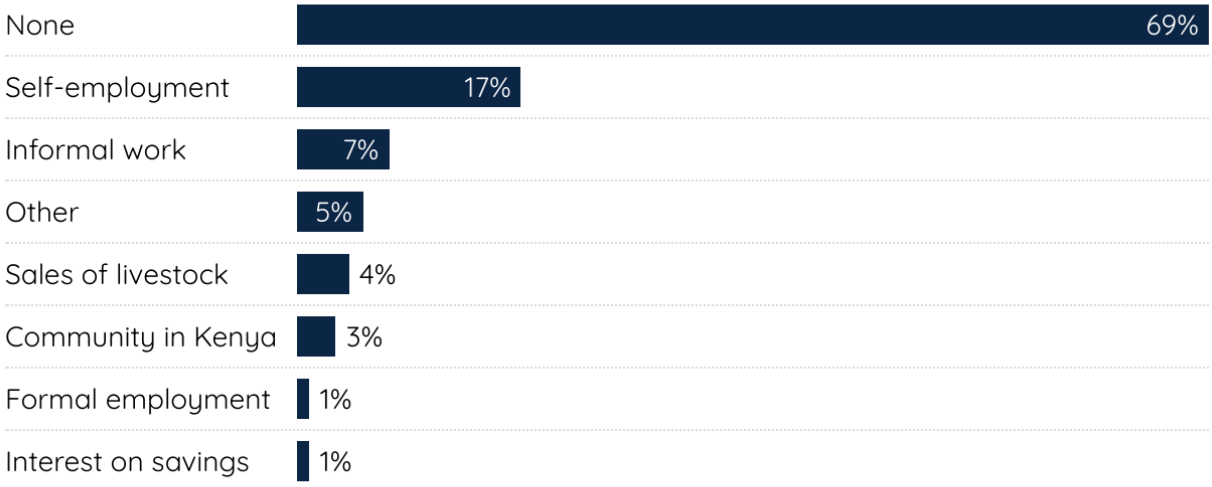


In the last week were children in your household not eating enough because there wasn't enough money for food?

The volatility of employee income from the small firms appears to matter a great deal to the employees' households. As shown in Figure 7.9 , almost 70% of employees report having no other source of income, so their household must cope with the volatility of small firm employment through other means. It's important to note that we do not see employees moving between employment in a small firm and other parts of the labor market.

[12] While we expected that firm owners would be more likely to nominate higher paid, longer tenured employees to participate in our surveys, those who took the surveys were not meaningfully different than other employees in our data.

FIGURE 7.9: OTHER SOURCES OF INCOME FOR SMALL FIRM EMPLOYEES



*No reported income from "community outside of Kenya," "subletting," or "government programs or jobs"

To the extent that we can see in our data, employees of the small firms are drawn from a distinct labor pool who work in small firms (Figure 7.10). When a job at one firm ends, the employees move to another small firm—over 40% of employees, the largest group, reported working at another firm prior to their job at the firm in the study. While our survey did not specify the size of other firms that workers formerly worked at, our field visits and conversations with firm owners and employees lead us to believe that the "other firms" were similarly sized firms in the same industry and neighborhood. It's particularly interesting that few employees, less than 5%, report formerly owning a microenterprise—suggesting that the labor pool for small firms is not drawn from the population that is the target of microfinance. While some employees told us they had contemplated opening a business, particularly those in industries like carpentry or leatherwork, they also shared that they were concerned about the risk that running a business of their own would entail.

FIGURE 7.10: PREVIOUS SOURCES OF INCOME FOR SMALL FIRM EMPLOYEES

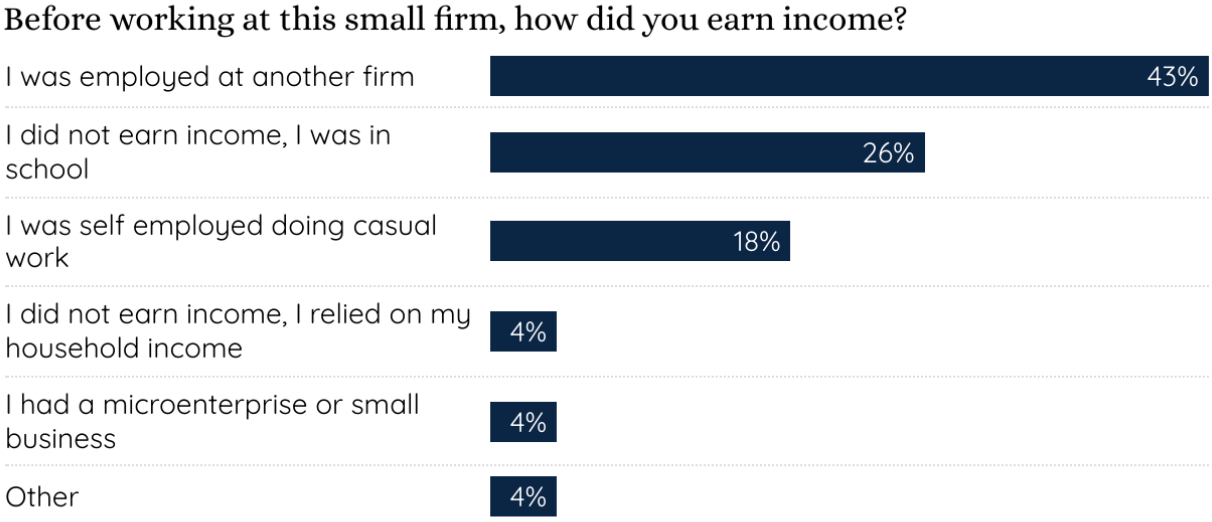


Chart: Financial Access Initiative - NYU Wagner • Source: Small Firm Diaries

8. Business Practices

SUMMARY

The two main pillars of policy programs directed at supporting small businesses are access to credit and business training. Growing out of the narrative of the microfinance movement, the prevailing assumption is that most small businesses, particularly small businesses started by low- or middle-income people, are unaware of or do not implement business and management practices that would help them thrive and grow. Research on firms larger than those of the Small Firm Diaries finds there are management practices that have a material impact on firm performance, and that there are many firms who do not use these practices.[13] Research on the actual business and management practices in firms of the size that we study in the Small Firm Diaries is rare but McKenzie and Woodruff were able to assemble surveys of micro and small businesses from seven developing countries conducted for other purposes but which included data on business practices. They then show that these core business practices (such as bookkeeping, stock management, and marketing) are as important for small businesses as they are for larger firms based on the measures of firm performance that are available.[14]

Given the evidence on the importance of business practices and the policy focus on business training programs and the relative dearth of information specifically about this segment, we were very interested in better understanding the practices of small firms. To do so, we used the inventory

[13]Bloom & Van Reenen, 2007; Bloom, Nicholas, and John Van Reenen. 2010; Bloom, et al. 2011
[14] McKenzie & Woodruff, 2017

of business practices created by McKenzie and Woodruff, and here we follow their calculations for an index score based on practices in use.

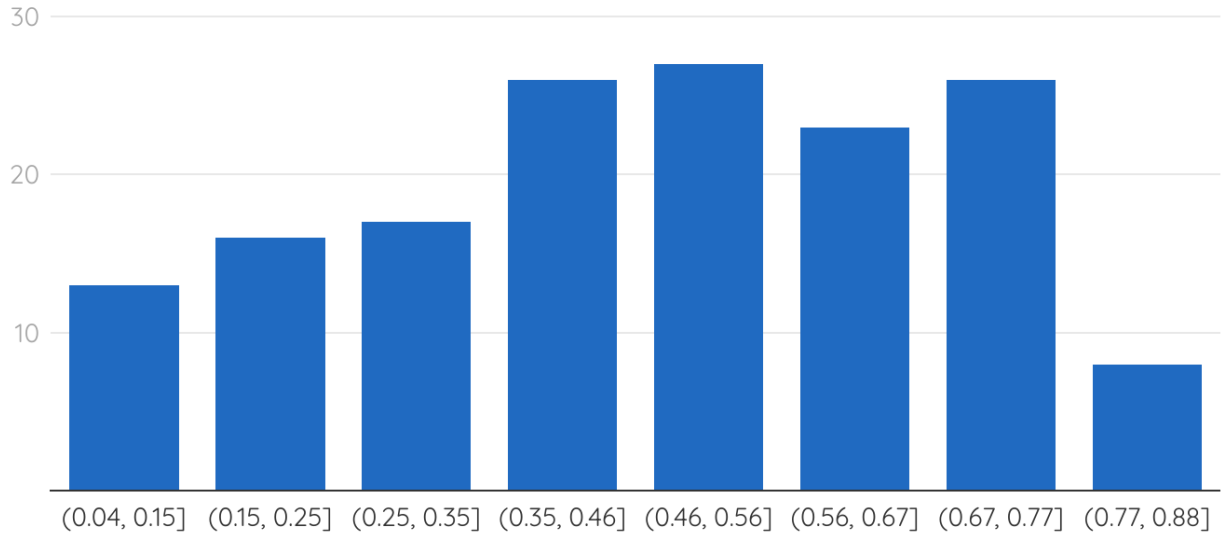
As noted in Section 3 on firm finances, the most basic business practice is the separation of business finances from household finances. When we asked at the start of the study, 88% of firms reported separating their finances (we ask at the start of the study to ensure that separation of finances is not induced by the need to report cash flows). Beyond that, we find significant variation between firms in terms of the business practices they employ. Using the McKenzie and Woodruff Business Practices Index Score, our sample ranges from scores of 0.04 to 0.87, with most firms clustered between 0.38 and 0.77, and half of them between 0.38 and 0.67. Consistent with the McKenzie and Woodruff findings, higher scores are correlated with higher monthly revenues.

Looking at specific practices, the most commonly used practices are related to record keeping; stock control practices are also employed by about 60% of the firms. Marketing and planning practices were far less common. We find that less than a third (29%) of the firms in our sample have used any of the marketing practices.

BUSINESS PRACTICE INDEX

On the McKenzie and Woodruff Business Practices Index Score our sample ranges from 0.04 to 0.87, with a majority of firms (75%) having a score below 0.63 (Figure 8.1).

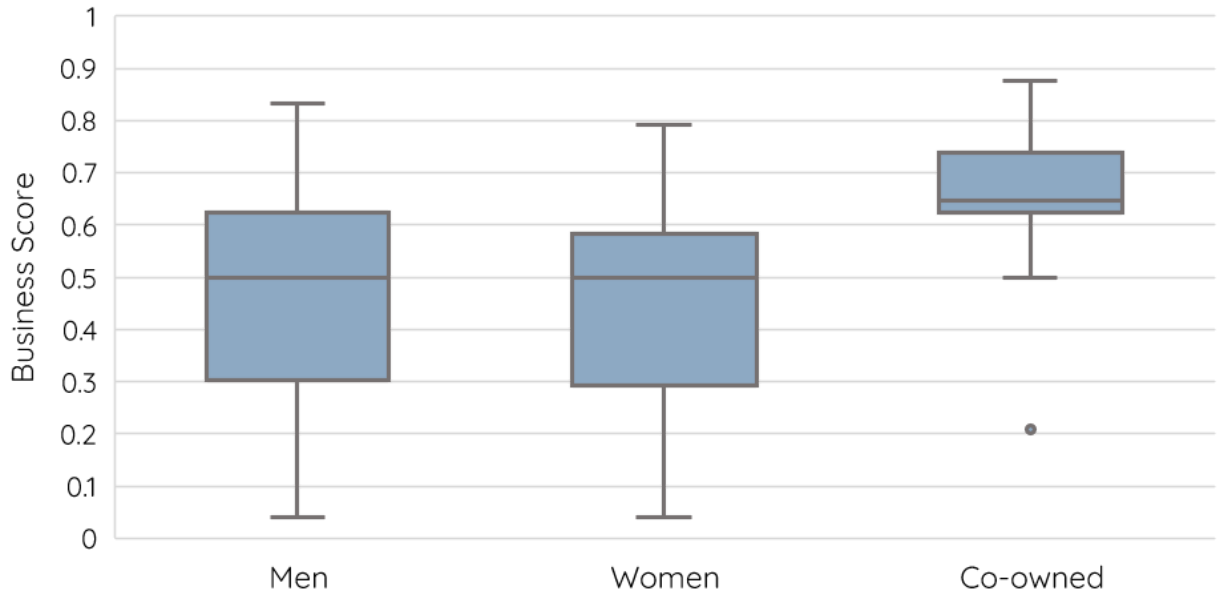
FIGURE 8.1: DISTRIBUTION OF FIRMS BY SCORE ON THE MCKENZIE AND WOODRUFF BUSINESS PRACTICES INDEX



When analyzing the score distribution by gender (Figure 8.2), men-owned firms have a median score of 0.50, with half of the firms ranging between 0.30 and 0.63. Women-owned firms have the same median score of 0.5, with half of the firms ranging from 0.29 to 0.58. Co-owned firms (a total

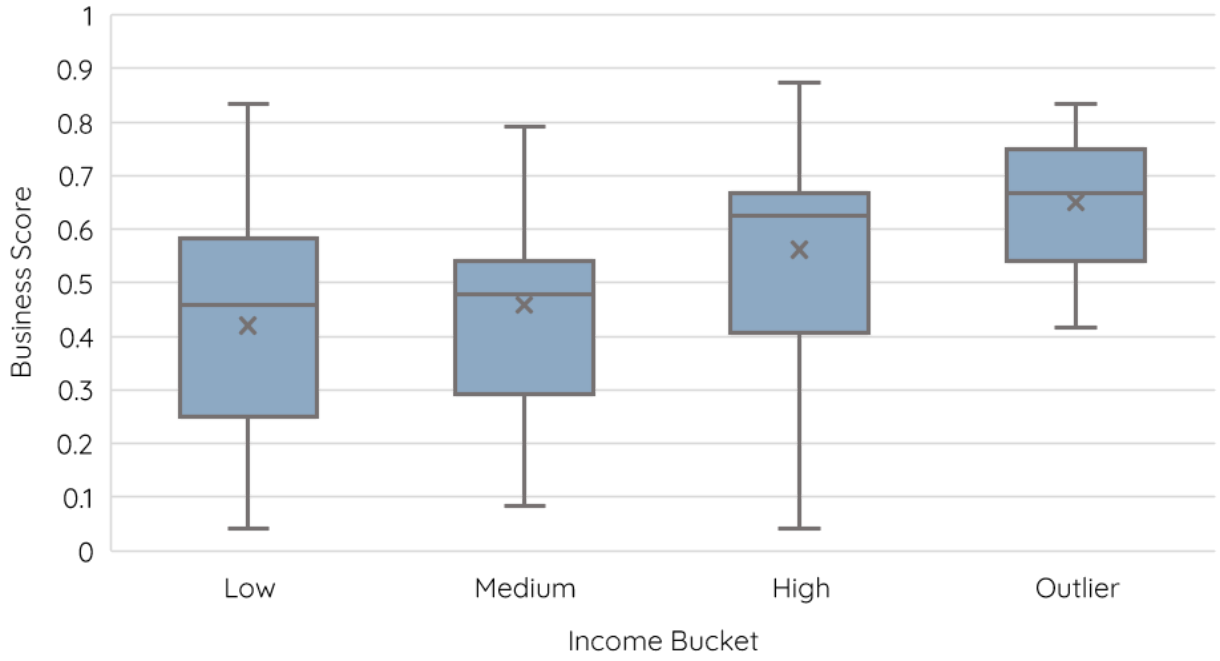
of 12 firms) have the highest median score of 0.64, with half of the firms ranging from 0.62 to 0.74 . For comparison, in the McKenzie and Woodruff study, comprising surveys from 7 countries (though different from the countries in the Small Firm Diaries) the median score is .39.

FIGURE 8.2: BUSINESS PRACTICES INDEX SCORE DISTRIBUTION BY GENDER



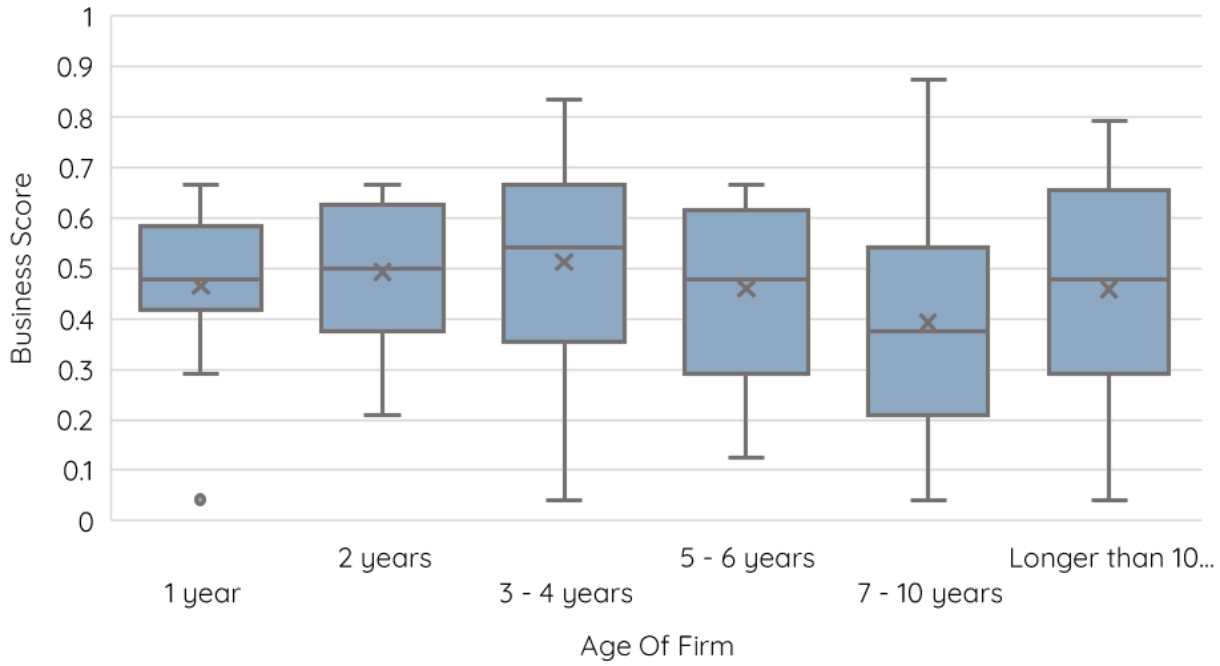
When we analyze the relationship between revenue and the distribution of business scores in our sample, the median business score increases with increasing revenue levels. The median score of firms in our lowest income group (see Section 3 on firm finances) is 0.46, with half of the firms ranging between 0.25 and 0.58. Medium-income firms have a slightly higher median business score of 0.48, while high-income firms have a median business score of 0.63. Our outlier firms (those with significantly higher revenues than most firms) show the highest median business score of 0.66 (Figure 8.3 shows the distribution of scores). Unfortunately we cannot say whether the better practices led the firms to grow to these higher revenue levels or the firms adopted these practices because they were larger.

FIGURE 8.3: BUSINESS PRACTICES INDEX SCORE DISTRIBUTION BY INCOME BUCKET



Using our growth metric, we find similar median scores for growers and non-growers. Figure 8.4 shows that there is no meaningful learning effect: older firms have similar scores to younger firms (though it is possible that firms that implement better business practices grow to be larger than our sampling criteria and we only observe firms with enough good practices to survive, but not to grow beyond their current size).

FIGURE 8.4: BUSINESS PRACTICES INDEX SCORE DISTRIBUTION BY AGE OF FIRM



DETAILED BUSINESS PRACTICES

The 26 business practices that McKenzie and Woodruff track are divided into four categories: marketing, stock control, record keeping and financial planning. They find that stock control is the most common set of practices and financial planning is the least common.

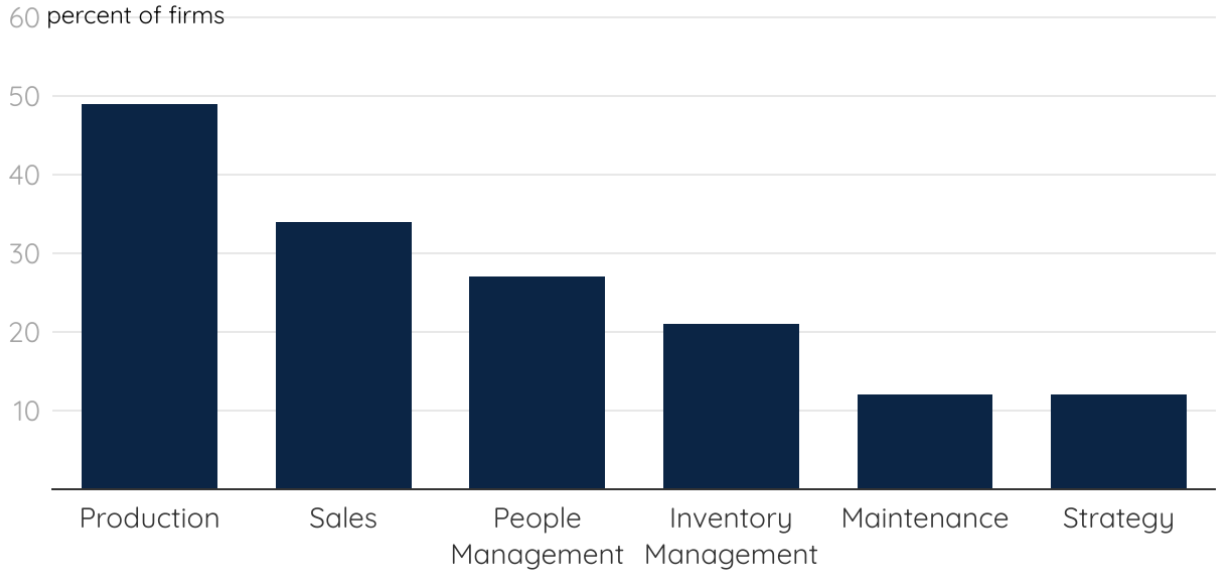
Among our firms, record keeping was the most common set of practices. For example, 80% of firms reported keeping written business records (compared to less than half in other surveys), with women and men being equally likely to report doing so (77% of the women vs. 80% of the men). Knowing which products were most profitable (also in the record keeping category) was the single most common specific practice, reported by 92% of respondents. Practices in the stock control category were also quite common and reported equally by men and women (59% and 58% respectively). Marketing and financial planning practices were far less common. Only a fifth (21%) of firms, for instance, reported that they had ever engaged a former customer to learn why they had stopped purchasing; less than 28% reported having a budget forecast for the following year (though our findings on volatility suggest that this may be a futile gesture).

We separately asked about time use in relation to management and business tasks. Unsurprisingly, given the size of the firms, the most common task owners engaged in was production—these are firms where owners are managers and workers. The other two most common tasks owners reported engaging in were sales and people management (see Figure 8.5). Given that firms report marketing and advertising practices at relatively low rates, this likely reflects that owners feel the need to deal

personally with customers, when their time might be better invested in more strategic marketing tasks.

FIGURE 8.5: PERCENT OF FIRM OWNERS DEDICATING TIME TO BUSINESS AND MANAGEMENT TASKS

Which activities did you spend time on in the past two weeks?



Kenya

Chart: Financial Access Initiative - NYU Wagner • Source: Small Firm Diaries

9. Aspirations and Growth

SUMMARY

Much of the discussion in development and poverty literature about MSMEs has focused on whether or not the firms grow, and if not, why not. Global work on microfinance and microenterprise has conclusively shown that the vast majority of microenterprises never grow enough to hire an employee; indeed, it appears that most do not aspire to grow and view a microenterprise as an alternative (and perhaps a second-best alternative) to wage employment. In high income countries there is a well-described class of small businesses which exist as an alternative to wage employment for owners, not because the business owners have classic entrepreneurial goals for growth. A central motivation for the Small Firm Diaries was uncovering more about the growth path and prospects for small firms, including their growth aspirations. To uncover firm aspirations, we ask firms specifically about their goals over the next year and next five years. We also ask about barriers to growth, desire to invest and other related questions. To measure growth, we use the slope for the best linear fit for monthly operating margin. We also look at our

quantitative data on large purchases and investments, on negative operating margins (which could potentially be a precursor to growth if firms increase spending in the short term to enable future revenue flows) and more to try to shed light on firms' choices related to growth. Finally we look at the comparisons between firms that did and didn't manage to grow during the study to look for any meaningful patterns.

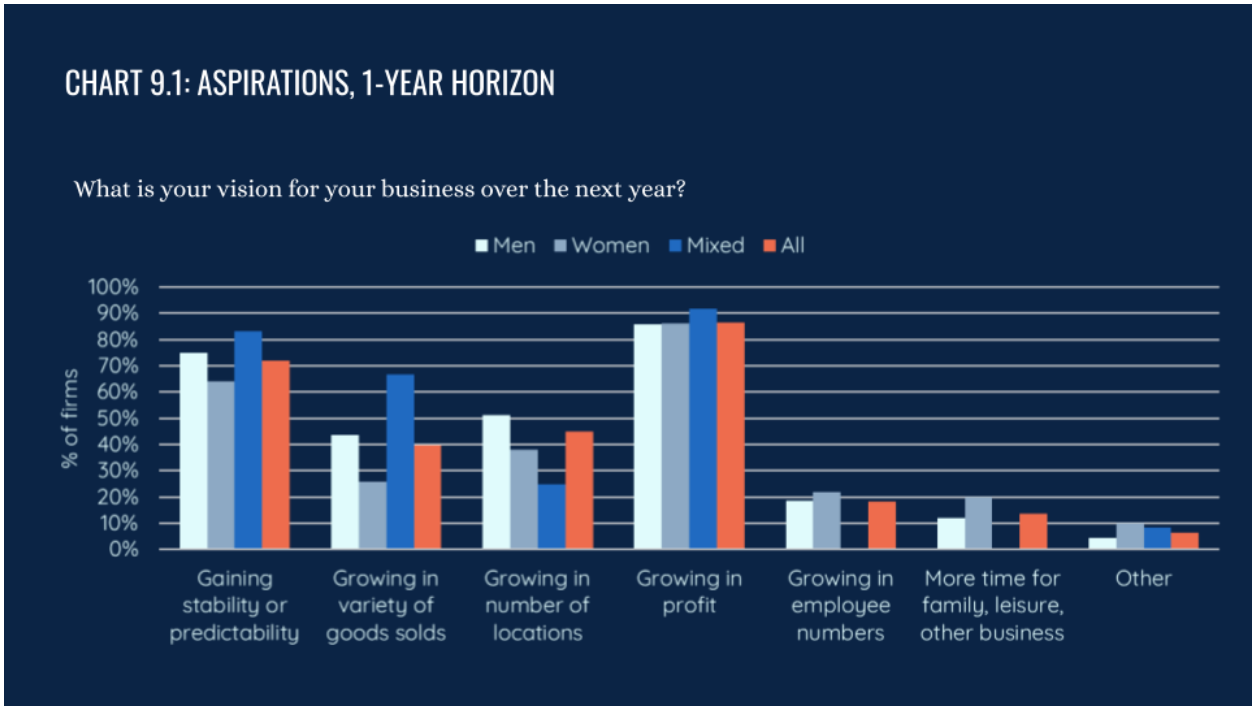
The majority of firms in the Small Firm Diaries did not meaningfully grow (or shrink) based on our preferred measure of growth, though it is important to remember that the year of the study fell during a difficult and complicated time while the global economy was just starting to recover from pandemic shock but struggling to cope with supply disruptions, worker strikes, Russia's invasion of Ukraine and rising inflation. Nonetheless we don't find the general lack of growth to be mirrored by an absence of aspirations to grow. Roughly 96% of the firms in the study told us they aspired to grow (on at least one of several measures of growth). Perhaps the most important finding about aspirations however, was not about growth but about the aspiration to achieve stability.

About 70% of firms say they aspire to increase stability. As the figures below suggest, firms do not consider growth and stability to be opposing goals. In fact, more than 70% of firms who aspired to growth also aspired to stability. This very large segment belies typical binary categories for these businesses (e.g. reluctant vs. gung-ho entrepreneur; survivor vs. growth entrepreneur). We believe one of the most important findings of the Small Firm Diaries is the existence of this large category of "Stability Entrepreneurs;" for more on this topic go to smallfirmdiaries.org.

Reviewing our quantitative data, on most measures we do not find significant differences between firms that grew and firms that did not grow over the course of the study. Growers and non-growers cite similar barriers and challenges. All firms' primary strategy for dealing with challenges is by attempting to save.

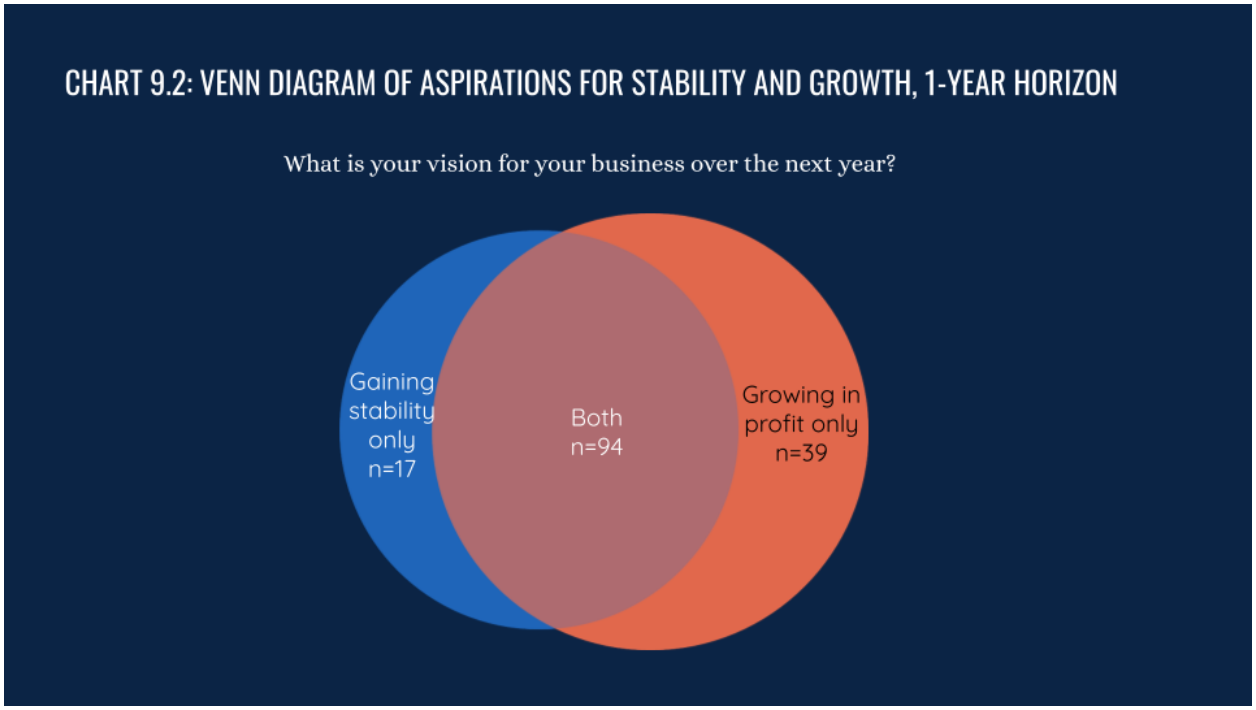
STABILITY ENTREPRENEURS

Near the middle of the study year, we asked firms about their vision for their firm over the next year and the next five years, giving them a variety of options related to growth, as well as some options to uncover if they did not aspire to grow: stability, closing the business, spending less time on the business. We designed the question expecting that "stability" and "growth" were opposing aspirations. However, the data shows that firm owners do not consider stability and growth to be in opposition but complements to each other. Growth in profit and stability were the two most common answers for every type of firm, without meaningful differences between firms based on gender of owners (see Figure 9.1) or on industry. We asked about aspirations over the next year and over the next 5 years because we thought it might be likely, given Covid-19 disruptions, that firms would aspire to stability in the short-term and growth in the long-term, or vice versa. Overall, desire for stability and profit improvements remain essentially unchanged, while desire for growth on other metrics (employees, locations, variety) increases in the 5-year horizon.



Of the firms that aspire to stability or profit growth, more than 60% of firms aspire to both, demonstrating that these aspirations are not only not mutually exclusive, but aspiring to both is the more common aspiration. In fact, of those that said they aspired to stability, 96% also chose at least one form of growth (profit, number of goods, employees, locations).

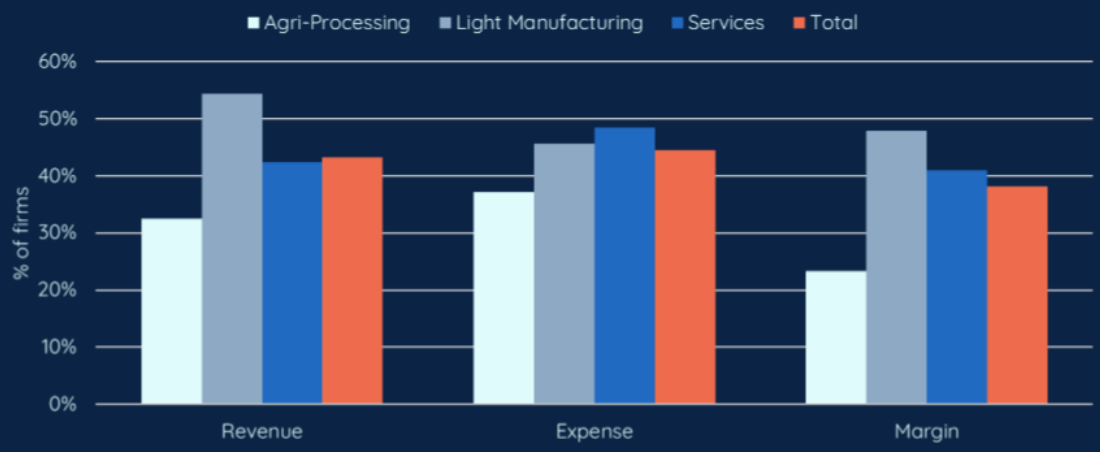
Schumpeter's popularization of the word entrepreneur emphasized the willingness to take on risk with an aspiration to create and grow something new, not just operate a small business. By that definition, our firms qualify as entrepreneurs—they take on risk in a volatile environment to create their businesses and aspire to grow them in the short- and long-term. However, they also have a significant desire to achieve greater stability at the same time rather than taking on additional risk to that which they already face. This category of Stability Entrepreneurs is the largest group of firms in the Small Firm Diaries.



PERFORMANCE VS ASPIRATIONS

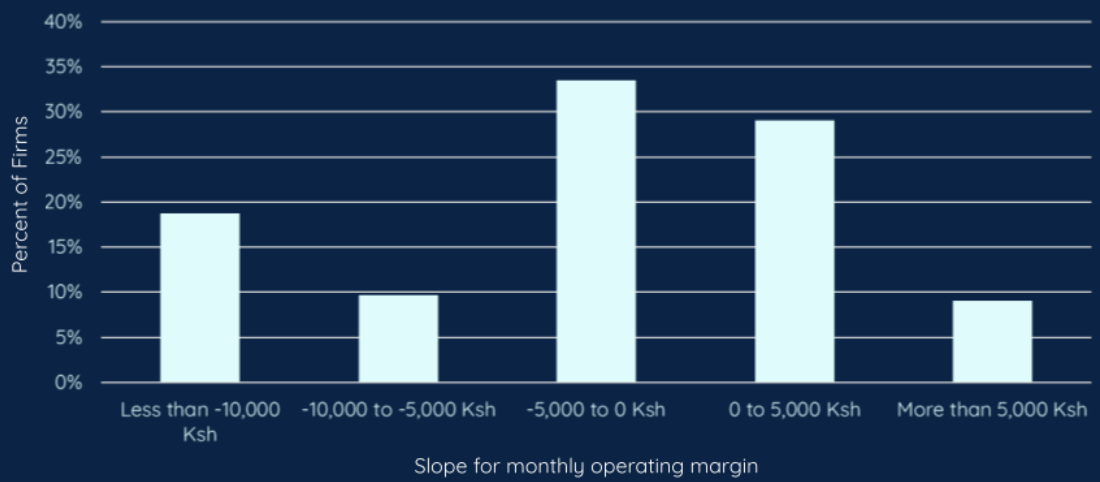
As discussed earlier, measuring whether firms "grew" in a year is difficult. By our preferred growth measurement, while more than 80% of the firms hoped to grow in profit over the course of the year, less than 40% of the firms were able to actually do so. While the proportion of firms that grew revenue was largely the same across owner gender, the proportion of firms that grew profit was larger for male-owned firms (42%) than female-owned firms (32%). A significantly smaller percentage of agri-processing firms grew compared to other industries (Figure 9.3). Given the overall economic environment, with inflation rising globally, we also checked for growth in revenue only, with similar results.

CHART 9.3: PERCENTAGE OF FIRMS GROWING IN REVENUE, EXPENSE, AND OPERATING MARGIN



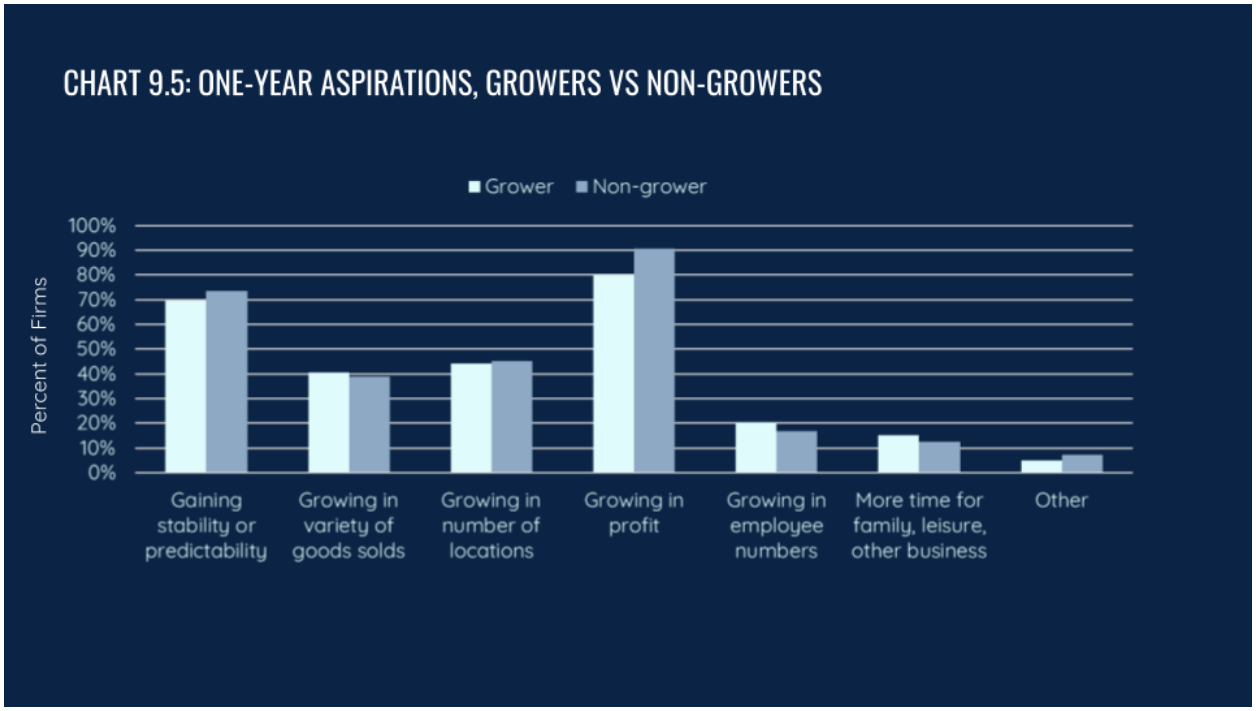
Our growth measure includes any firm with a positive slope, no matter how small. To better understand the amount of growth (or contraction) firms see over the course of the study, Figure 9.4 shows the distribution of firms based on the monetary amount of the change implied by the slope. More than half of the firms fall between -5,000 KES to +5,000 KES (-$40 USD to +$40 USD) monthly change in operating margin—these firms, given the volatility that we see, are neither achieving their aspirations for growth nor stability.

CHART 9.4: DISTRIBUTION OF OPERATING MARGIN SLOPES



ASPIRATIONS AND GROWTH

The reason that we focus on aspirations is the possibility that firms of this size do not exhibit growth because they do not aspire to growth. Having established that the firms desire to grow, but at a measured pace that yields increased stability, we turn to whether aspirations for growth or actual measured growth correlate with other behaviors or outcomes. In this section, "grower" refers to firms that have a positive slope of operating margin. For the most part, there is not a difference in aspirations between firms that grew and those that didn't, though firms that did not grow in operating margin did express interest in growth in profit at higher rates than those who did grow (Figure 9.5).

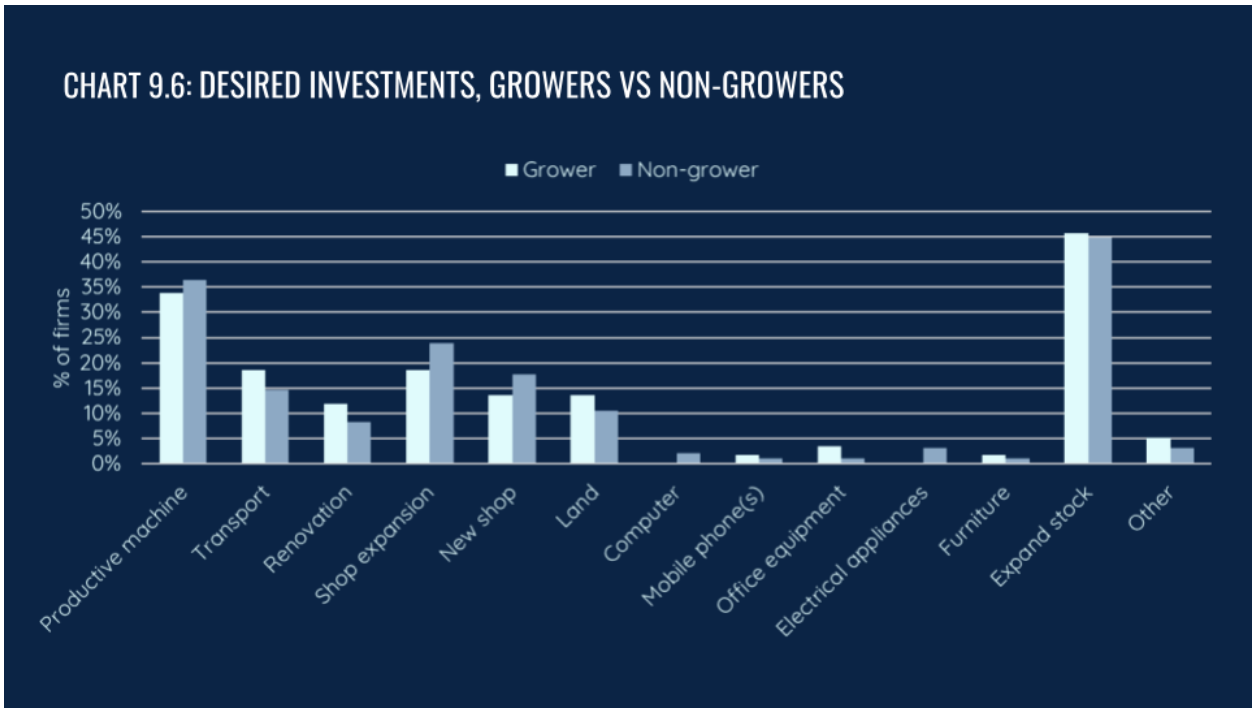


BUSINESS PRACTICES, INVESTMENTS, AND BARRIERS TO GROWTH

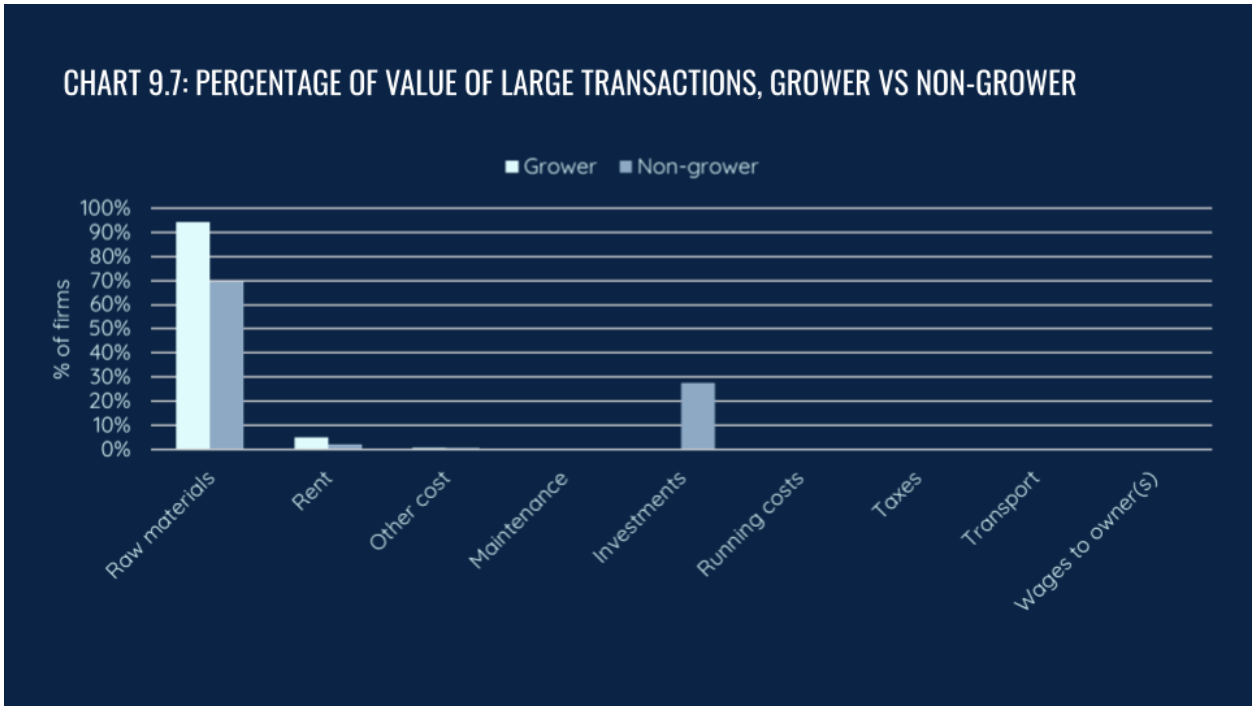
If aspirations do not make a difference to growth, it's natural to ask if other practices are more correlated with growth, and whether the growers perceive different barriers to growth than non-growers. In summary, there are no meaningful differences between growers and non-growers in business practices, employment, diversification, or investment behaviors.

Since most policy efforts focused on growth in this segment of the economy prioritize investment (e.g. with policies to provide investment credit or subsidize investment credit), we looked especially at firms' investment behavior and intentions. To do so, during the study, we asked firms to categorize their expenses with "investment" as one of the categories. With quantitative data we also looked at firm investments through a different lens: the relative size of expenses. Specifically, we looked at single expenses with an amount that is larger than three times the standard deviation above the mean of single expenses for the given firm. We classified these as "large purchases."

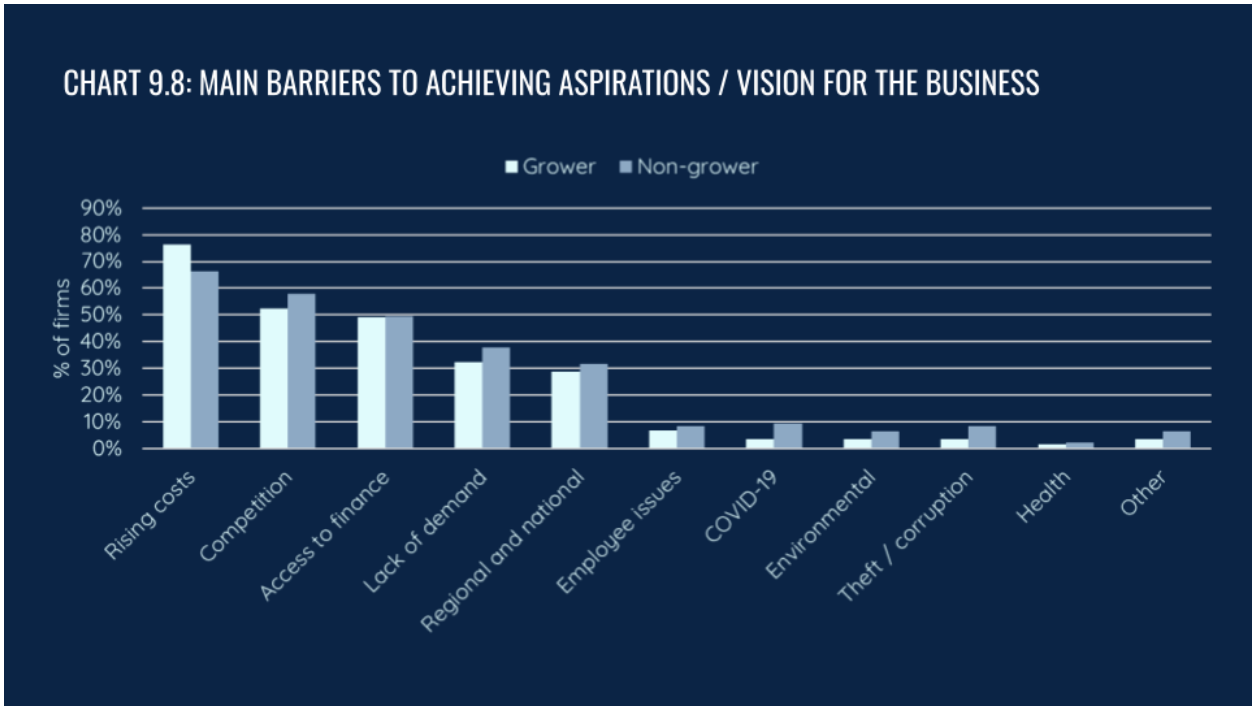
When we ask firms about investments that they would like to make, about a third of them report that they would like to invest in a productive machine. The only other investment that a significant portion of firms aspired to was raw materials, which nearly 40% of firms noted, though raw materials would not qualify as an investment in most small business credit programs. Interestingly, while there was not a gap between growers and non-growers in terms of desire to invest in a machine or raw materials, non-growers reported interest in shop expansion at a nearly 10% higher rate than growers.



Most firms (~80%) — grower or not — made a "large purchase" at some point in the study period. When we look at these actual expenses during the year of the study we find that large purchases were overwhelmingly focused on raw materials, not capital assets; there were not differences between growers and non-growers in these terms.



Consistent with the value of large purchases being focused on raw materials, more than two-thirds of firms in Kenya report that the biggest barrier to achieving their aspirations is access to and rising costs of raw materials. Half of firms report that access to finance is a significant barrier to their aspirations (See Figure 9.8). When instead we ask firms about barriers to making their desired investments (which as noted above is often raw materials), more than two-thirds say lack of capital is a major barrier. Together this suggests that firms do not perceive that additional capital assets are necessary to achieve their growth and stability goals. Instead, it is working capital that is a more significant barrier and they do not perceive that external finance is the path to improve working capital. Importantly, while we don't go into detail here, 59% of firms (with no difference between growers and non-growers) report that they reserve funds specifically for coping with risks, which may help explain why firms find it difficult to self-finance their desired levels of raw material "investments."



Credits

The principal investigators for the Small Firm Diaries global project are Timothy Ogden and Jonathan Morduch; and for the Kenyan arm of the study, Amrik Heyer and Tamarka Cook. The principal investigators acknowledge the contributions of Rachael Eplee, Laura Freschi, Michelle Kempis, Yeji Lee, Camila Londoño Sanin, and David Pinedo De La Hoz in creating this Country Report.

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About the Study

The Small Firm Diaries is a global initiative to better understand small firms in low-income neighborhoods of developing countries.

Visit smallfirmdiaries.org for more information and additional publications.

References