

05.23.2023

KENYA

small firm
DIARIES

Country Data Overview

DATA FROM THE SMALL FIRM DIARIES

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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 project focuses on firms larger than those that have been central to 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. The study uses financial diaries,¹ 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.

In Kenya, MSMEs make up 98% of companies in the country, provide 30% of job opportunities, and contribute approximately 40% to the Gross Domestic Product according to the UN Department for Economic and Social Affairs.² 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 sole operator microenterprises; between the “snapshot” data of large, nationally-representative surveys such as FinAccess,³ 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.

Note that throughout the analysis and charts in this report we exclude the first two months of data collected, and report data for months 3 through 12. During the initial two-month period, the field

¹ The Kenya Financial Diaries, a study completed in 2013 by FSD Kenya in partnership with BFA and Digital Divide Data, is an example of this research methodology applied to households rather than businesses <https://www.fsdkenya.org/themes/digital-finance/an-overview-of-the-kenya-financial-diaries-research-program/>

² 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>

³ FinAccess Kenya Household Survey 2021, <https://finaccess.knbs.or.ke/>



researcher and firm owner are still establishing familiarity and confidence and consequently we consider data from this period to be less reliable.

PURPOSE OF THIS REPORT

The Kenya Country Data Overview presents data on key study topics, including financial access, aspirations, and employment, and includes a section that gathers findings on women-led firms, one of the priorities of the study. The appendix at the end of the report summarizes how the sample differs across the three industries and the three counties.

This report provides an overview of the extensive quantitative data gathered during the study, and helps frame our future analyses of our quantitative and qualitative data. We will publish more detailed analysis on specific topics relevant to Kenya, and individual firm profiles of Kenyan businesses in the sample. The current version of this report and any additional reports using data from the Kenya sample will be published at smallfirmdiaries.org/kenya and at fsdkenya.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, data collection began in November 2021 and was completed in November 2022. The study was conducted in three sites: Nairobi, Kisumu, and Kwale. In each, we selected low-income communities, 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 155 firms, roughly evenly spread across the research sites. 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 the Kenyan sample, half of the firms are engaged in small-scale manufacturing (e.g. carpentry, metal works, and construction materials); 20% in services (e.g. printing, car and bike repair and maintenance); and 26% in agri-processing (e.g. meat and fish preservation and food preparation).

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 communities where owners, employees and customers are likely to be near poverty lines, and 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 were selected in conversation with local partners and advisors to provide a reasonably representative look into the varied regional economies of Kenya. Within each research site, we then worked to identify low-income communities that 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 were selected as these are sectors where short- and medium-term growth in profitability and employment are plausible. We purposely excluded retailers, although



retailers are a large portion of small firms overall.⁴ To recruit firms, the field team visited each selected community 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 that 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 (93% of the original sample).

Gender

Of the final sample, 33% 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 59% are owned by men.

FIGURE 2.1: FIRM COUNT BY OWNER GENDER, N = 155



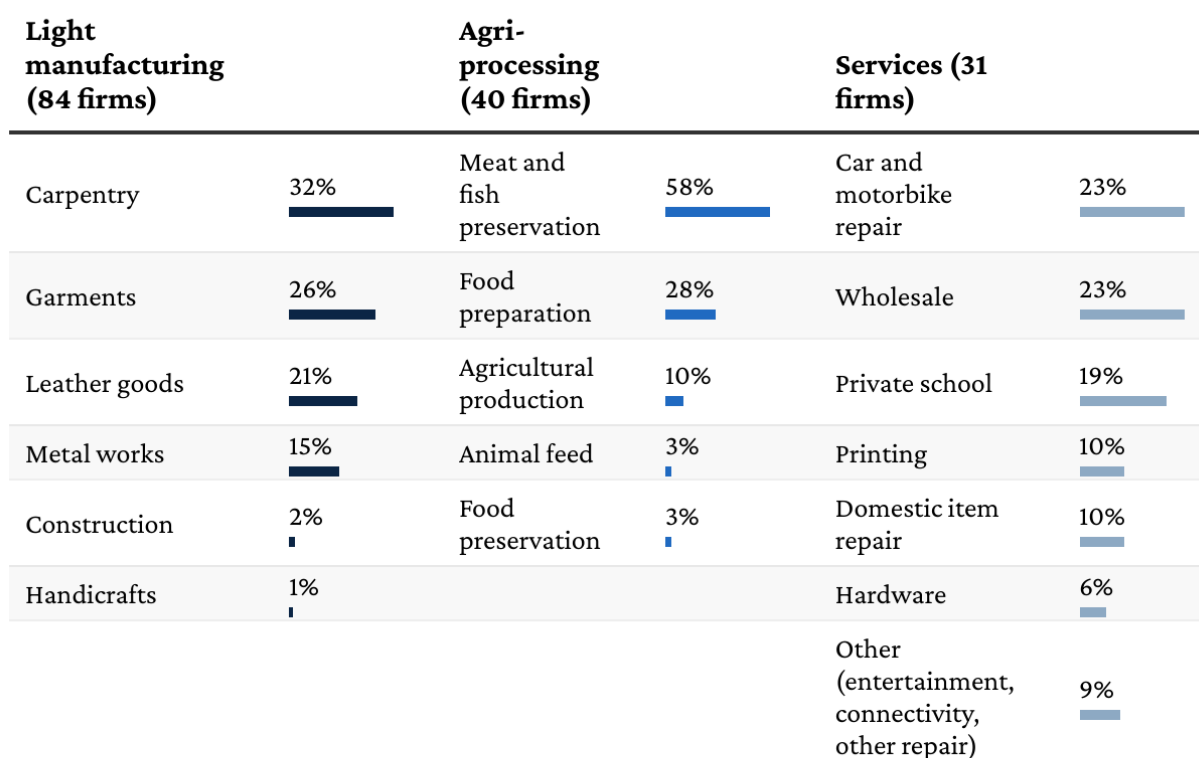
Industry

We selected firms from three sectors: agri-processing, light manufacturing, and services; Figure 2.2 shows the sectors included within each industry. Twenty percent of the firms are in the services sector. Light manufacturing constitutes half of the total firms, and the remaining 26% of firms are in the agri-processing sector.

⁴ Retail globally is a low margin sector, where profitability is tightly linked to large scale and the use of technology to drive down costs. In low-income communities particularly, small retailers are largely undifferentiated and markets are extremely crowded with very low barriers to new small-scale entrants. Therefore the pathways for a small retailer to grow meaningfully in terms of productivity, profitability, employment or revenues are very limited.



FIGURE 2.2: TYPES OF FIRMS IN THE KENYA SAMPLE



Cash Flows

The Small Firm Diaries is explicitly focused on the role of small firms in the economies of low-income communities. However, using revenue or profit measures to define a sample ex-ante is fraught. What research has uncovered about the micro-firms⁵ 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 study. In this section, 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,

⁵ Within the Small Firm Diaries, “micro” always means firms with 0 non-family employees.



loans and future commitments (not to mention the use of cash or accrual methods)—something well beyond the ability of a study like ours to accurately measure. Given that, our measures focus not on “profit” in accounting terms, but on operating margins: monthly revenues less monthly expenses. Of note, our measure of expenses, and therefore of operating margin, excludes any payments the owners make to themselves; we also exclude any measure of the value of owners’ time. The reason for this is that small firm owners, regardless of size or location, often adjust their personal “income” to the needs and cash flows of the firm and of their household (e.g. not paying themselves in a low month, but taking home more in a high revenue month). This idiosyncratic behavior would impair comparisons between firms. Thus, the operating margin presented here provides a view of the resources the firm owner has to use for their household or to invest further in the firm.

Median annual revenue and median annual operating margin for participating firms is KES 930,700 and KES 389,800 respectively. Given the month-to-month variability in these figures, however, we think it is much more instructive to focus on monthly measures (see Section 3 for an analysis of cash flow volatility).

The monthly median revenue of all firms in the final sample is 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 revenue lower than KES 150,000 and 43% of our sample has a median monthly revenue lower than KES 75,000. Figure 2.3 presents the monthly median data with conversions to PPP dollars.

Firms’ monthly median operating margin was KES 32,818. Of all firms, 94.8% (147) had positive monthly median margins. While most firms have positive operating margins, their margins are 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 range from KES 1,150 to KES 26,240 in losses. Financial performance is outlined in further detail in Section 3.

FIGURE 2.3: MEDIAN MONTHLY CASH FLOW FIGURES

	Revenue	Expense	Operating margin
KES	89,950	50,515	32,818
PPP	2,054	1,153	749

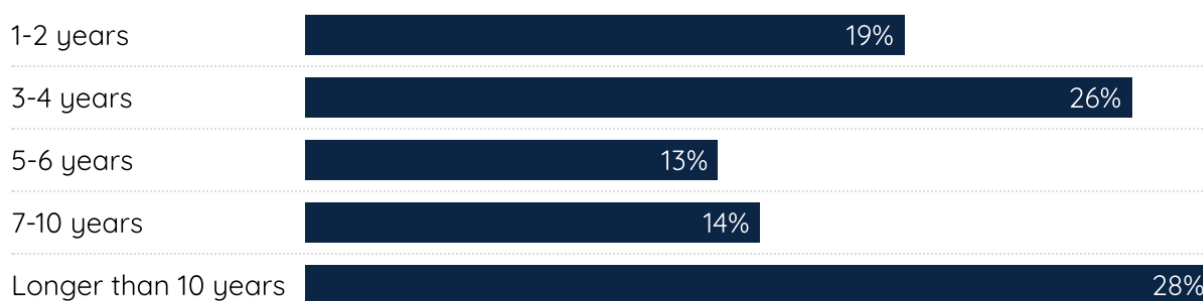


Firm Age

A key question about small firms around the world is how long they survive. A well-known problem of naive measures of small businesses is that they imply that small businesses account for the vast majority of firm and job creation. However, they also account for the vast majority of firm and job destruction—most small businesses globally appear to last for only a handful of years.⁶ We were interested in whether the kinds of small firms we were studying were short-lived or persisted for longer periods. Overall we see firms of all ages. About 20% of firms were less than 3 years old, while nearly 30% had operated for more than 10 years.

It's important to note that while we do see a fairly equal distribution of firms across the age spectrum, even though we did not take this into account when building the sample, it is possible that our sample misses firms that grow rapidly from starting to being larger than our 20 employee cut-off. In other words, our data may have some bias based on not including the most rapidly growing and successful small firms.

FIGURE 2.4: FIRM AGE, PERCENT OF FIRMS



Location

As shown in Figure 2.5, the firms included in the final sample are essentially equally distributed across cities. In all cities, there are 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 are men-led, 18 are women-led, and 9 are co-owned.

We also see that a greater proportion of light manufacturing firms are located in Nairobi, while the agri-processing firms are more concentrated in Kisumu and Kwale. Firms located in Nairobi earn significantly more in monthly revenue compared to those in Kisumu or Kwale. For more county-level comparisons, see the Appendix.

⁶ Shane, Scott, 2008



FIGURE 2.5: COUNTY-LEVEL SAMPLE DATA

		Kisumu	Kwale	Nairobi
Owner Gender, Firm Count	Men	34	31	27
	Women	15	18	18
	Co-Owned, Mixed	2	1	9
Industry, Firm Count	Agri-processing	13	20	7
	Manufacturing	28	22	34
	Services	10	8	13
Cash Flows, KES	Median Monthly Revenue	78,950	69,505	193,627

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



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 are 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.⁷ Our firms experience significant volatility in revenue and expenses, and extremely high levels of variability in operating margins. Importantly, this variability is mostly in positive territory—only 15% of firms have more than 2 months of negative operating margins, suggesting that the firms are likely matching expenses to revenues. 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 in our data, nor any clear differences that would easily explain why or how some firms with high variability manage to grow while others do not.

FINANCIAL PERFORMANCE DATA

Revenue, Expenses, and Operating Margin

As shown in Figure 3.1, 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 90,000 or less, and around 75% of them KES 239,000 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 55,000 or less, and around 75% have a median monthly expense of KES 123,000 or less.

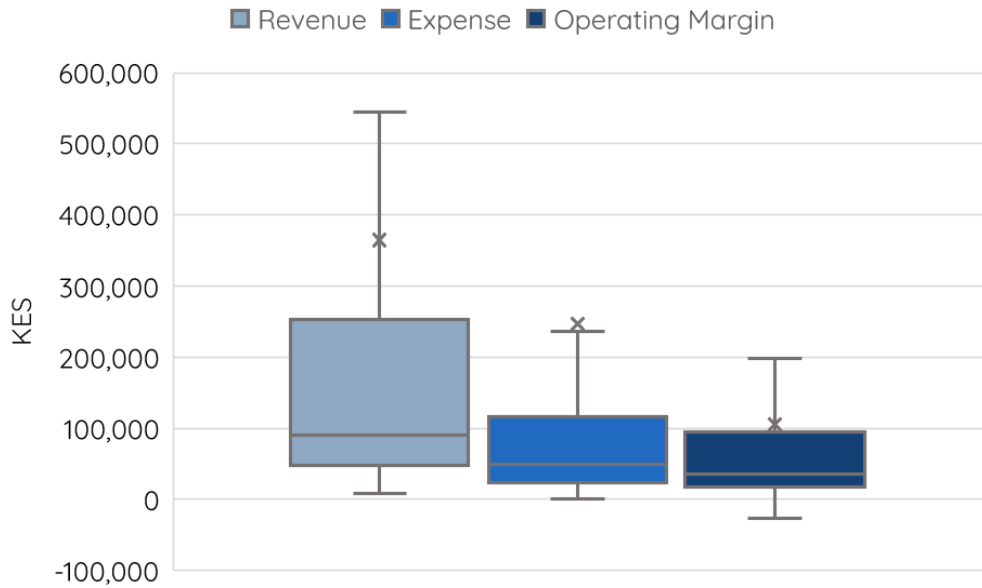
With respect to operating margin, half of our firms have a median monthly margin between KES 17,500 and KES 92,400. Most of our firms have operating margins of less than KES 100,000 a

⁷ 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.



month. Eight firms show a negative median monthly margin, going as low as KES 26,000 of negative median monthly margin.

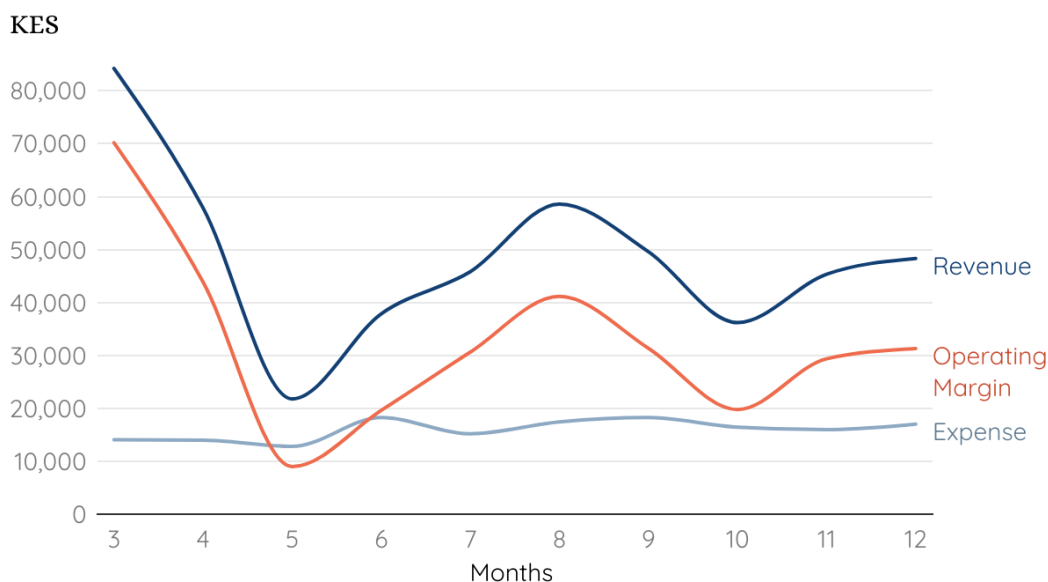
FIGURE 3.1: MEDIAN MONTHLY REVENUE, EXPENSE, AND OPERATING MARGIN



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 for firms in our sample is 0.44. To better understand CV, consider the case of a particular firm as seen in Figure 3.2.



FIGURE 3.2: CASH FLOW FOR ONE GARMENT PRODUCTION FIRM



As noted in the introduction, we drop the first two months of data from all Small Firm Diaries analysis, leaving 10 months of data: months 3-12.

FIGURE 3.3: MEASURING CASH FLOW VOLATILITY FOR ONE GARMENT PRODUCTION FIRM

	Monthly average revenue (KES)	Monthly standard deviation (KES)	Monthly coefficient of variation (CV)
Operating margin	32,615	16,735	0.51
Revenue	48,556	16,541	0.34
Expenses	15,941	1,888	0.12

The CV is calculated by dividing the standard deviation by the mean (or average).

This firm’s monthly average revenue is about KES 32,000, but rarely is the actual monthly figure within KES 10,000 of that average; specifically the standard deviation tells us that monthly income tends to be about KES 17,000 more or less than the average. Standard deviations, though, 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 tells us how distant 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 34% greater or lesser than the average monthly revenue. 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 several 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 make choices about expenditures to optimize the long-term success of the company, by drawing on working capital or credit when revenues were low and topping up those accounts when revenues were high. In this case, a firm's expenses could vary but would do so mostly independent of short-term revenue fluctuations. Alternatively, a firm could fix its expenses at a level below its "low" revenue months, similar to what we see in the garment production firm's cash flows shown above in Figure 3.2. The downside of such a strategy is that it essentially precludes the firm from pursuing growth opportunities or making significant investments. Finally, a firm without access to working capital reserves or credit, but wanting to take advantage of opportunities would have to match expenses to revenues as closely as possible, increasing spending when revenues were high, but cutting them drastically when revenues dropped. However, as in the second example, the firm would be unlikely to be able to make significant investments in long-term growth as operating margins would remain small even during revenue "spikes."

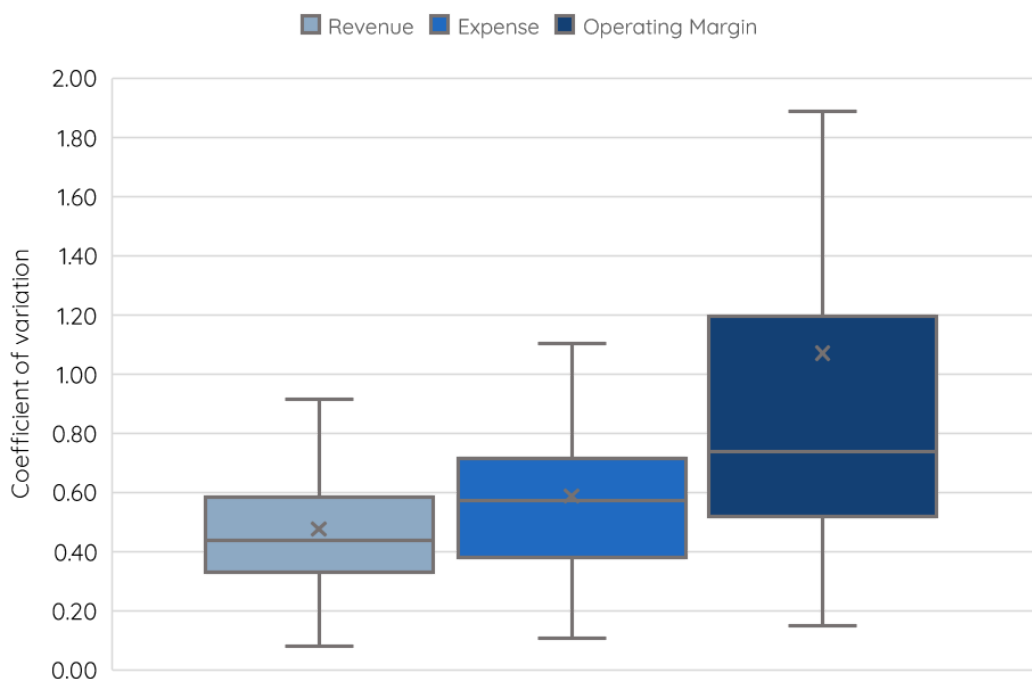
This last scenario is what we most commonly see among the small firms. In our data we see that the variability of expenses is higher than that of revenue, with a median CV of monthly expense of 0.57 (compared to .44 for revenue as noted above).

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).⁸ The very few instances of negative monthly operating margins indicates that this is not because firms have adequate access to credit or working capital reserves to manage expenses independently of revenue. While we cannot say definitively that expenses follow revenues or revenues follow expenses, for the most part the two are closely linked.

⁸ 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: COEFFICIENT OF VARIATION FOR MONTHLY 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).⁹ The majority of our firms typically have revenue less than KES 239,000 per month (USD ~1,800).^{10 11}

FIGURE 3.5: REVENUE CATEGORIES

Bucket	Median monthly revenue, KES	Count of firms
Low	Less than 100,000	82
Medium	100,000 to 300,000	38
High	300,000 to 700,000	20
Outlier	700,000 or greater	15

⁹ Buckets were created based on observed breaks in the sample-wide distribution of median monthly revenues.

¹⁰ Exchange rate KES/USD 0.0077 (March 10th to March 21st 2023)

¹¹ For context, GDP per capita in Kenya is 2,081 USD but minimum monthly wages are 116.6 USD on average.

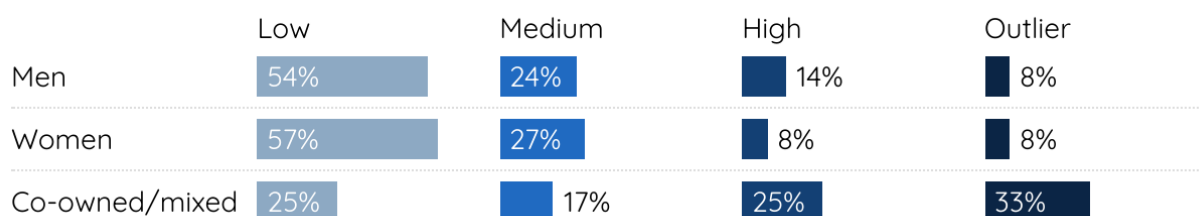


Large gender differences persist globally when it comes to firm ownership, size, income and wealth. According to the World Bank,¹² the global average of firms with female participation in ownership is 32.9%. In Kenya, the average of small firms with female representation in ownership is 47.5%.¹³ The 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.¹⁴

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 Focus on Women-Led Firms Section, which follows the present section. Here we'll describe the basic measures of firm size and operations.

As seen in Figure 3.6, the distribution of firms across the revenue categories defined above is close to equal between men- and women-owned firms; the co-owned category shows a different pattern though this may be due to the small sample size of only 12 firms. About 50% of both men and women-owned firms are categorized as “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 is a small number of women-owned firms that have significantly negative operating margins, while there are some men-owned firms that 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 42,300 compared to KES 33,200 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 3.6: REVENUE CATEGORY DISTRIBUTION ACROSS GENDERS



¹² World Bank Gender Data Portal, “Firms with female participation in ownership (% of firms)”

¹³ World Bank Enterprise Survey: Kenya 2018 Country Profile, page 11

¹⁴ Small and Medium Enterprises (MSME) Survey 2016, Kenya, 2016, Kenya National Bureau of Statistics, <https://statistics.knbs.or.ke/nada/index.php/catalog/69>



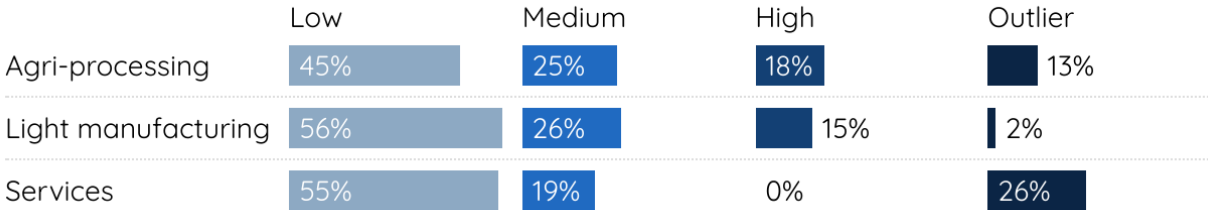
We believe that the general parity between men and women in our sample is in large part a function of the selection criteria for our study: women who start and own firms with employees are those that have already overcome many of the gender gaps that exist among the general population and are responsible for women being overrepresented among microenterprises.

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 3.7). 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 100,000, 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 630,800. In agri-processing the margin ranges up to KES 963,500, while in the services sector the margin range reaches KES 1.6 million.

Additional data disaggregated by industry can be found in the Appendix.

FIGURE 3.7: REVENUE CATEGORIES ACROSS INDUSTRIES



Growth

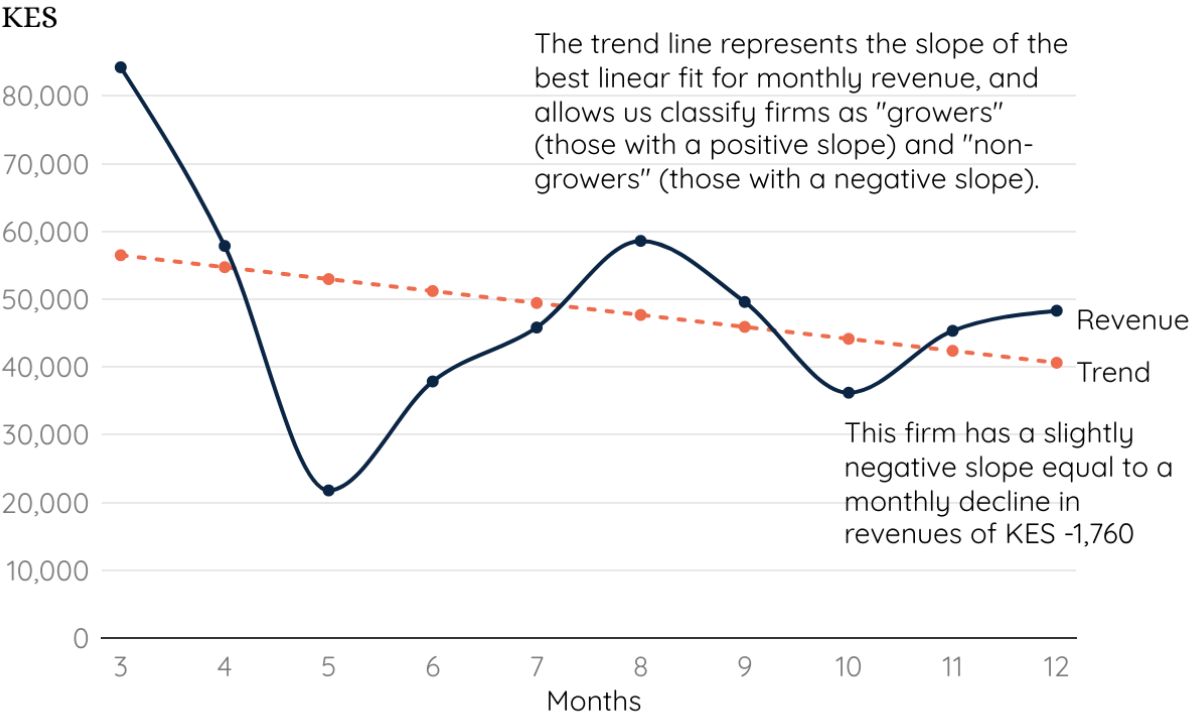
Measuring growth (by revenue or operating margin) is a challenge in an environment with high volatility. Comparing first month to last month revenues or margins is not reliable as these months may be arbitrarily higher or lower, for instance. To best measure the direction of change, while accounting 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 3.8 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 slight negative slope equal to a monthly decline in revenues of KES -1,760. As the slope is negative, we categorize the firm as a “not-grower.”

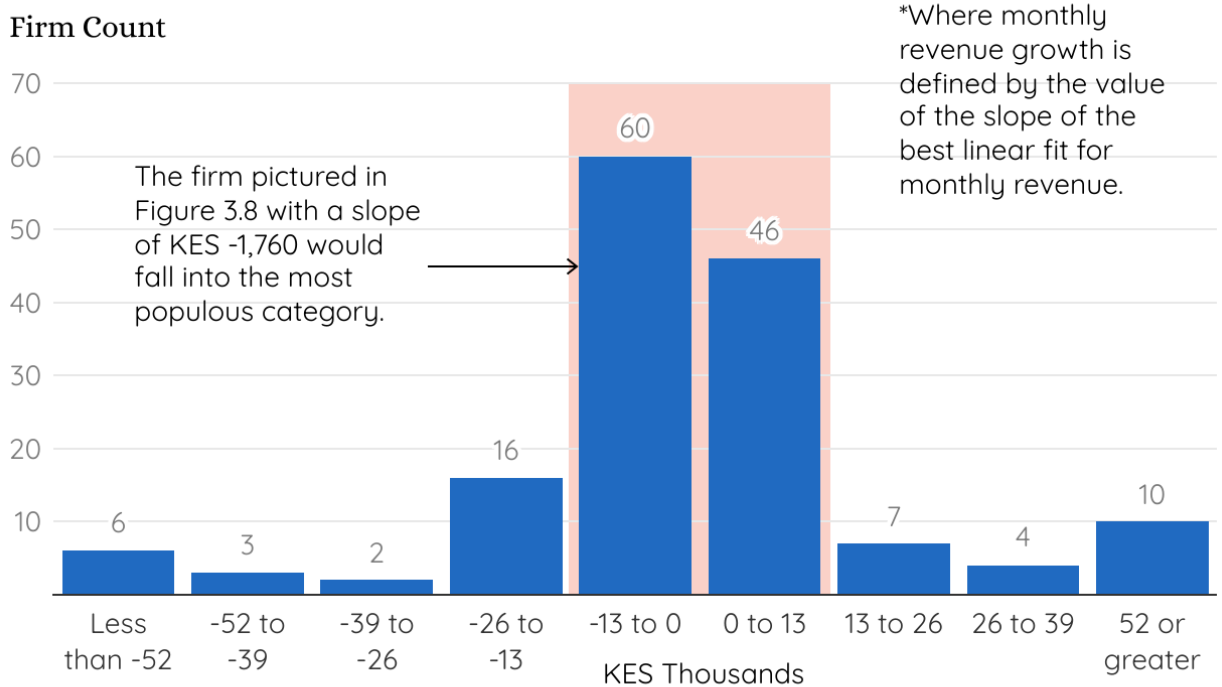
FIGURE 3.8: MONTHLY REVENUE FOR EXAMPLE FIRM, MONTHS 3-12



Using this metric we find that most firms do not see much change over the course of the year. As seen in Figure 3.9, 106 (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 showing positive slopes higher than KES 54,000 a month.



FIGURE 3.9: 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 Data Overview we discuss gender-disaggregated data. In this section we summarize those analyses of differences and similarities between men-owned and women-owned¹⁵ 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 with significantly negative operating margins, while there are a few men-owned firms with 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 overrepresented among microenterprises. However on some measures there are notable differences. For instance, women are unbanked (do not report having a bank account, see Section 4 for more details) 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.

GENDER DIFFERENCES ACROSS STUDY TOPICS

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.

¹⁵ 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.



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 42,300 compared to KES 33,200 for women-owned firms.

Financial Access

Female firm owners have the lowest rates of bank account ownership for business at 66%, compared to 74% of male firm owners. Otherwise, women and men are similarly distributed across levels of formal financial integration. Female firm owners and male firm owners use their bank accounts with a similar frequency—the median percentage 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 percentage of male firm owners use mobile money wallets than women firm owners (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. (See Section 4 on how we categorize firms according to their levels of banking and mobile integration).

Formalization

Levels of perceived formalization are 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%). Only a few firms reported having Business Registrations (23%), but unlike the other types of registrations, there was not a gap between men and women reporting this level of registration (7% men vs. 10% women).

Employment

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

Business Practices

On the McKenzie and Woodruff Business Practices Index score (a measure of use of business practices associated with business success, see Section 7 for more details), 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.

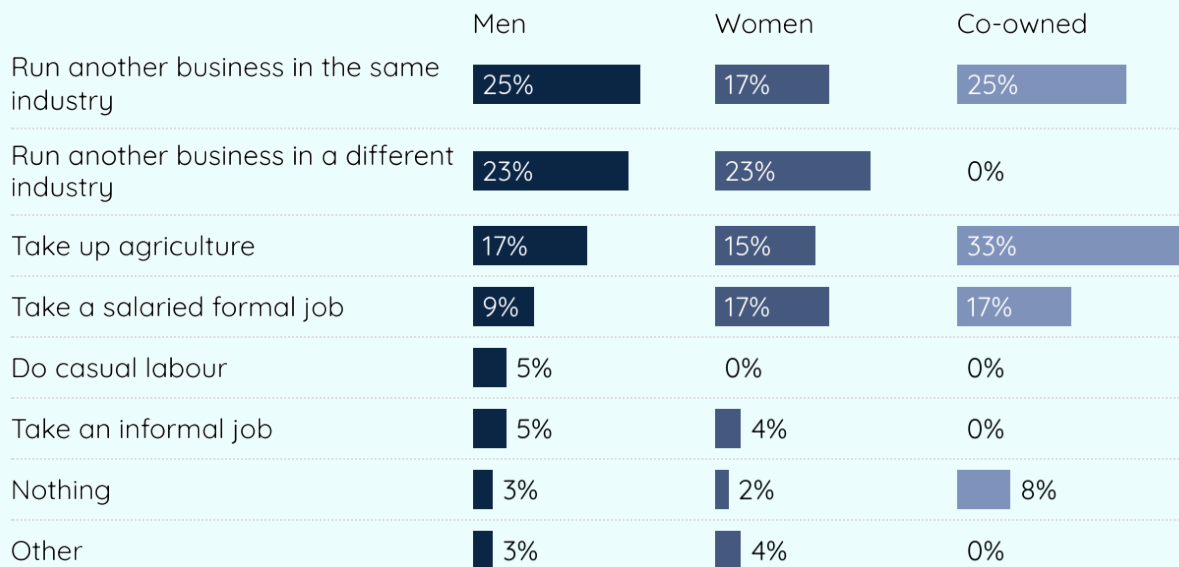
ENTREPRENEURIAL CONFIDENCE AND PERFORMANCE: A CLOSER LOOK

We wanted to understand if firm owners of different genders had differing motivations for starting a business that might affect 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 ALTERNATIVES 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 (Figure W.2). 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 the number of activities on which any time was spent.

FIGURE W.2: TIME USE

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

	Men	Women	Co-owned
Production	63%	29%	33%
Sales	42%	21%	25%
People Management	35%	12%	33%
Inventory Management	24%	13%	25%
Accounting	13%	6%	17%
Maintenance	12%	10%	25%
Strategy	12%	8%	33%
Marketing	10%	6%	8%
None	1%	13%	0%
Other	1%	6%	0%

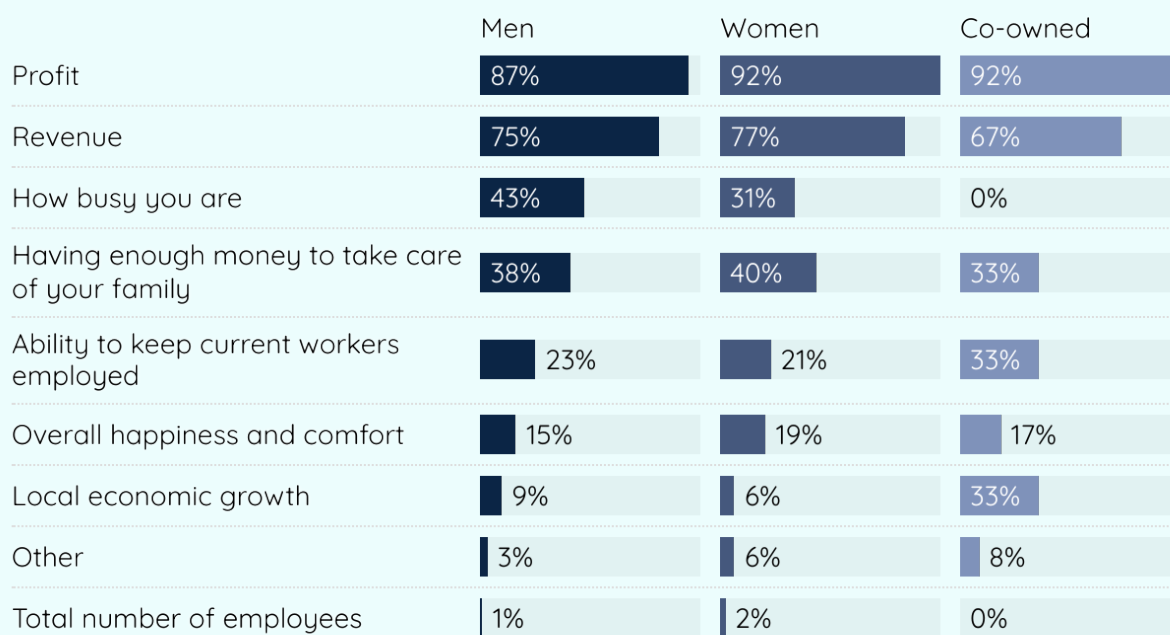
The disparity in reported time use, however, is not reflected in differences in how the owners measure success. Profit was the most important metric for both men and women. On measures that could be expected to skew significantly towards women (“having enough money to take care of your family” and “overall happiness”) there were only small differences.¹⁶ The only measure where there was a marked difference was “how busy you are” with men considering busyness as a success metric at a rate more than 10 percentage points higher than women (Figure W.3).

¹⁶ Given the segmentation of the total sample into groups for these analyses, one or two firms answering differently could move a percentage by 3-8%.



FIGURE W.3: METRICS OF BUSINESS SUCCESS

How do you measure how your business is doing?



4. Financial Services

SUMMARY

A major global policy focus for the last decade has been bringing more people into the financial sector, spurred on by findings that half the world was “unbanked.”¹⁷ Efforts to bring more people into the formal and regulated financial system, comprising both traditional banking and mobile money, have borne fruit in many parts of the world as shown in the 2021 Global Findex,¹⁸ which reports that the number of unbanked people has decreased by half in the last 10 years.

In this section, we explore how integrated firms are into the formal and regulated financial system. Specifically, we use both account ownership and *percent of value of transactions through a bank account and mobile money wallet* to describe a firm’s integration into the banking and mobile money systems respectively. We also look at access to credit and credit usage. The findings here are an abbreviated version of the report on financial access, *Financial Services: How Small Firms in Kenya Manage their Finances*, available on smallfirmdiaries.org/kenya.

We find that 62% of firms in the study reported owning a bank account for business purposes, compared to 63% owning mobile money wallets for the business. However, only 25% of firms use a bank account for 25% or more of their aggregate transaction value, compared to 32% for mobile money wallets. Overall, cash is still the predominant tool—71% of firms used cash boxes for 25% or more of their transaction value.

In our sample, we see little relationship between the level of banking system integration and credit usage. Firms that are only marginally integrated borrow from banks at similar rates to those that are more integrated. (See Figure 4.4 for how we categorize firms according to levels of banking integration). Still, credit usage for the business is relatively low: only 49% of our sample in Kenya had at least one active loan for their firm during the study period. Commercial banks were the primary providers of loans.

Banks are not the only source of credit. About the same number of firms report taking loans from suppliers as from commercial banks (21% and 23%, respectively). There’s also a large overlap between the use of formal bank credit and supplier credit—they are complements, not substitutes. At the same time, the firms are an important *source* of credit: roughly a third of firms (and 71% of firms that engage in any form of supply chain finance) *give customers credit*. But perhaps the most important finding from the Small Firm Diaries in terms of credit access is that working capital, or liquidity management credit is the most pressing need for many firms.

BUSINESS ACCOUNT OWNERSHIP

In Kenya, the most widespread type of formal account is a mobile money account and the majority of Kenyans with a bank account have a “mobile bank account” and conduct their banking outside

¹⁷ Chaia et al., 2013

¹⁸ The World Bank, The Global Findex Database 2021, <https://www.worldbank.org/en/publication/globalfindex>

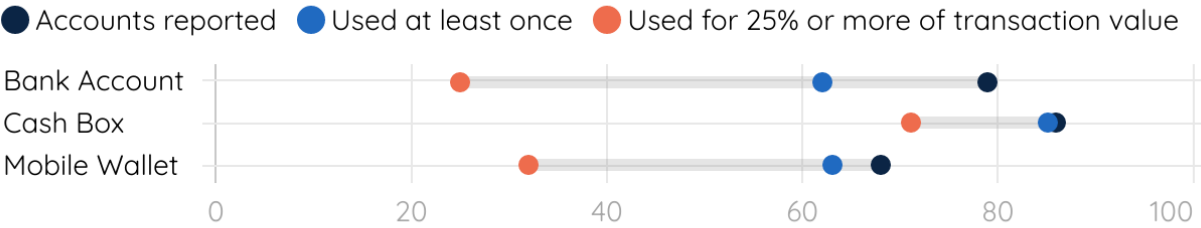


the confines of a traditional bank branch, either through phones or bank agents. In this report, we focus on bank account and mobile money wallet ownership specifically for business purposes. When we asked the firms in the Small Firm Diaries study about general usage of digital financial services, *not* specifically for business, 99% reported experience with mobile money and 67% with mobile banking.

While our survey data of personal digital financial services usage aligned with previous reports from Kenya, we wanted to better understand the usage of financial services specifically by the business. At the beginning of the diaries, we asked each firm owner to list the accounts they used for the firm.

Almost 80% of our firms say that they own a bank account they use for the business, while close to 70% report having a mobile wallet for the business. Looking deeper not just at reported ownership, but those who reported using an account type at least once during the study, we see a gap: just 62% of all firms—18% less than firms that report owning an account—use their bank accounts at least once. We see a smaller gap in the ownership and usage of mobile wallets, as well as a convergence of the usage rates of bank accounts and mobile money wallets—63% of firms used a mobile wallet at least once during the study (Figure 4.1). Looking further at firms that used accounts for at least 25% of their total transaction value (inflows and outflows), cash boxes are the predominant tool (71% of firms used cash boxes for 25% or more of their transaction value), followed by mobile wallets (32%), and then bank accounts (25%). Overall, while a high percentage of our firms report owning a bank account used for the business, few—less than the same percent for mobile money wallets—used their bank account for a meaningful percentage of their business.

FIGURE 4.1: ACCOUNTS REPORTED AND USED FOR BUSINESS PURPOSES



Outside of these three major account types, firms also reported accounts with microfinance groups, SACCOs, informal savings groups, and deposit collectors. All of these account types were reported by less than 10% of firms.

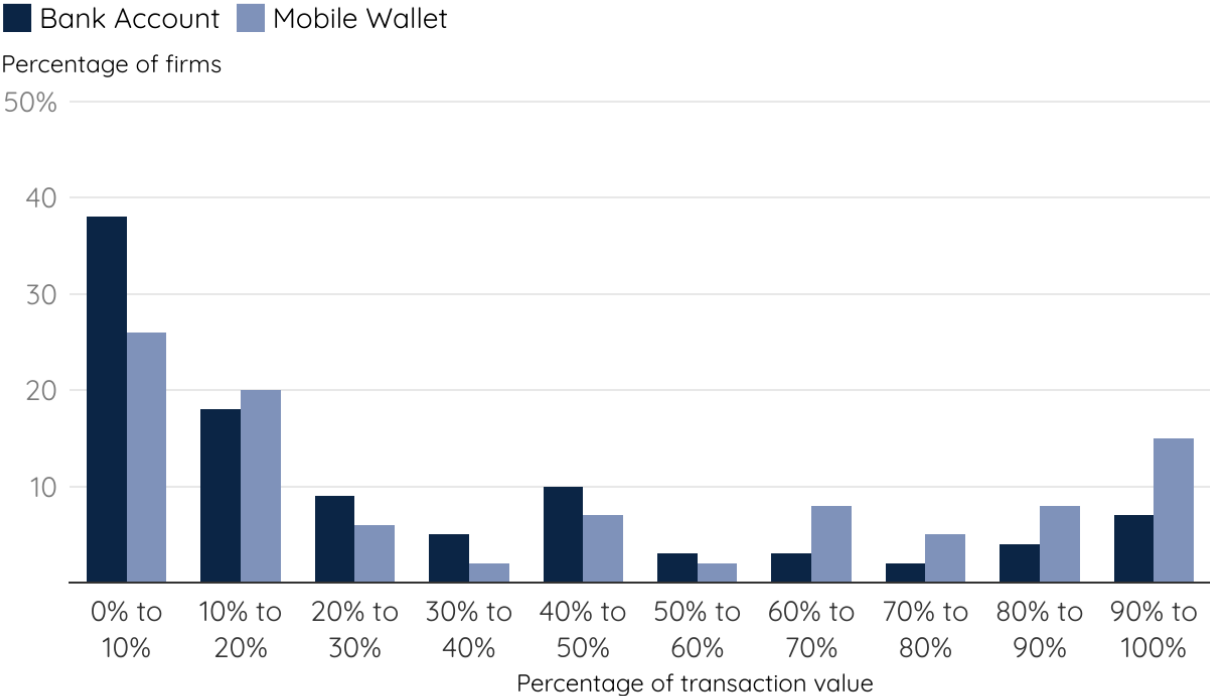
Of the firms that do use their accounts, we can use the high frequency data gathered to see how important a bank account or mobile money wallet is in each firm’s financial management. As our methodology allows firms to bundle small transactions, and most small transactions happen in cash, we choose to focus on *value* of cash flows instead of a *count* of transactions to avoid underestimating the role of cash.



For each transaction recorded we ask the firm owner the value, the mechanism of the transfer (e.g. cash, bank transfer, mobile money), and the type of account used. When we ask what account was used, we record the firm owner’s perception of where the transaction originated (for an expense) or terminated (for income). For this reason it’s important to note that not all transactions reported as into or from a bank account are made by bank transfer or at a branch, but may have been cash transactions or mobile money payments (e.g. PayBill) deposited into a bank account. From the firm owner’s perspective it is salient that the payment ends up in the bank account, which reflects the value that the firm places on the bank account as a useful storage mechanism.

To better understand how firms use and value bank accounts and mobile money wallets, in this report we look deeper into the cash flow data to categorize, first a firm’s level of banking activity based on the value of its total transactions from or into a bank account, and second a firm’s level of mobile money activity based on the value of its total transactions from or into a mobile wallet. This analysis reveals a quite different picture of integration than measures of either ownership, or ownership and transaction alone. We see a wide distribution of both banking and mobile money activity across our sample (see Figure 4.2).

FIGURE 4.2: PERCENTAGE OF VALUE TRANSMITTED VIA ACCOUNT TYPE



Based on the recorded flows, there are two important dimensions for integrating small firms like those we studied more firmly into the formal system: 1) increasing the usage of formal financial services of the firms (about 80% of firms for banks and about 50% for mobile wallets) that are using formal finance but for less than half of their financial activity, and 2) reducing the portion of the firms (about 10%) that are still operating entirely outside formal financial systems. It will likely be



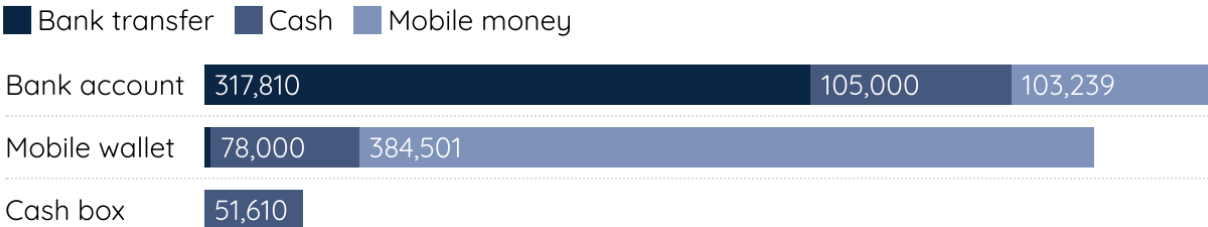
much easier to increase usage for firms that are already partially integrated than it will be to bring unbanked firms into the system. The former can likely be addressed through marketing and product design tweaks; the latter probably requires more significant interventions and potentially policy changes.

TRANSACTION MECHANISMS

In this report, we focus on banking and mobile money integration based on the account types that firms report using to originate or terminate a transaction. As noted, based on this measurement we cannot comment on the specific transaction mechanism used, for example whether a transaction from a bank account is a mobile banking transfer or cash, and we collected data on “transfer mechanisms” separately.

Figure 4.3 outlines the relationship between “account used” and “transaction mechanism” and shows the distribution of transaction value against transaction mechanism for each respective account type. For bank accounts, the median firm only makes bank transfers when using her bank account for 5% of her total transaction value into or out of a bank account, compared to 20% of transactions from the bank account occurring as mobile money payments. Notably, the median firm also uses cash for 11% of transactions out of or into a mobile wallet. For this reason, the somewhat high percentage of transaction value we see reported as into or from a bank account should not be directly interpreted as a reliance on bank transfers or branches, but rather as bank accounts or mobile money wallets providing an important storage mechanism and interoperable tool that our firms use in combination with cash and mobile money. In particular, the discrepancies between account used and transaction type, particularly for bank accounts, illustrate that firms are moving funds between account types (cash box to mobile wallet to bank account, etc.) and interoperability between these modes is crucial.

FIGURE 4.3: FIRM TRANSACTION MECHANISM VS ACCOUNT USED FOR AN EXAMPLE FIRM, KES



Our interpretation of the mixed transaction mechanisms occurring from or into mobile wallets and bank accounts is that firms need to constantly shift capital between different modes (mobile money, cash, banks), to manage unpredictable costs. There may also be a mismatch between payment modes from customers and the payment modes for firm expenses. Given our limited insight into the specific details of transaction types and the importance of having appropriate storage mechanisms for business capital, our report will focus on the “accounts used” metric to analyze a firm’s level of banking and mobile money integration.



SAVINGS

Aside from transacting, another important use of accounts of all types is as a savings mechanism. While our weekly data collection did not track the level or distribution of firm owner savings, we did ask firm owners to self-report whether they save for personal or business reasons, and if so where and for what. We found that 79% of owners save some of their proceeds; of these 40% save in a bank account, compared to 29% in informal savings groups, and 25% in mobile money accounts (6% did not disclose where they saved). Of those that saved, over half reported saving for their business, but a similar proportion reported saving for personal emergencies. It's important in interpreting these results to keep in mind that savings are completely fungible—just because savings are intended “for business” does not mean it won't be tapped “for emergency.” It's also likely that firm owner households had other sources of income that they may be saving for these same purposes and would not have been reported here (e.g. the husband of a female firm owner may be saving to buy land for the family). In our qualitative interviews, firm owners would also sometimes mention household investments in land or education that they may not have considered “saving” as much as current consumption.

SEPARATION OF FINANCES

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%). 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.¹⁹ Interestingly, the combined group of women-owned and co-owned firms is 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 did 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, a unique 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

¹⁹ Per Figure 3.5, 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 700,000 are considered outliers.



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 more likely to perceive themselves as formal, but are *not* more likely to separate their finances. For instance, three-fourths of the firms that have tax registrations/KRA pin certificates have a separate business account, and 90% of firms that perceive their firms as formal have a separate business bank account.

BANKING INTEGRATION

In this section we examine how firms differ across levels of banking integration. Our sample is not equally distributed across the categories: it skews downward toward less integration (Figure 4.4).

FIGURE 4.4: LEVEL OF BANKING INTEGRATION

Level of banking integration	Definition	Percentage of firms
High	More than 75% of transaction value conducted into or from a bank account	8
Partial	Between 25% and 74% of transaction value conducted into or from a bank account	17
Marginal	Less than 25% of transaction value conducted into or from a bank account	38
Unbanked	Do not report using a bank account	38

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 an opportunity to significantly increase the banking integration of firms at all levels of the revenue distribution. (Figure 4.5)



FIGURE 4.5: REVENUE PARAMETERS BY LEVELS OF BANKING INTEGRATION

Level of banking integration	Number of firms	Minimum (KES)	Median (KES)	Maximum (KES)	Median coefficient of variation (CV)
High	12	25,705	250,325	4,407,850	0.47
Partial	26	26,790	361,000	4,734,735	0.45
Marginal	58	22,575	115,861	4,787,931	0.38
Unbanked	58	11,730	54,573	963,545	0.43

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 4.6, we find no relationship between growth and formal financial integration—only 25% of our highly integrated firms are “growers” (as defined in Section 3 as those firms with positively sloping monthly revenue trendlines), compared to over a third of marginally integrated firms.

FIGURE 4.6: LEVEL OF BANKING INTEGRATION AND FIRM GROWTH

Level of banking 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 that are at least partially integrated do not spread their non-cash use to bank alternatives such as mobile wallets or MFIs for any of their business transactions—the bank accounts are a pure substitute for these other types of accounts (Figure 4.7).



FIGURE 4.7: HOW FIRMS OF DIFFERENT BANKING INTEGRATION LEVELS USE THEIR ACCOUNTS

Median percentage of transaction value moving into or out of account types

Level of banking integration	Bank account	Cash box	Mobile wallet
High	96%	0%	1%
Partial	47%	51%	0%
Marginal	4%	78%	9%
Unbanked	0%	82%	18%

Kenya

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

We also looked at what types of transactions the firms made from each account across levels of banking integration. Highly integrated firms used their bank accounts to receive the majority of the payments from customers and to make payments for expenses, as well as paying employees, however they were slightly more likely to use mobile wallets to pay employees than for revenue or expenses. For partially integrated firms, they typically used cash boxes to receive revenue but bank accounts to make payments for both expenses and employees. Marginally integrated firms used a cash box for the majority of their transactions across revenue, expenses, and employee payments, and used a mobile wallet for a fifth of their transaction value on median across the three categories. Unbanked firms, on the median, split their revenue between a cash box and mobile wallet and were more likely to use a mobile wallet to pay expenses but typically used a cash box to make payments to employees.

Median percentages of transactions, by value, are given for the entire sample in Figure 4.8.



FIGURE 4.8 HOW SMALL FIRMS PAY FOR MAJOR EXPENSES

Account type used for expense payments, by median percentage of transaction value



	Bank account	Cash box	Mobile wallet
Revenue	29%	57%	14%
Employee payments	37%	44%	19%
Raw materials	0%	61%	4%
Rent	6%	50%	0%
Fuel	0%	56%	18%
Taxes and government fees	0%	100%	0%
Utility costs	0%	42%	33%

As there is a global effort to increase adoption of digital financial tools by encouraging employee payments via DFS, we looked specifically at the use of types of accounts for employee payments and how common cash is. We find that highly integrated firms (8% of firms) essentially never use cash to pay their employees, and a large proportion of partially integrated (17% of firms) firms use cash for less than half of their employee payments (see Figure 4.9). While there is use of mobile money for employee payments among marginal and unbanked firms (76%), 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 4.9: ACCOUNTS USED TO PAY EMPLOYEES

Median percentage of transaction value by account type

Level of banking integration	Bank account	Cash box	Mobile wallet
High	90%	1%	9%
Partial	70%	22%	8%
Marginal	12%	66%	23%
Unbanked	1%	64%	36%

Female firm owners have the highest rates of being unbanked, at 44%, while 36% of male firm owners are unbanked. Otherwise, women and men are similarly distributed across levels of financial integration. Female firm owners and male firm owners use their bank accounts at a similar frequency—looking only at the subsample of firm owners with bank accounts, the median woman-owned firm conducts 19% of total transactions into or out of bank accounts (measured by value of those transactions). The corresponding figure for the median men-owned firm is 12%.

Examining differences among firms in different industries, agri-processing firms are unbanked at higher rates than light manufacturing and services; 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. We also looked at the pattern of formal financial integration across firm age and found no distinct relationship.

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. However, we did find a close correlation between level of integration with the firms' own perceptions of their formality. For detailed distributions across gender, industry, and formality, reference *Financial Services: How Small Firms in Kenya Manage their Finances*, available on smallfirmdiaries.org/kenya.

MOBILE MONEY INTEGRATION

As noted, using our cash flow data, 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.

Taking the same approach as when categorizing a firm's banking integration, we group firms by their usage of mobile money 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 for business (Figure 4.10). This is in stark contrast to perceptions about the penetration of mobile money. Based on an initial review of some of the few studies that have specifically looked at mobile money usage among small firms, there are several points of difference: 1) most of these studies ask about whether mobile money was used but not the account where the transaction ends; 2) most studies have a very high proportion of retailers, while the Small Firm Diaries excludes retail firms.

FIGURE 4.10: LEVEL OF MOBILE INTEGRATION (BUSINESS TRANSACTIONS)

Level of mobile integration	Definition	Percentage of firms
Super user	More than 75% of transaction value conducted into or from a mobile wallet	16%
Moderate user	Between 25% and 74% of transaction value conducted into or from a mobile wallet	16%
Marginal user	Less than 25% of transaction value 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 (significantly higher revenues than most of the sample) are least likely to use mobile wallets at all (non-users), followed by the low revenue categories. High revenue firms have the highest proportion of super users, but the least moderate users, while medium revenue firms have the highest proportion of moderate and marginal users of mobile wallets.

The pattern is more clear cut when we examine the relationship between banking integration and mobile money adoption. 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 (as we saw in Figure 4.7). 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.

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. Across industries, 83% of agri-processing firms use mobile wallets, compared to 56% of both light manufacturing and services firms (Figure 3.11). Notably, the opposite was the case with regard to bank account use, where agri-processors were the least likely to use banks relative to services firms and manufacturers.



Looking at levels of perceived formality, informal firms have the highest usage rates of mobile wallets—75% compared to 62% of formal firms, and 49% of semi-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 the highest 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 use for business purposes among the most banking integrated firms, and among the highest revenue firms.

BANKING AND MOBILE MONEY INTEGRATION

We have discussed banking and mobile money integration in detail in the previous sections. Here we briefly explore the distribution and characteristics of firms that have either a bank account, a mobile wallet or both. Following this categorization, we find that the vast majority of our firms are banked and/or users of mobile money: 92% of respondents used a bank account, mobile wallet, or both during the study.

Using the same categorization method as for integration above, the percent of transaction value initiated from and terminating in these accounts, we find that, while more firms are highly integrated (>75% of transaction value through accounts) using this broader metric, the majority of firms are still only partially or marginally integrated into the overall formal financial services system. Only 8% of firms use neither a mobile money nor bank account, however, as opposed to 38% of firms that do not use bank accounts (Figure 4.11).

FIGURE 4.11: BANKING AND MOBILE MONEY INTEGRATION

Level of banking and mobile money integration	Definition	Percentage of firms
High	75% or more of transaction value through accounts	28%
Partial	25% to 75% of transaction value through accounts	36%
Marginal	Less than 25% of transaction value through accounts	28%
Unintegrated	No bank account or mobile money account	8%

While we would not expect there to be perfect overlap between firms using bank accounts and mobile money accounts, it is nonetheless unexpected how small the overlap is: just 34% of firms used both a bank account and a mobile wallet during the study. In other words, nearly two-thirds of the firms use bank accounts and mobile wallets as *substitutes*, not complements.



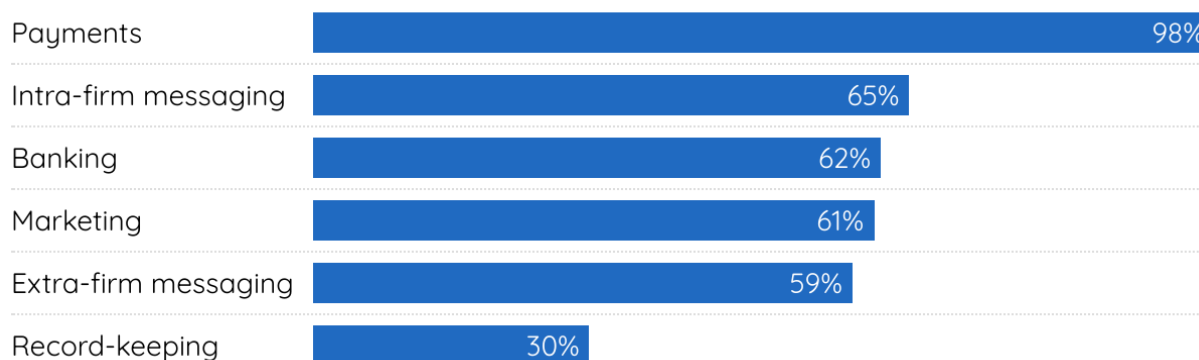
DIGITAL FINANCIAL SERVICES ADOPTION

In addition to mobile money integration, the Small Firm Diaries wanted to explore the drivers of adoption of digital financial services more broadly. We use digital financial services (or DFS) as an umbrella term that includes banking and payments services delivered through the internet, 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 being used for withdrawing physical cash from an ATM).

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). This holds true across industries and gender. Unbanked firms have significantly lower smartphone adoption rates than banked firms (74% vs. 91%). Of the 80% of firms that use a smartphone and/or computer for business, close to 100% use these tools for payments and/or banking (see Figure 4.12) Note that this figure is not directly comparable to mobile money usage as payments can include bank transfers or other online payments.

FIGURE 4.12: REASONS FOR USING A COMPUTER OR SMARTPHONE

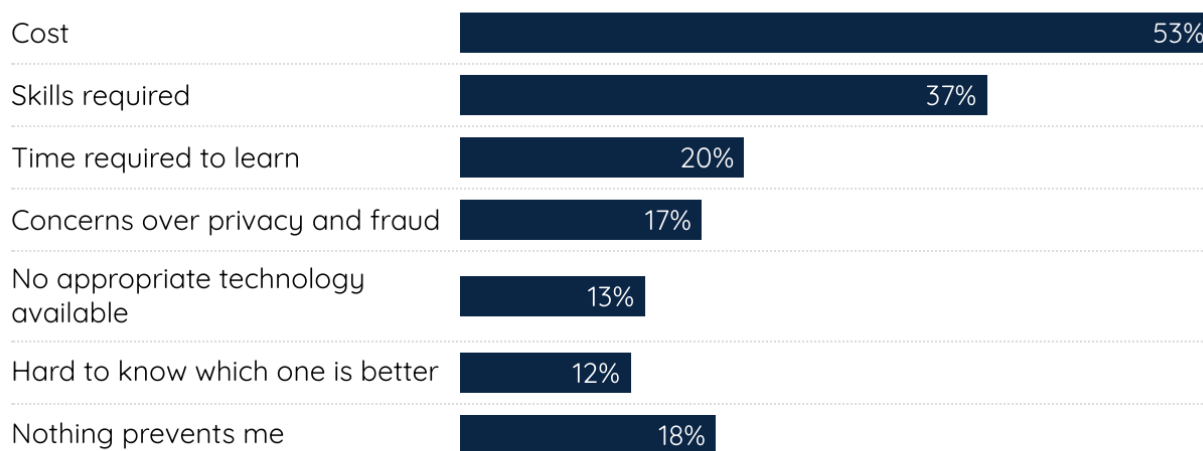
Percentage of firms among firms that report using either device



In a separate survey on attitudes towards and adoption of technology, we asked firms what prevents them from using technology broadly (Figure 4.13). Over half of firms reported cost as a barrier to using technology, while only a third reported a skills barrier. Interestingly, less than 20% of firms reported concerns over privacy and fraud.

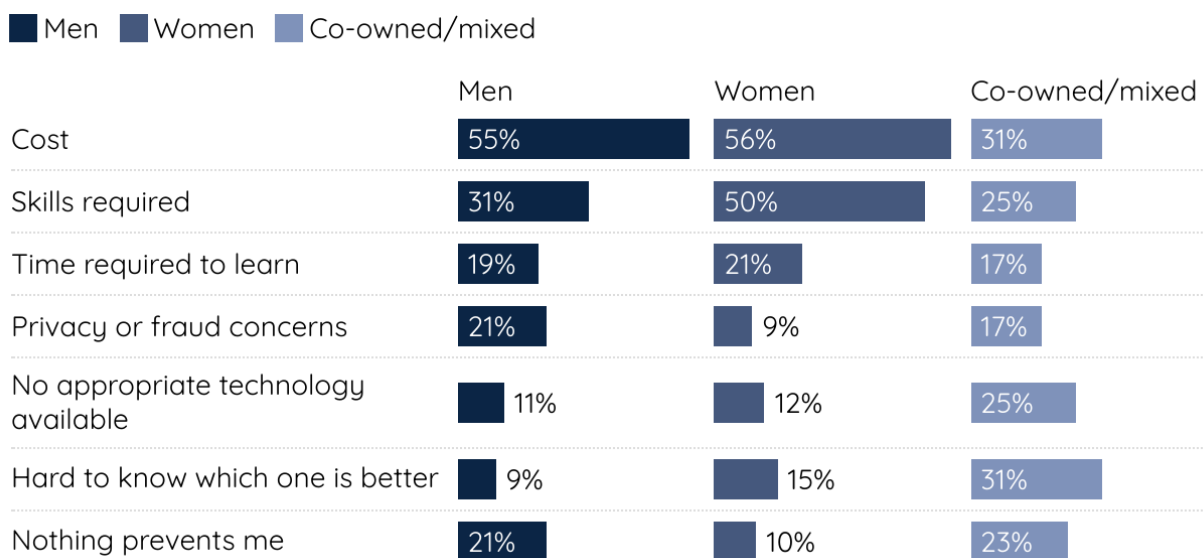


FIGURE 4.13: BARRIERS TO TECHNOLOGY ADOPTION, PERCENTAGE OF FIRMS



As shown in Figure 4.14, women were also more likely than men to report skills as a barrier to adoption (50% of women as opposed to 31% of men).

FIGURE 4.14: BARRIERS TO TECHNOLOGY ADOPTION, PERCENTAGE OF FIRMS BY FIRM OWNER GENDER

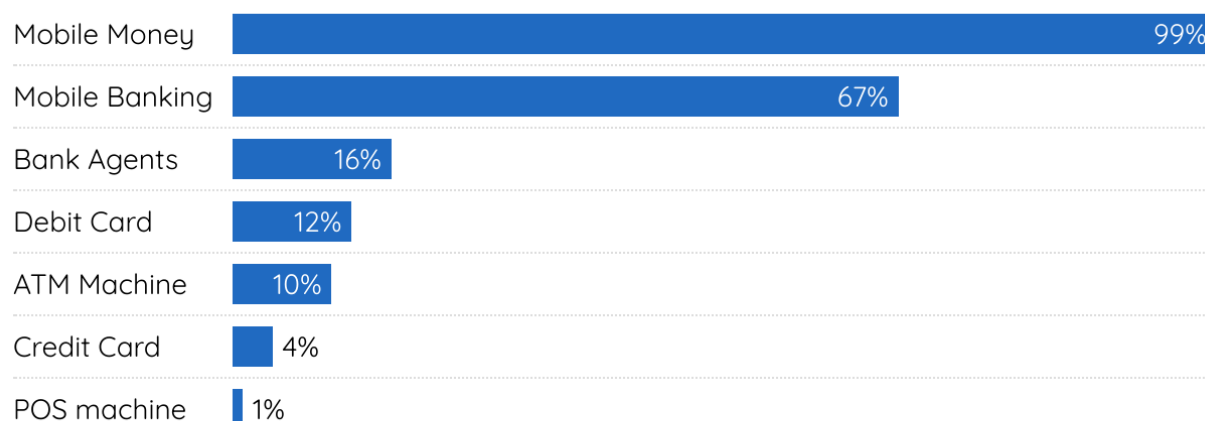


In addition to general technology usage, we specifically ask all firms about what forms of digital financial services they use generally—not just for business, and regardless of whether they report using a smartphone or computer for business. There is a wide disparity between tools: POS terminals and 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 4.15). The use of mobile money for business transactions shown in our cash flow financial data was significantly lower than reported



usage of mobile money according to our one-time survey module here, 64% vs. 99%. This discrepancy could be driven by the use of mobile money in a firm owner's personal life rather than for the business.²⁰

FIGURE 4.15: REPORTED DIGITAL FINANCIAL SERVICES, PERCENTAGE OF FIRMS



We also ask users of digital financial services 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 banking integration levels—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 4.16). Over half of firms report lower prices as a reason to use digital payments more. The second most common reasons were other people, like suppliers or customers, requesting to send or receive a digital payment, closely followed by more agents or cash-in/cash-out (CICO) points.

²⁰ This is corroborated by FSD-Kenya's MSE tracker 2023 which finds that 53% of small firms (1-9 employees) receive customer payments via mobile money and 61% use mobile money to pay for supplies, despite much higher numbers of small firms (93%) reporting using mobile money in FinAccess surveys.



FIGURE 4.16: REASONS TO USE DIGITAL PAYMENTS MORE, PERCENTAGE OF FIRMS

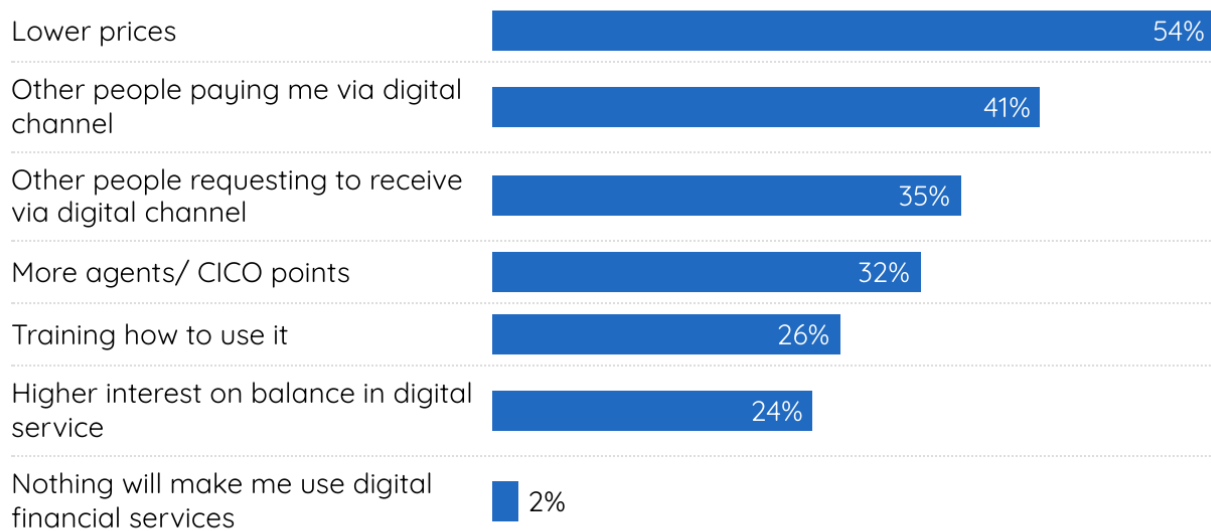


Chart: Financial Access Initiative - NYU Wagner • Source: Small Firm Diaries

CREDIT ACCESS AND USAGE

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 that are partially or highly integrated into the formal financial system.

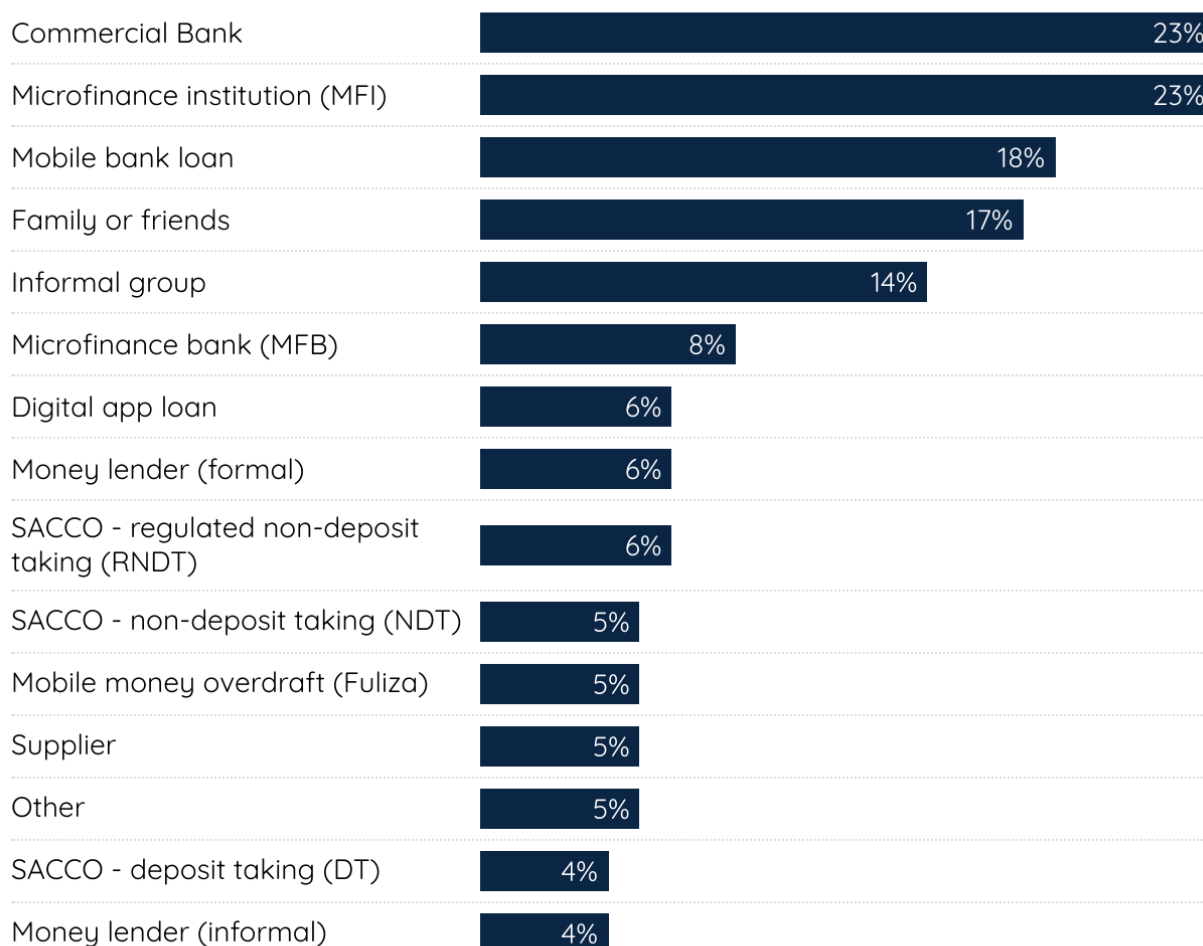
About half (50%) of our firms reported holding a loan of any kind during the study (including loans that were active at the start of the study and new loans taken during the study). A higher proportion of our female firm owners (56%) took loans than male firm owners (48%). Women business owners, on the median, also took higher value loans than men—KES 33,000 compared to KES 28,000. There were some differences across industries: services firms were most likely to take a loan (55%), compared to 48% for light manufacturing firms, and 42% of agri-processing firms. Agri-processing firms took higher value loans than services or light manufacturing firms, on the median, at KES 42,500 compared to KES 30,000.²¹

Commercial banks, MFIs, and mobile banks are the most common loan sources in Kenya (see Figure 4.17). Most firms rely on one source of credit, but there are overlaps between categories—15% of firms with a commercial bank loan also have a loan from a mobile money lender; moreover the same percentage have a loan from friends or family.

²¹ For a more complete comparison of differences between industries, see the Appendix.



FIGURE 4.17: BUSINESS LOAN SOURCES, PERCENTAGE OF FIRMS

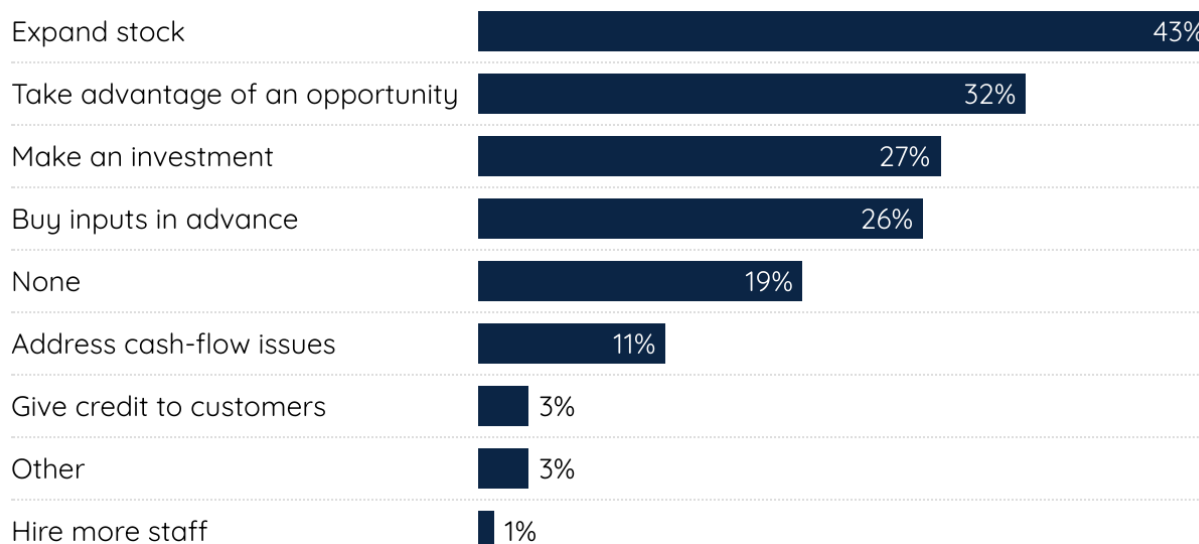


During the study, we asked firm owners what they use or would want to use a loan for, with a variety of options (Figure 4.18). The answers choices were not mutually exclusive: firm owners could choose multiple responses. The most popular response was “expand stock,” followed by “take advantage of an opportunity,” “make an investment,” and “buy inputs in advance.”



FIGURE 4.18: DESIRED USES FOR LOANS, PERCENTAGE OF FIRMS

Do you sometimes use or want to use loans to address the following issues?

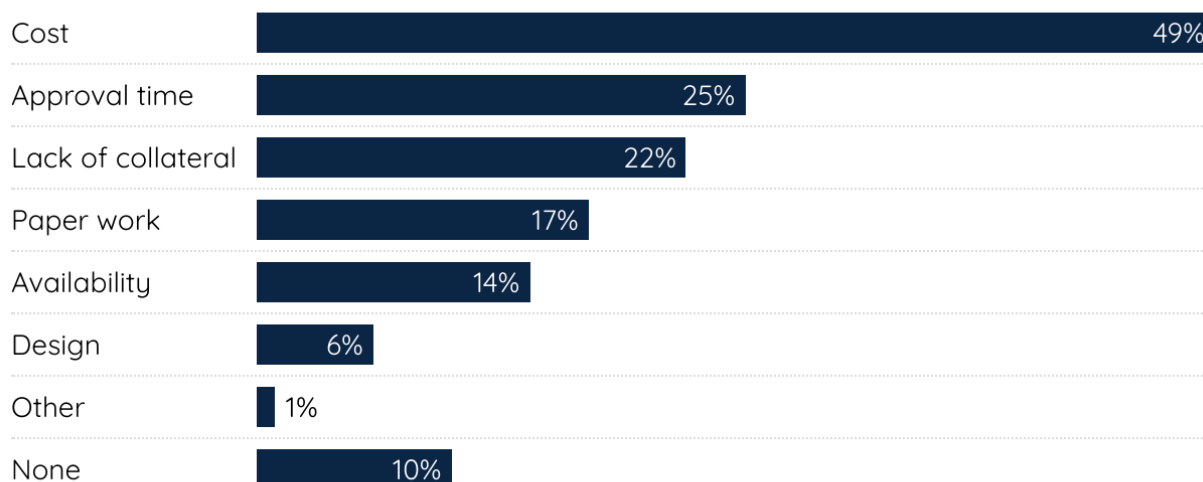


In total, the desired uses for loans are predominantly within what could be categorized as working capital, rather than for purchasing assets. This is particularly true if at least some portion of the “take advantage of an opportunity” answers are related to purchases of raw materials or paying for such 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.

We also asked firms about the barriers that prevented them from accessing credit. Cost was the most frequently cited barrier, reported by close to half of firms. Notably, issues at the forefront of policy design, such as lack of collateral, availability, and design were reported less than half as often (24%, 21%, and 6% respectively) (see Figure 4.19). Regardless of loans taken, firm owner gender, or industry, cost was the main barrier cited followed by the time it takes to get approved loans.



FIGURE 4.19: PERCEIVED BARRIERS TO ACCESSING CREDIT



In addition to looking at firms' perceptions of barriers to credit, we examined other firm characteristics to see which firms were 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 issues with credit product design, cost or other barriers noted above. Of note, follow-up work among small firms in Colombia after the study there had ended corroborates the credit product design hypothesis: firms report using formal credit for asset purchases while relying on informal credit for liquidity and working capital.

SUPPLY CHAIN FINANCE

Understanding the opaque domain of supply chain finance for small firms is particularly interesting, given the apparent need for working capital. 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 give or receive credit through supply chain finance. In fact the number of firms that take supplier loans (21%) is roughly equal to those that take loans from commercial banks (23%). 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

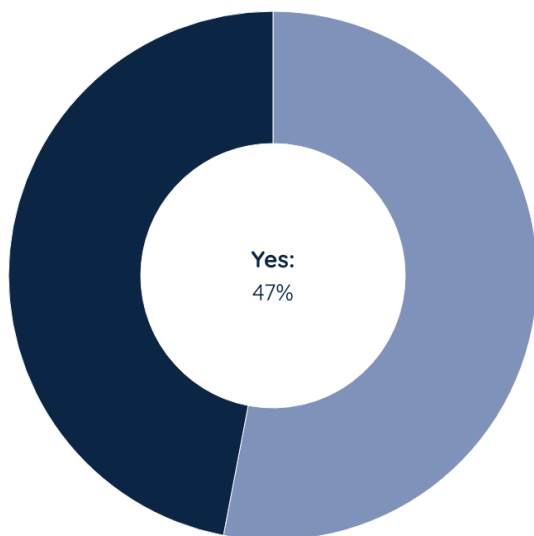


than they receive it (Figure 4.20). On further thought however, it is likely true that the firms are serving low-income customers who have even greater liquidity challenges than the firms themselves. Thus, while these firms are liquidity constrained, they are providing liquidity to their customers and play a 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.

FIGURE 4.20: USE OF SUPPLY CHAIN FINANCE

Does your firm use supply chain finance?

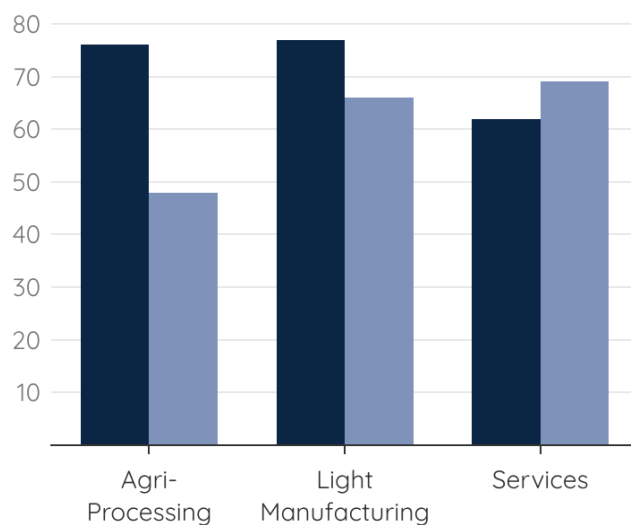
■ No ■ Yes



TYPE OF SUPPLY CHAIN FINANCE USED, BY INDUSTRY

What type of supply chain finance do you use?

■ Giving credit ■ Getting credit



Firms see a variety of advantages of supply chain finance compared to other sources of credit (see Figure 4.21) but both users and non-users 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 4.21: ADVANTAGES OF SUPPLY CHAIN FINANCE

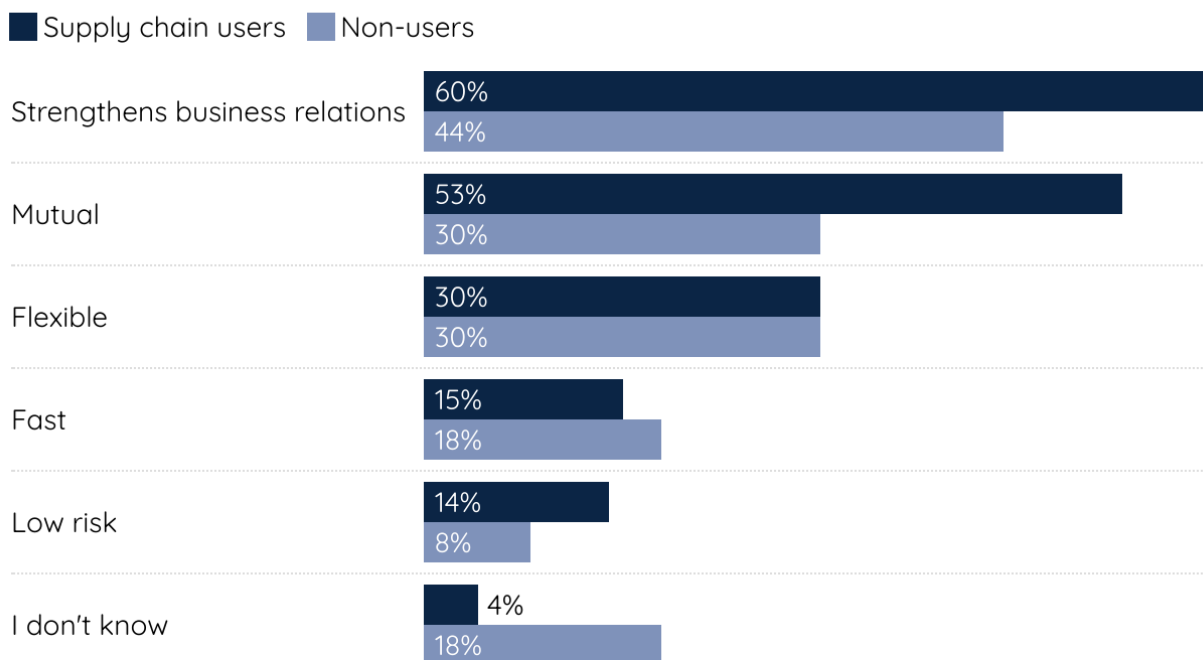
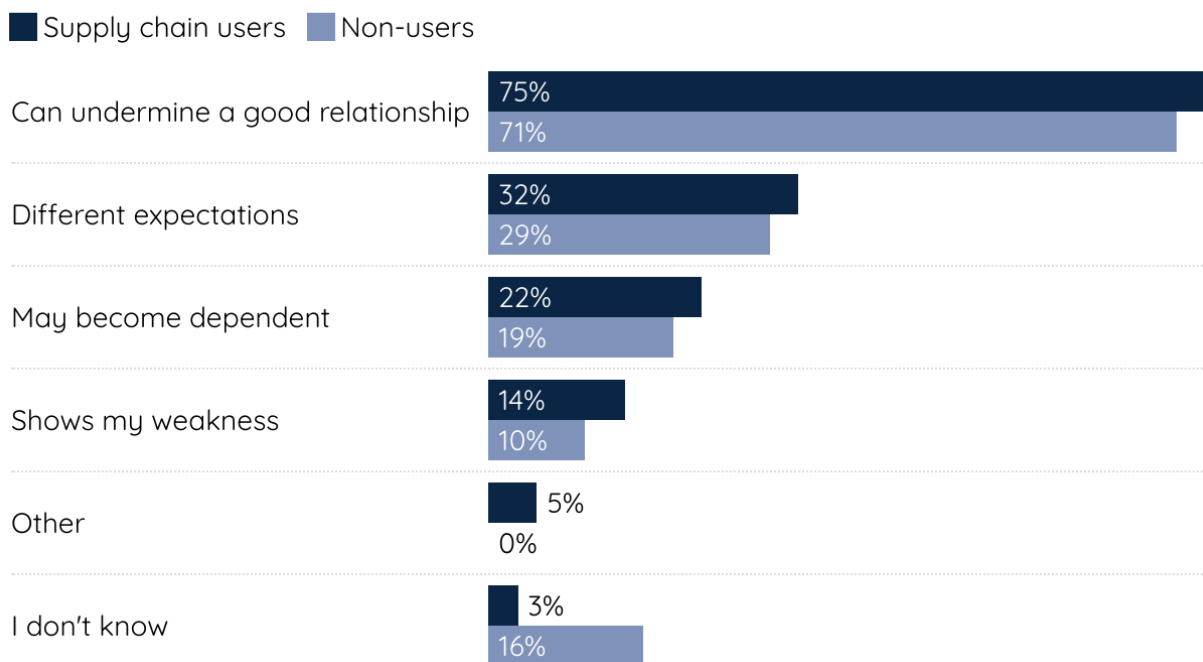


FIGURE 4.22: DISADVANTAGES OF SUPPLY CHAIN FINANCE



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. 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;²² 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.

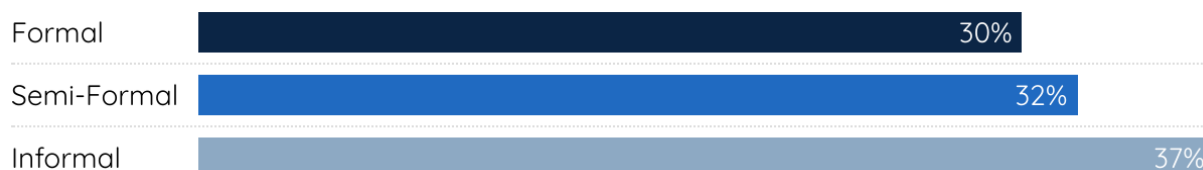
Given the sampling approach we took in the Small Firm Diaries, it was unclear whether the firms recruited would be formal or informal, and what their perceptions of formalization would be. In this section, we look at the firms' reported levels of formalization, perceptions of what it means to be formalized, 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 25% of firms report they have a KRA pin certificate. A higher percentage of men-owned businesses compared to women-owned businesses reported Annual Business Permits (76% vs. 58%), and KRA certificates (26% vs. 14%).

We asked firms whether they considered themselves formal, semi-formal or informal. As shown in Figure 5.1, firms are almost equally distributed across levels of formalization.

FIGURE 5.1: SELF-REPORTED LEVELS OF FORMALIZATION, PERCENT OF FIRMS



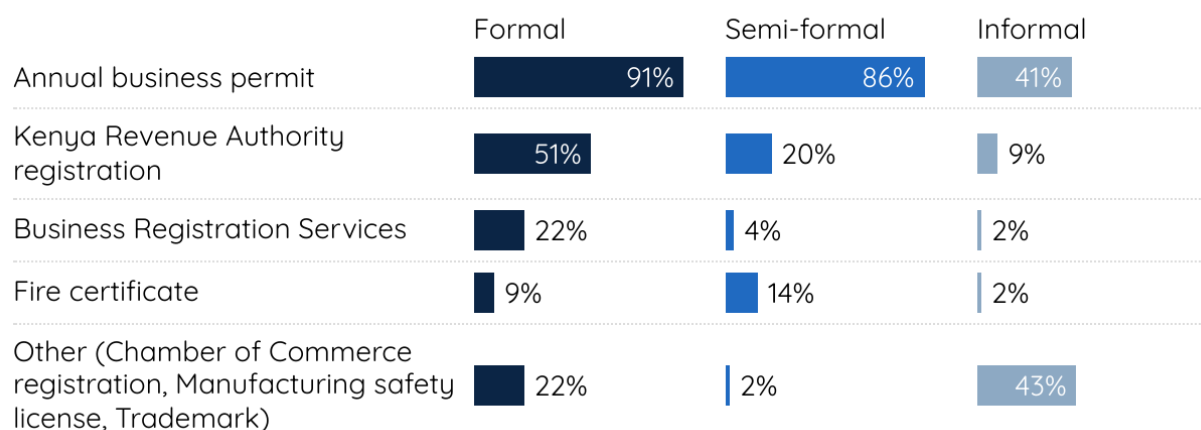
²² Bruhn and McKenzie, 2014



When comparing perceived formalization and reported registrations, we found that the majority of firms reporting an annual business permit registration consider themselves formal. Firms did not perceive that a KRA registration was required to be formal: only 50% of firms that identified as formal reported a KRA registration (Figure 5.2).

CHART 5.2 REGISTRATION TYPES BY SELF-REPORTED LEVEL OF FORMALITY, PERCENTAGE OF FIRMS

Many firms have more than one type of registration

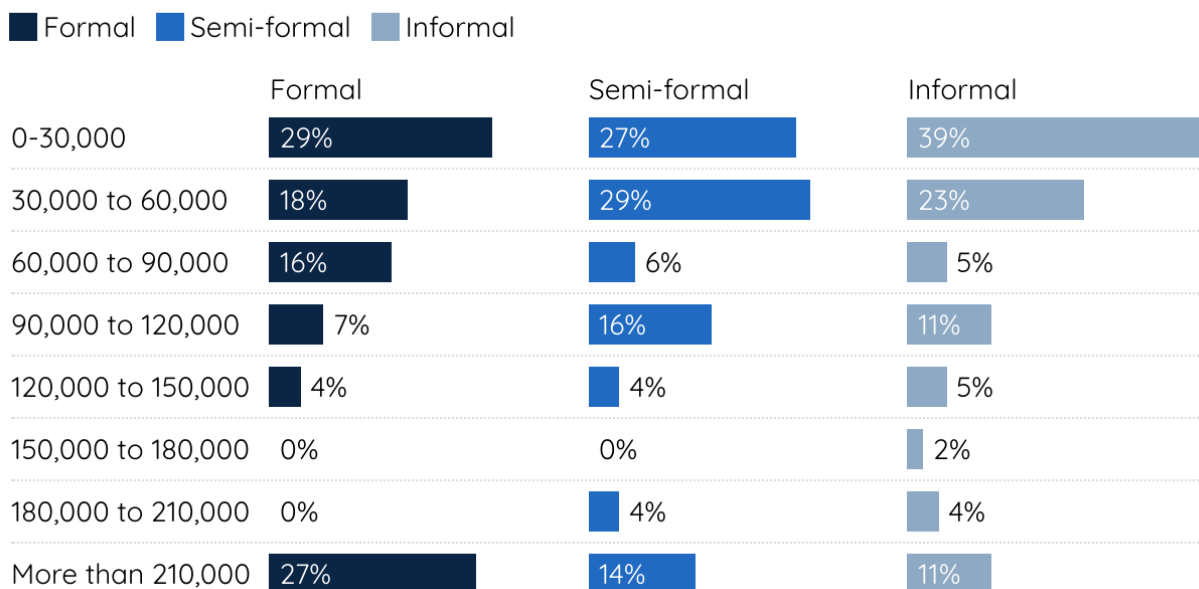


Unsurprisingly, firms that considered themselves informal were usually the lowest earning: over half of them earn less than KES 60,000 in monthly revenue (Figure 5.3). Services firms were also more likely to report they were formal, while levels of perceived formalization were similar across genders.



FIGURE 5.3: REVENUE AND SELF-REPORTED FORMALITY, PERCENTAGE OF FIRMS

Median monthly revenue



REASONS FOR FORMALIZING

In our module on formalization, we asked firms about their motivations for taking steps toward formalization. The primary reason was that 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 5.4) 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 5.5).



FIGURE 5.4: REASONS FOR OBTAINING EXISTING REGISTRATIONS

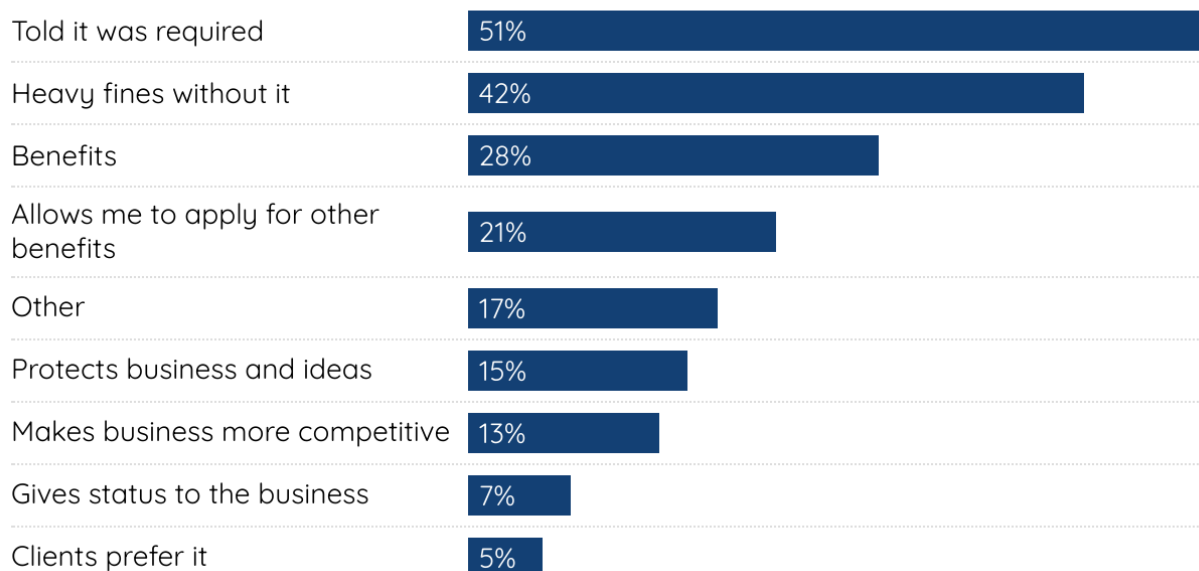
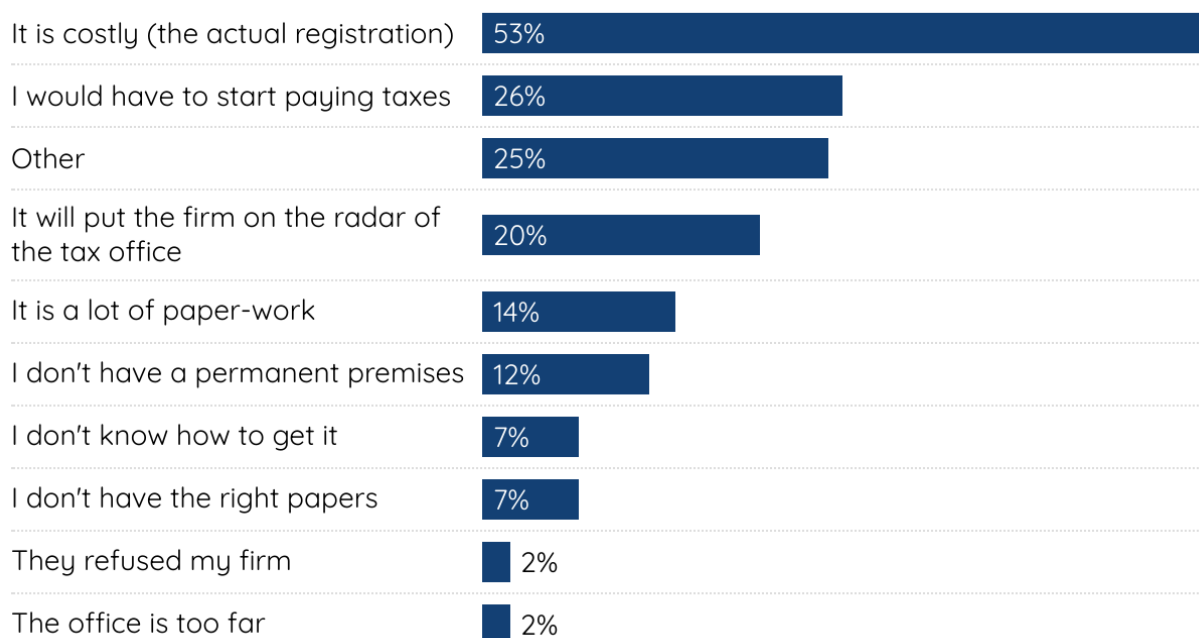


FIGURE 5.5: REASONS FOR NOT OBTAINING EXISTING REGISTRATIONS



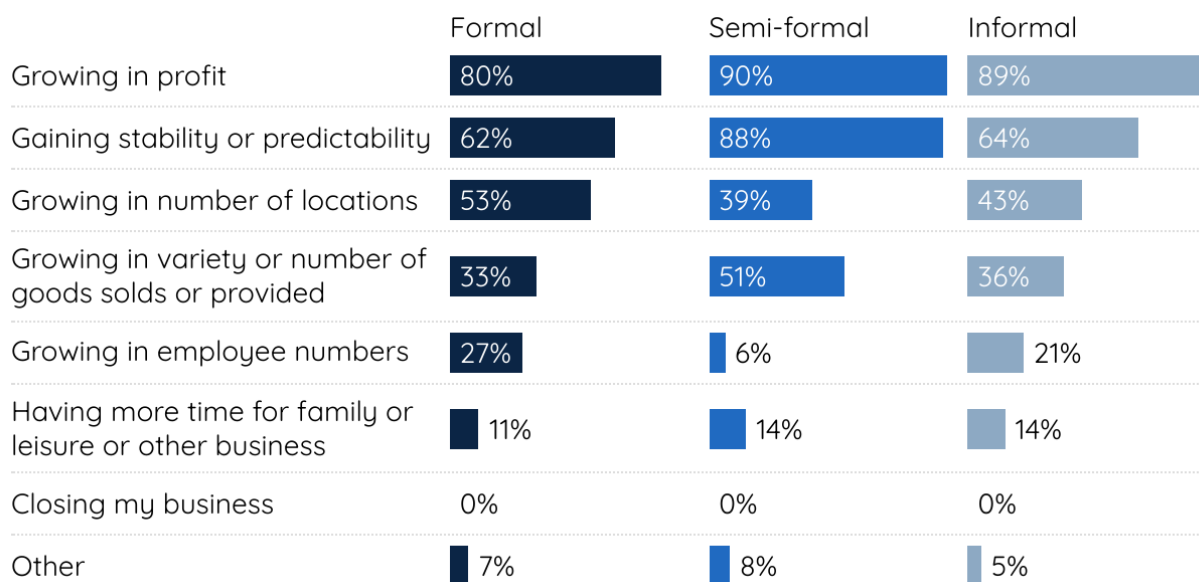
Formalization also does not appear to be influenced by aspirations (Figure 5.6). Formal and informal firms reported growth aspirations at similar levels (for all forms of growth; see Section 8 for more on firm aspirations). While semi-formal firms were relatively more likely to cite gaining stability as a 5-year aspiration for their business, growing in profit was the most common aspiration of all levels of formalization.



FIGURE 5.6 FORMALIZATION AND ASPIRATIONS

What do you want your business to look like in 5 years?

■ Formal ■ Semi-formal ■ Informal



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:

- Reducing administrative barriers: “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:

- Cost: “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, in the view of informal firms, 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 macroeconomic conditions (“regional” and/or “national issues”) to be a barrier to growth than informal firms.



6. Employment

SUMMARY

Increasing the number and quality of jobs is a high 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.²³ As noted in the introduction, in Kenya, MSMEs (defined as 0 to 99 employees) make up 98% of companies in the country, provide 30% of job opportunities, and contribute approximately 40% to the Gross Domestic Product according to the UN Department for Economic and Social Affairs.²⁴

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 primary income is from working in small firms (e.g. the employees do not report running their own microenterprises before, nor an expectation of microenterprise as an alternative in the future, nor 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.

²³ ILO, "The power of small: How SMEs are driving job creation and inclusive growth"

²⁴ 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>



These facts suggest that one-time household surveys and firm surveys obscure important and policy-relevant details of this 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 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.

We used the responses to our census to select our sample of firms that 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. In total, the firms paid 444 individuals. 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 6.1; 57% of firms reported more than 3 employees.

FIGURE 6.1: REPORTED NUMBER OF EMPLOYEES FROM BASELINE SURVEYS

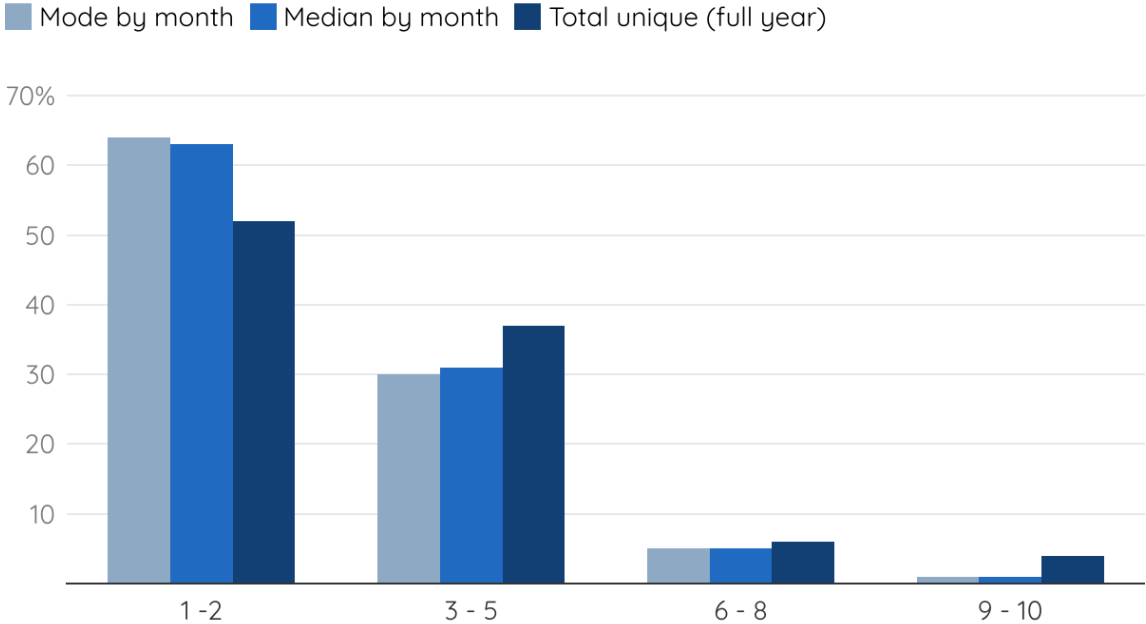
Reported employees	Number of firms	Percent of firms
1 to 2	67	43%
3 to 5	70	45%
6 to 20	19	12%

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 6.2, we show the breakdown of firms in three 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 6.2: FLUCTUATIONS IN NUMBER OF EMPLOYEES PAID



That some firms have high employee 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 (Figure 6.3). Turnover was the highest in agri-processing firms 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. Surprisingly, this turnover is *not* due to “seasonality”—the firms do not show significant spikes in total employment in specific months.



FIGURE 6.3: 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 roughly half of the 444 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 6.4)

FIGURE 6.4: MAXIMUM NUMBER OF MONTHS PAID TO A SINGLE EMPLOYEE

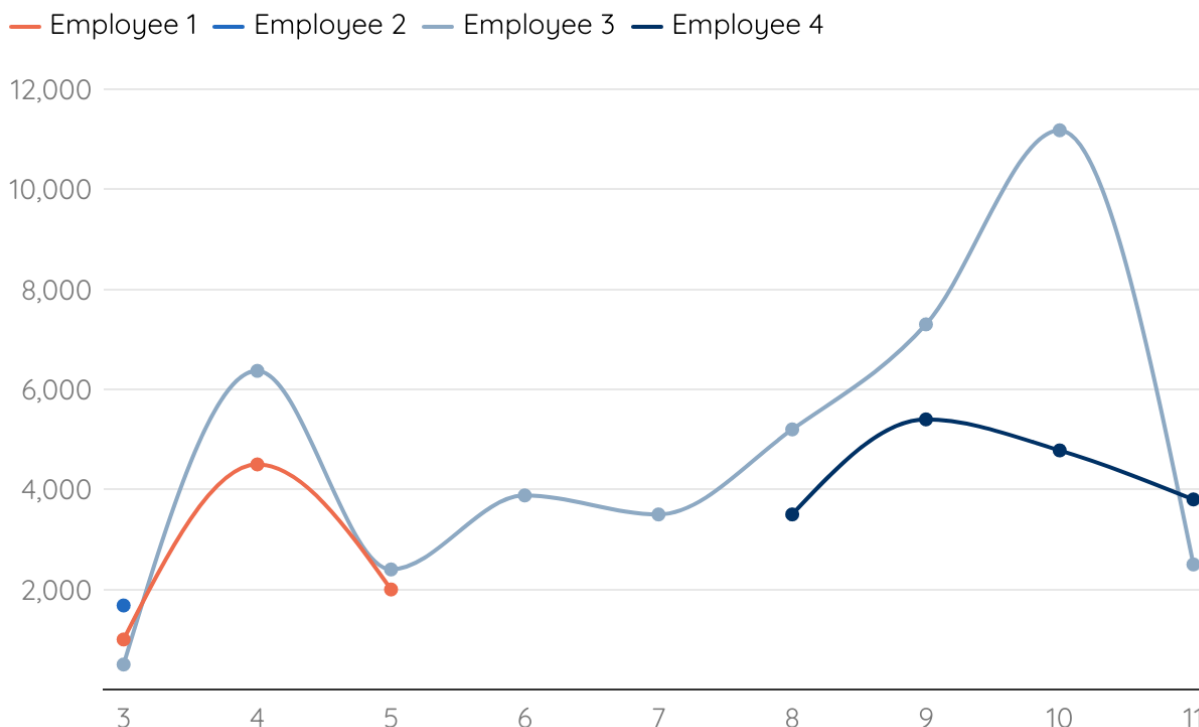
Maximum number of months paid to a single employee	Number of firms	Percent of firms
1 month	2	1%
2 to 4 months	9	6%
5 to 7 months	38	26%
8 to 10 months	95	66%

To better understand the shape of employment, Figure 6.5 gives an example from a single firm. During one month of the study (month 3) the firm reaches its peak employment, and pays three workers. During eight of the months of the study (months 4, 5, 8, 9, 10, and 11) the firm pays two workers (but they are not consistently the same two people from month to month). During two months of the study (6 and 7) the firm pays just one worker. The gray line shows the firm's single "core" employee, who was paid during all 10 months,²⁵ while the other employees have shorter spells of employment—of 4 months, 3 months and 1 month.

²⁵ As noted elsewhere, we drop the first two months of data during data cleaning, and report only on months 3 through 12.



FIGURE 6.5: PAYMENTS (KES) 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 (see callout box on the Kenyan labor market). Nominally, it would seem from the structure of employment that we see—that is, 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; just a quarter of firms in Kenya reported having a casual worker and payments to casual workers made up just 13% of total payments to employees. In contrast, 35% of firms reported “salaried” employees and payments to fixed salary workers made up 41% of total payments to employees. However, 45% of firms reported hiring piece-rate workers. As firms categorized their own workers and there is not a fully clear distinction between a casual worker and a piece-rate worker, there is likely a significant portion of these piece-rate workers who would be considered casual laborers under the labor law.

When we compare the frequency of the payments to casual laborers compared to those described as formal salaried workers, both casual laborers and formal salaried employees are paid a median of



seven out of ten months. However, for formal salary workers paid in three or more months, the median CV of their payments is 0.1, compared to 0.5 for casual laborers, indicating that the casual laborers face much higher volatility in the value of their payments. Looking instead at piece-rate workers, who may be considered casual laborers under labor laws, we see a similar pattern to casual laborers—they are paid a median of eight out of ten months but the median CV of their monthly payments is 0.4.

THE KENYAN LABOR MARKET

The Employment Act of 2007 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. In this type of agreement, the worker is not entitled to the same rights and protections as other workers such as paid leave, medical coverage, collective bargaining, or termination notice. However some protections for casual workers were introduced in 2007. These protections specify conditions when casual workers should be converted to term contracts, and require that casual workers be paid according to the daily minimum wage and get one day of rest for every seven days of work.

EMPLOYEE PAYMENT

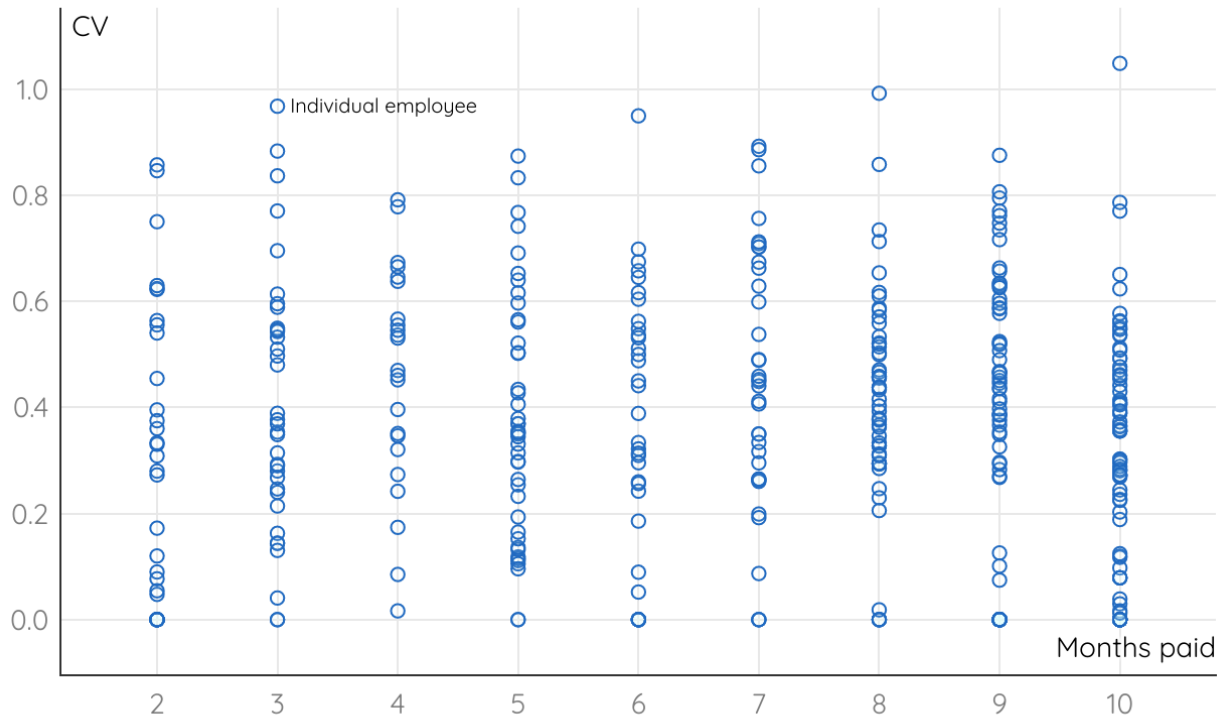
The most common payment arrangements are piece-rate pay (39% of employees) and formal salaries (32% of employees), with the remaining employees receiving informal or casual salaries. Looking at how these payments are made, 56% of total payment value and 85% of individual employee payments are made in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

The most important feature of employee payment we uncovered is the degree to which employees' earnings change 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 6.6 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.

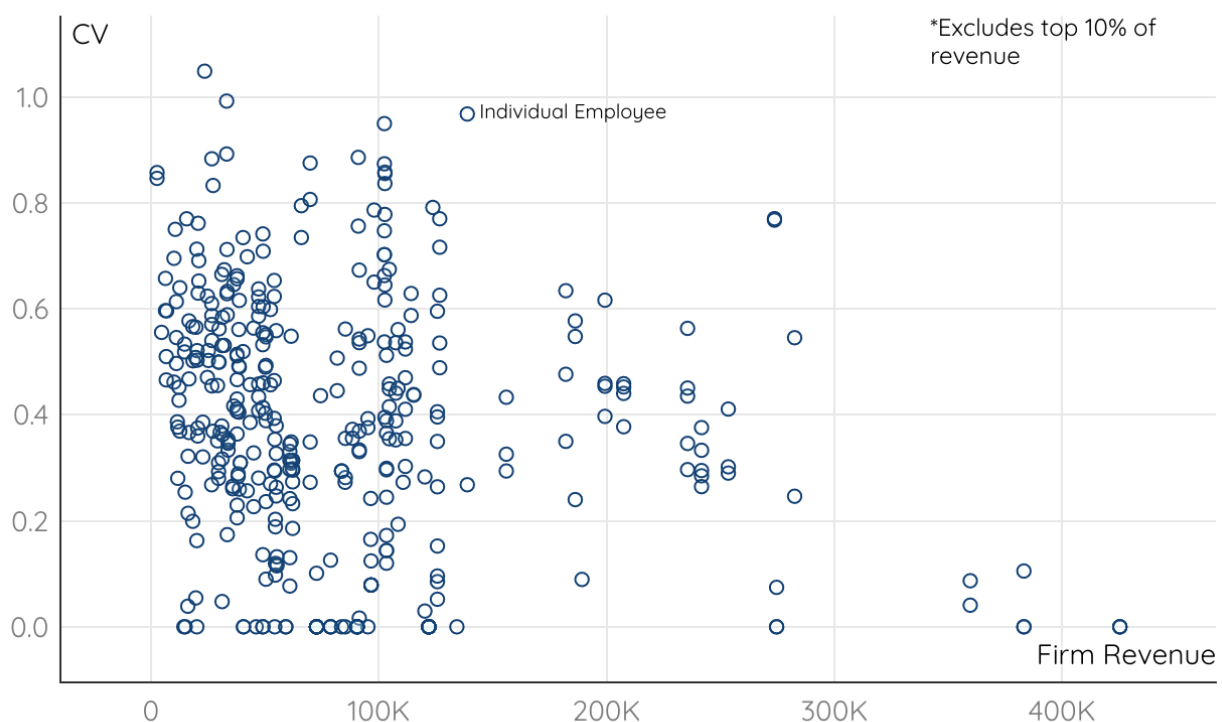
FIGURE 6.6: VOLATILITY OF MONTHLY EMPLOYEE PAYMENTS BY NUMBER OF MONTHS PAID



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 6.7), implying that any stabilization of employee payments is occurring when firms reach a much greater size than is represented in our sample.



FIGURE 6.7: PAYMENT VOLATILITY FOR FIRMS BY MEDIAN MONTHLY REVENUE



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-rate, 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

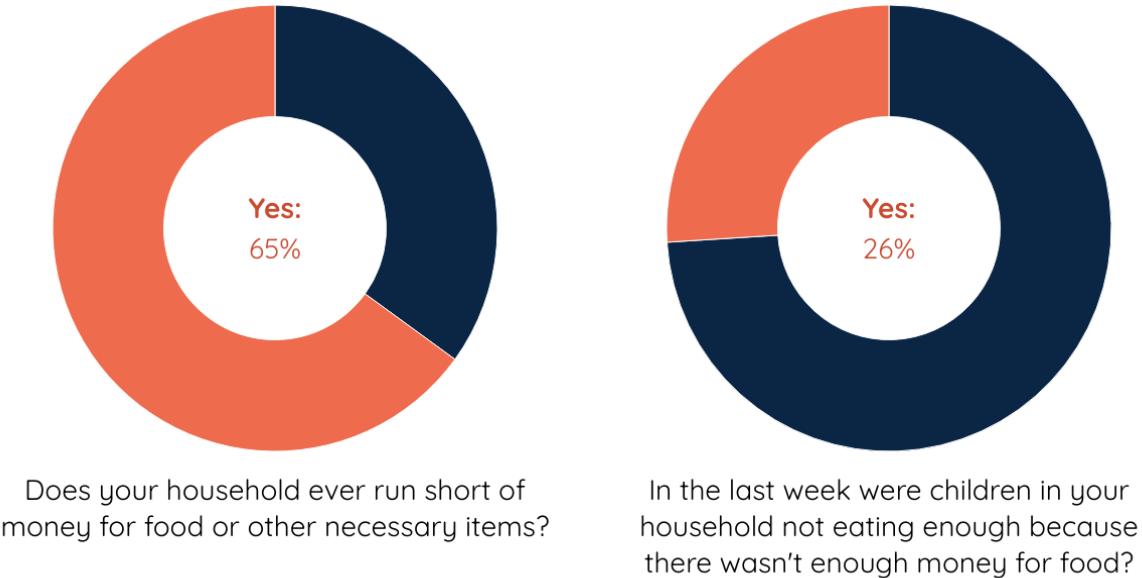
Who are the employees of small firms? Where do they sit in the income distribution? Did they formerly own microenterprises, or work in larger firms?



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 Poverty Probability Index as a proxy for the relative income of small firm employees. Given the firms' location (in low-income communities), we expected employees to be drawn from low-income households.

Indeed, as we see in Figure 6.8, 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. While we expected that firm owners would be more likely to nominate higher paid, longer tenured employees to participate in our surveys, those who participated in the surveys were not meaningfully different in terms of payments received from the firm than other employees in our data.

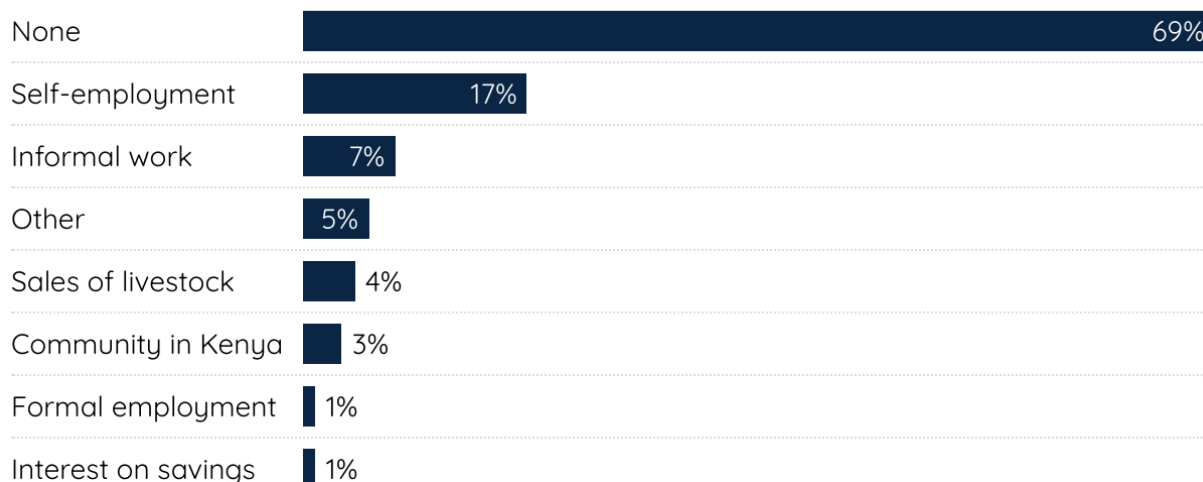
FIGURE 6.8: EMPLOYEE WELFARE INDICATORS



The volatility of employee income from the small firms appears to matter a great deal to the employees' households. As shown in Figure 6.9, almost 70% of employees report having no other source of income. There's reason to suspect that employees likely do have other sources of income that they chose not to report—not least the Kenyan culture of hustling which even some of the firm owners mention in qualitative interviews—but also that the income we see the employees earning from the firm is likely not sufficient to sustain their households. Even so, the responses make it clear that the employees struggle to 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.



FIGURE 6.9: OTHER SOURCES OF INCOME FOR SMALL FIRM EMPLOYEES



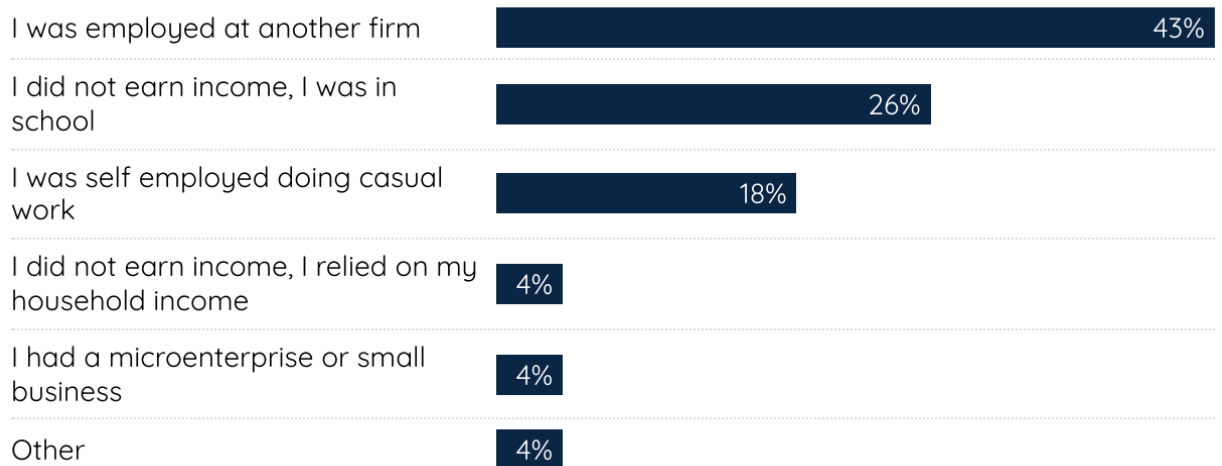
*No reported income from "community outside of Kenya," "subletting," or "government programs or jobs"

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 6.10). 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 6.10: PREVIOUS SOURCES OF INCOME FOR SMALL FIRM EMPLOYEES

Before working at this small firm, how did you earn income?



7. 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 that do not use these practices.²⁶ 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 (in four categories: marketing; record keeping; buying & stock control; and financial planning) are as important for small businesses as they are for larger firms based on the measures of firm performance that are available.²⁷

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 of business practices created by McKenzie and Woodruff based on the ILO's *Improve Your Business* training curriculum. Here we follow their calculations for an index score based on practices in use. The score is the percentage of the 26 total business practices that a business engages in (e.g. a business that engages in 3 of the practices would have an index score of .12). The average score across the seven countries from which McKenzie and Woodruff drew their data was .39.

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.

²⁶Bloom & Van Reenen, 2007; Bloom, Nicholas, and John Van Reenen. 2010; Bloom, et al. 2011

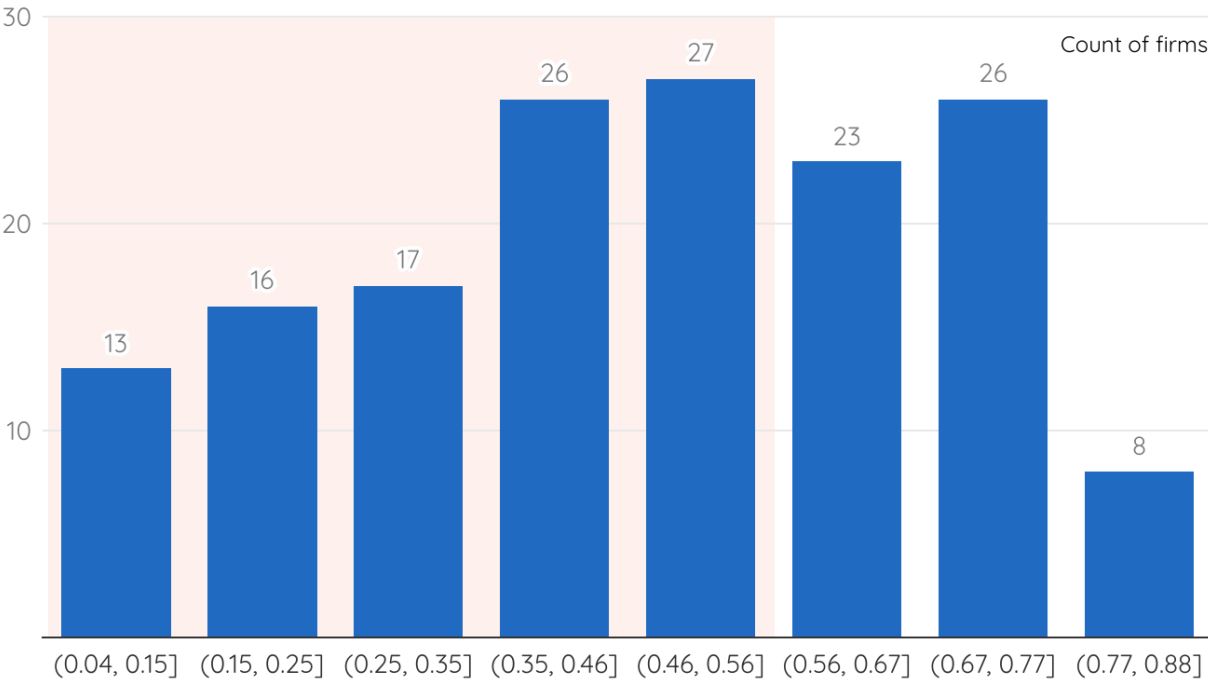
²⁷ McKenzie & Woodruff, 2017



BUSINESS PRACTICE INDEX

On the McKenzie and Woodruff Business Practices Index Score our sample ranges from 0.04 to 0.87, with two-thirds of the firms having a score below 0.56 (Figure 7.1). McKenzie and Woodruff include a survey from Kenya in their review—their Kenyan survey is of female retailers with less than 3 employees, so markedly different from the Small Firm Diaries sample—and find a mean score of 0.52.

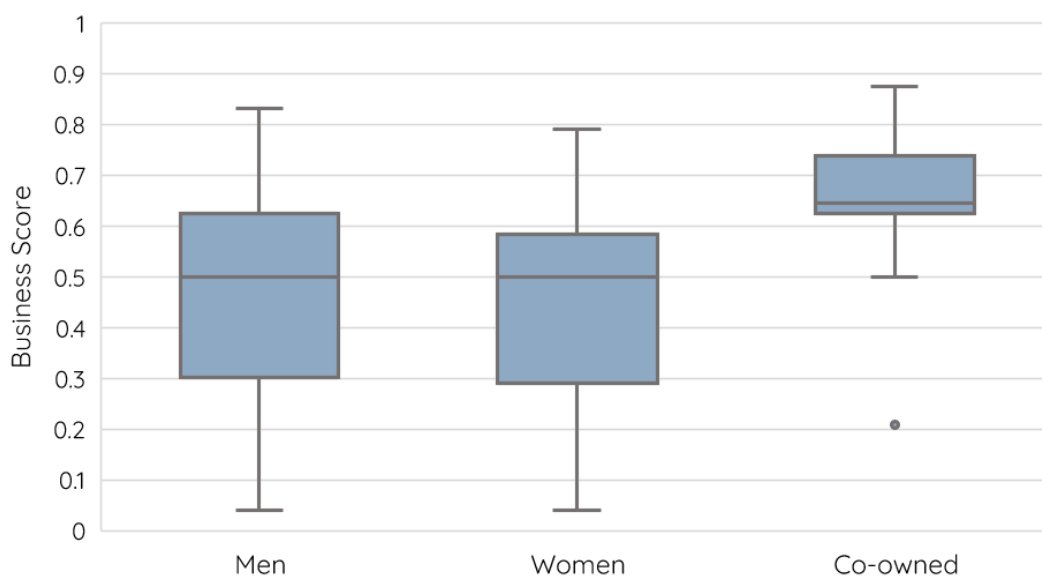
FIGURE 7.1: DISTRIBUTION OF FIRMS BY SCORE ON THE BUSINESS PRACTICES INDEX



When analyzing the score distribution by gender (Figure 7.2), 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 0.50, 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.



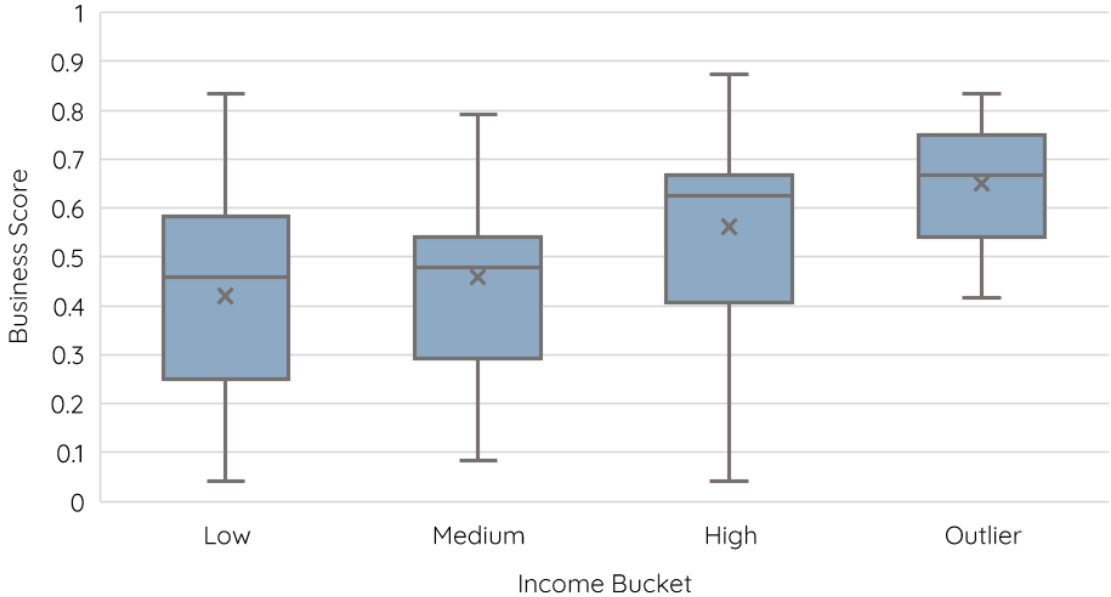
FIGURE 7.2: BUSINESS PRACTICES INDEX SURVEY SCORE DISTRIBUTION BY GENDER



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 7.3 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.



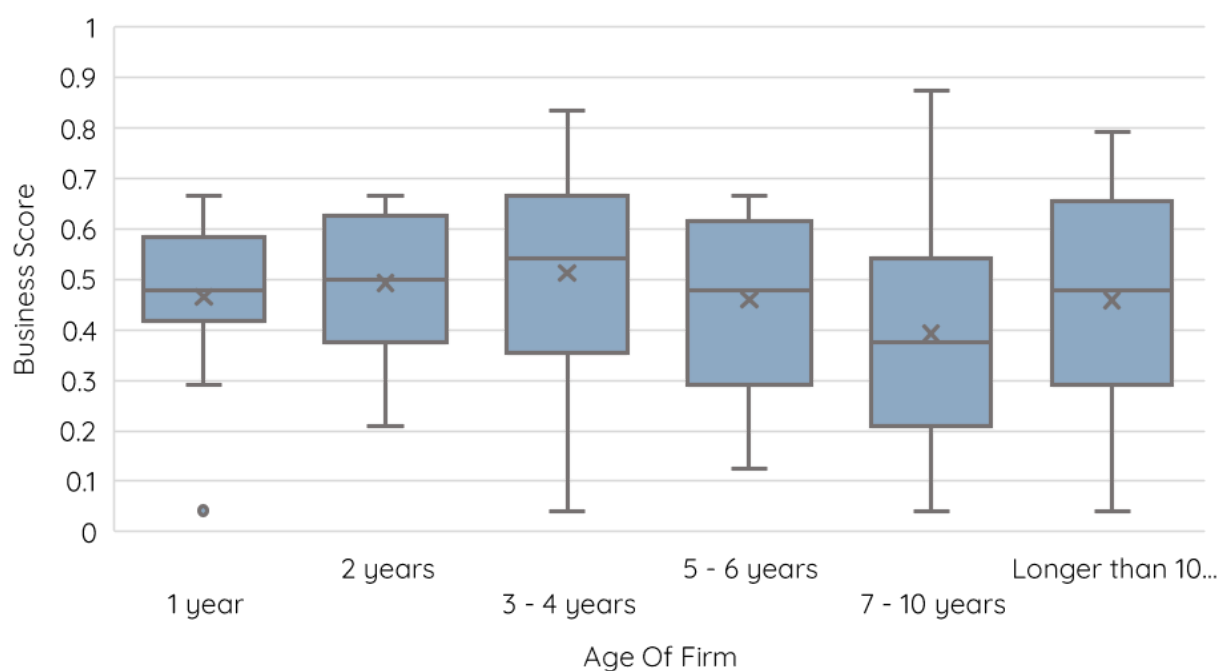
FIGURE 7.3: BUSINESS PRACTICES INDEX SURVEY SCORE DISTRIBUTION BY INCOME BUCKET



Using our growth metric (as defined in Section 3, page 18), we find similar median scores for growers and non-growers. Figure 7.4 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 7.4: BUSINESS PRACTICES INDEX SCORE DISTRIBUTION BY AGE OF FIRM



A DEEPER LOOK AT SPECIFIC BUSINESS PRACTICES

The 26 business practices that McKenzie and Woodruff track are divided into four categories: marketing, stock control, record keeping and financial planning.²⁸ They find that stock control is the most common set of practices and financial planning is the least common.

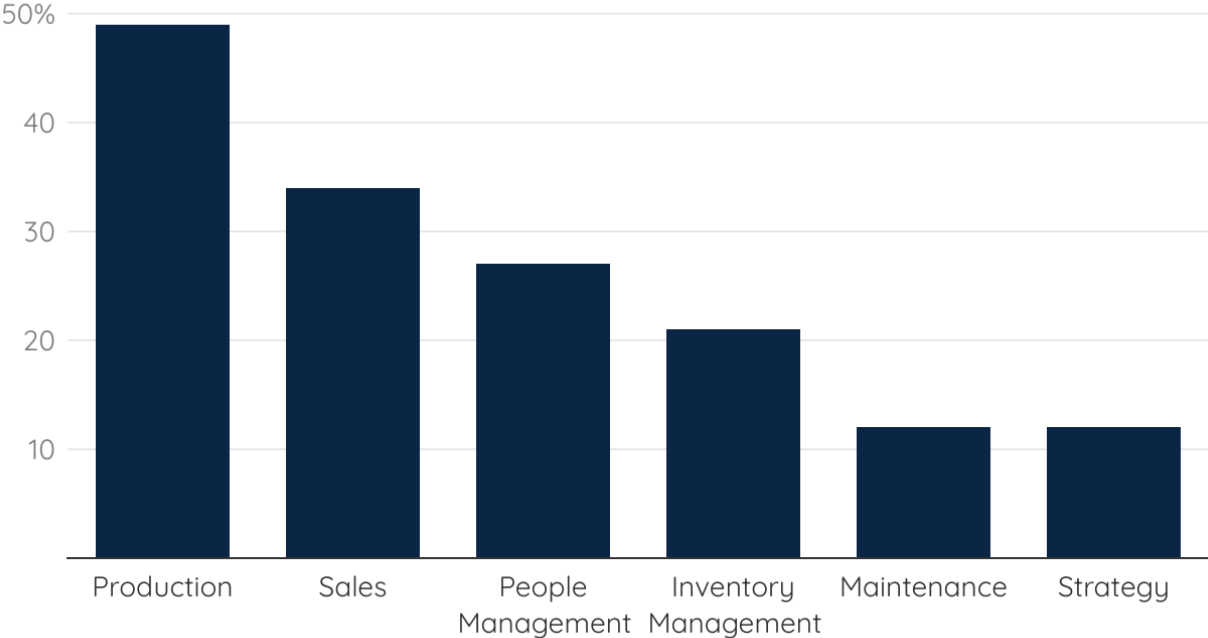
Among our firms, record keeping was the most common set of practices. For example, 80% of firms reported keeping written business records (compared to less than half in some surveys reviewed by McKenzie and Woodruff), with women and men being equally likely to report doing so (77% of the women vs. 80% of the men). Tracking 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).

²⁸ McKenzie & Woodruff, 2017



We separately asked about time use in relation to management and business tasks (Figure 7.5). These are different categories than used in the Business Practices Index which only considers “management” activity. Given the size of these firms, we would expect that owners are engaged in more tasks than management. What stands out particularly is that owners report spending time most commonly on production and sales. That owners are spending time on these tasks suggests they may be unable to trust these tasks to workers without supervision. Given the high degree of turnover in employees that is hardly surprising, but the lack of specialization is potentially a large drag on the firms’ productivity. This is a topic we will return to in future briefs.

FIGURE 7.5: PERCENT OF OWNERS WHO SPENT TIME ON AN ACTIVITY IN THE LAST TWO WEEKS



8. 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 in this analysis, 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, 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 did not manage to grow during the study to surface 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 that 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," which we discuss in this section of this report, and in other publications available at 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.



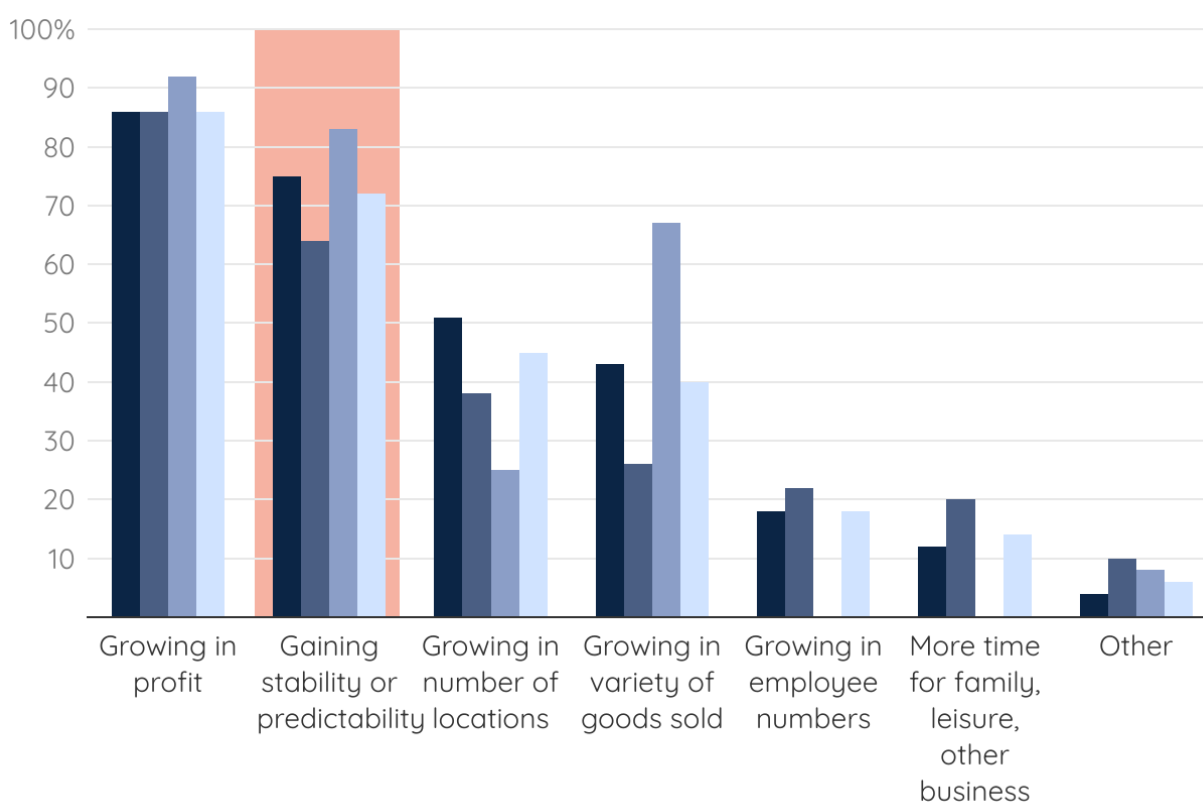
STABILITY ENTREPRENEURS

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 8.1) 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.

FIGURE 8.1: ASPIRATIONS, 1-YEAR HORIZON, PERCENT OF FIRMS

What is your vision for your business over the next year?

■ Men ■ Women ■ Co-owned ■ All

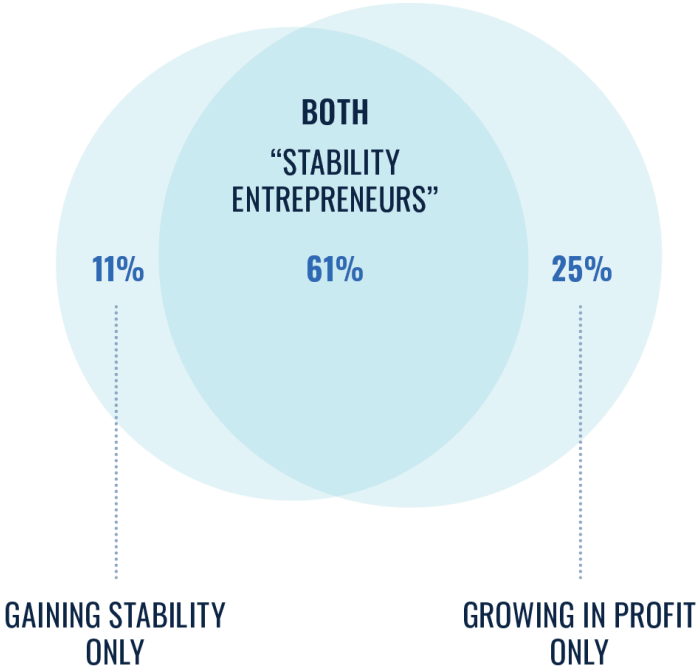


Of the firms that aspire to stability or profit growth, 61% of firms aspire to both, demonstrating that these aspirations are not only not mutually exclusive, but aspiring to both is the more common aspiration. In fact, of those that said they aspired to stability, 96% also chose at least one form of 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.²⁹ 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 by far the largest group of firms in the Small Firm Diaries in Kenya; the percentage of firms that choose both growth and stability in Kenya is higher than in Colombia and Nigeria, two countries in the study where analysis has been conducted as of May 2023, where Stability Entrepreneurs were the largest group but comprised about half of participating firms.

FIGURE 8.2: ASPIRATIONS FOR STABILITY AND GROWTH; 1-YEAR HORIZON

What is your vision for the business over the next year?



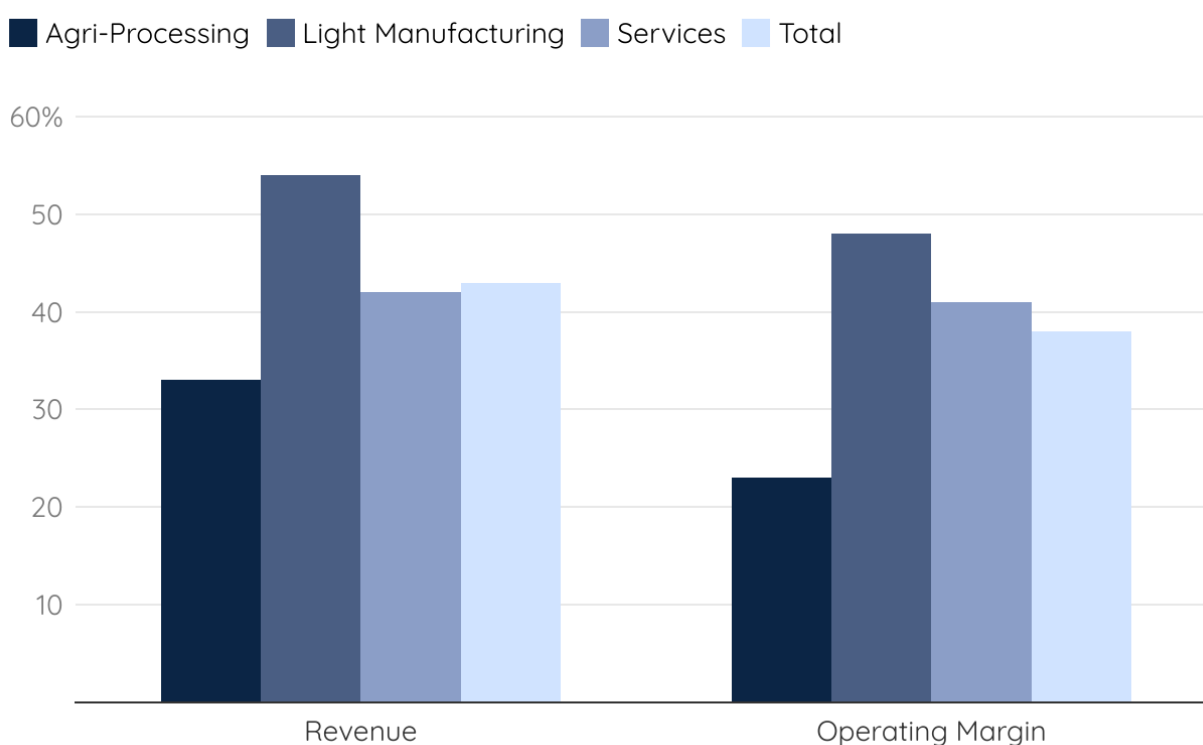
²⁹ Schumpeter, 1962.



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 8.3). Given the overall economic environment, with inflation rising globally, we also checked for growth in revenue only, with similar results.

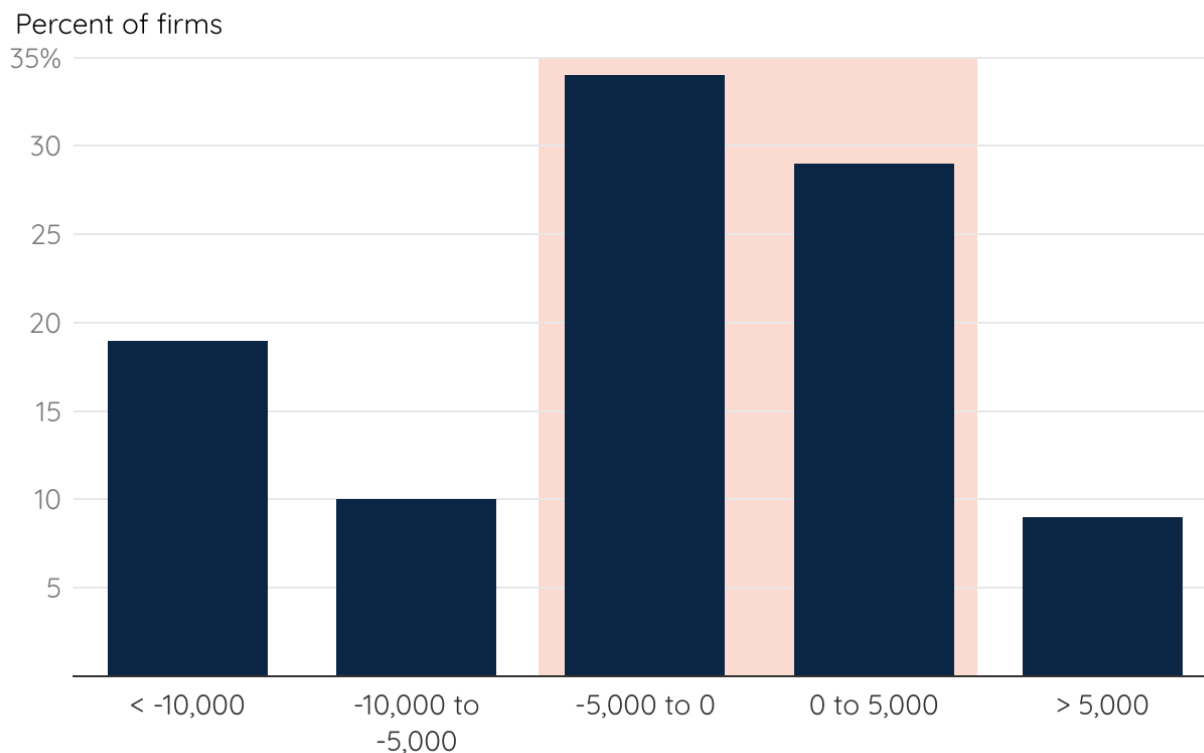
FIGURE 8.3: GROWTH IN REVENUE AND OPERATING MARGIN BY INDUSTRY, PERCENTAGE OF FIRMS



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 8.4 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 KES -5,000 to KES 5,000 (USD -40 to USD 40) monthly change in operating margin—these firms, given the volatility that we see, are neither achieving their aspirations for growth nor stability.



FIGURE 8.4: DISTRIBUTION OF SLOPE OF MONTHLY OPERATING MARGIN, KES

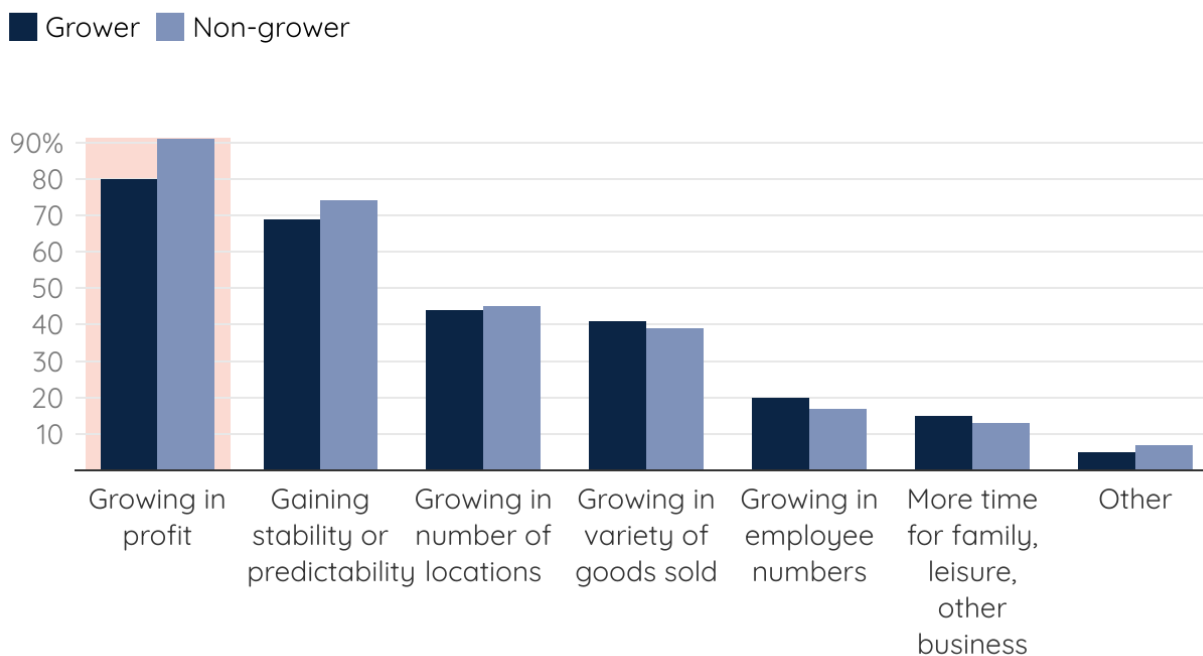


ASPIRATIONS AND GROWTH

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 grow. 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 8.5).



FIGURE 8.5: ASPIRATIONS, 1-YEAR HORIZON, PERCENT OF FIRMS



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 gender, 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; “investment” was one of the categories. With quantitative data we also looked how firms might be investing in growth 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.”

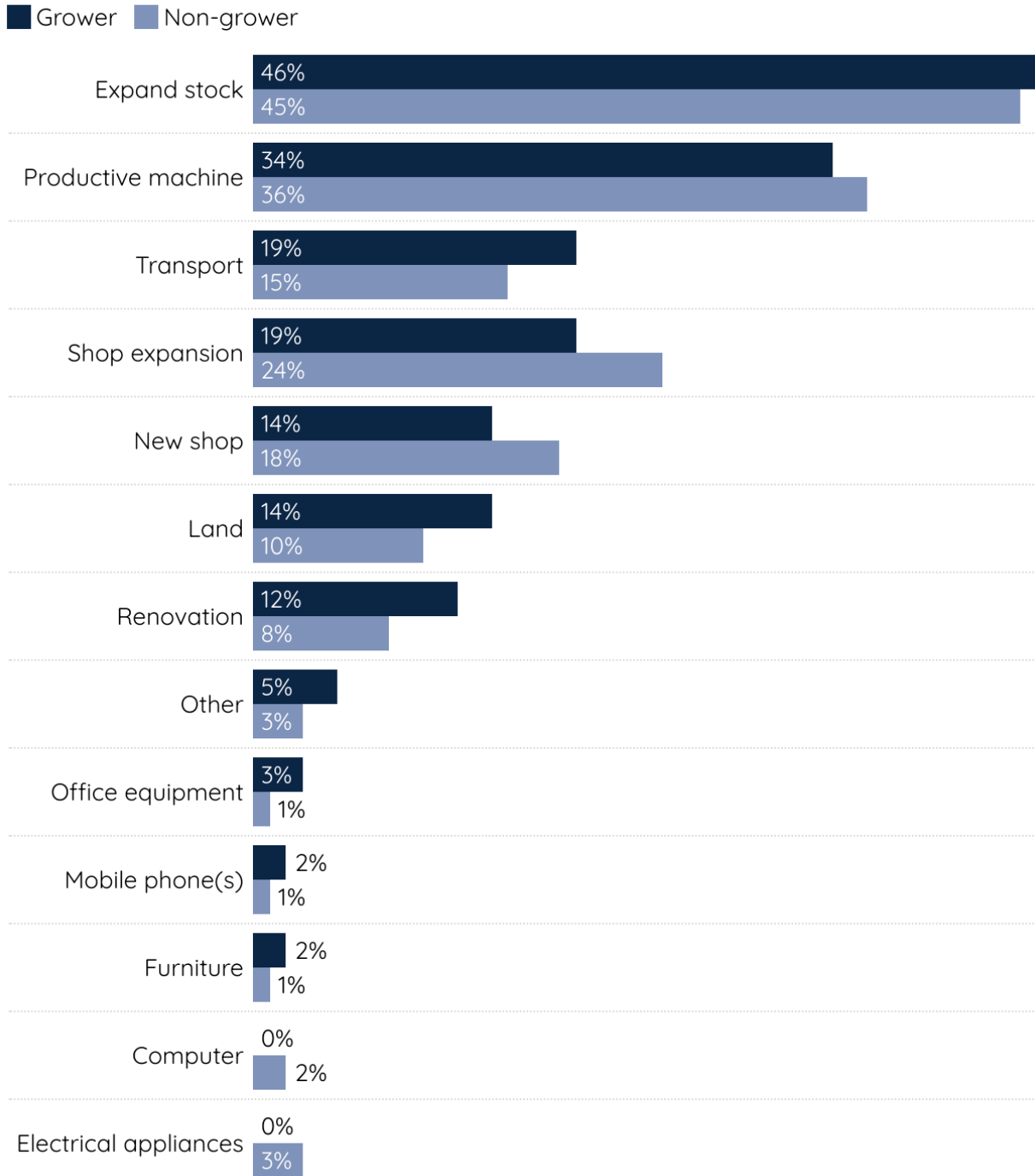
Most firms (~80%)—grower or not—made a “large purchase” at some point in the study period. When we look at these actual expenses during the year of the study we find that large purchases were overwhelmingly focused on raw materials, not capital assets; there were not differences between growers and non-growers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

When we ask firms about investments that they would like to make, only about a third of them report that they would like to invest in a productive machine (Figure 8.6). The only other investment that a significant portion of firms aspired to was raw materials, which was somewhat



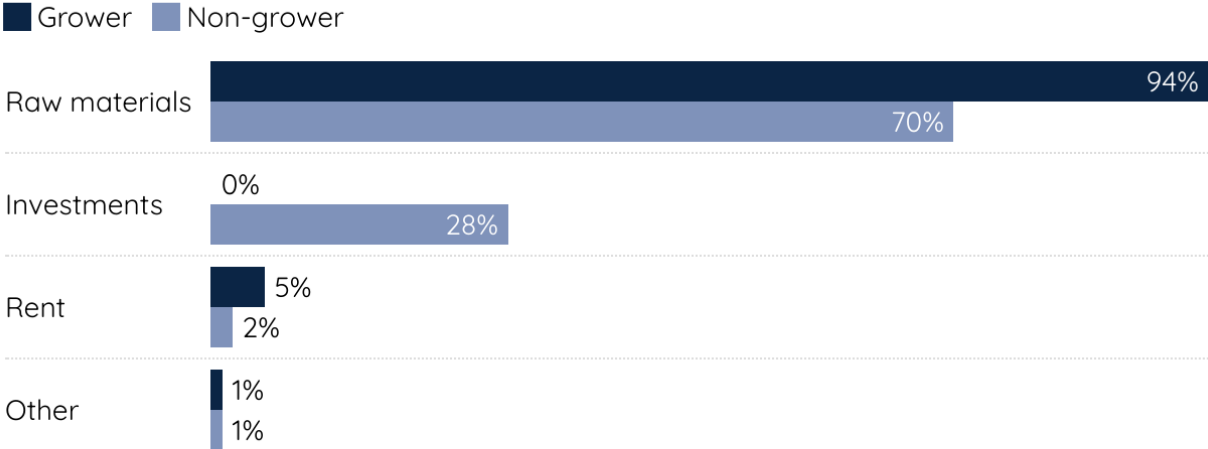
more common with 40% of firms selecting it, though raw materials would not qualify as an investment in most small business credit programs.

FIGURE 8.6: DESIRED INVESTMENTS, PERCENT OF FIRMS



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 (Figure 8.7)

FIGURE 8.7: PURPOSE OF LARGE TRANSACTIONS, PERCENT OF VALUE

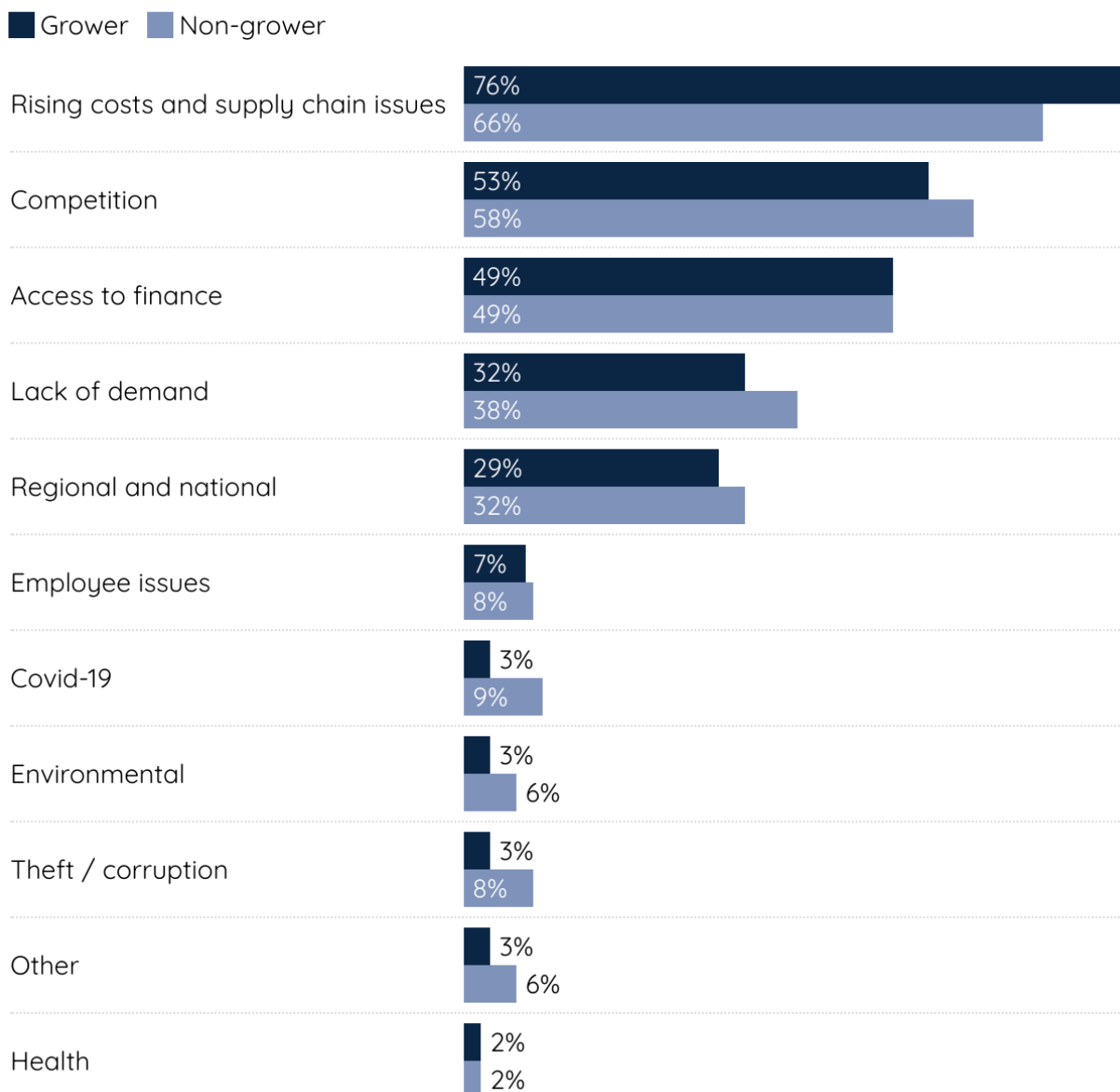


Other includes maintenance, running costs, taxes, transport, and wages to owners.

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 (Figure 8.8). 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."



FIGURE 8.8: BARRIERS TO ACHIEVING ASPIRATIONS, PERCENT OF FIRMS



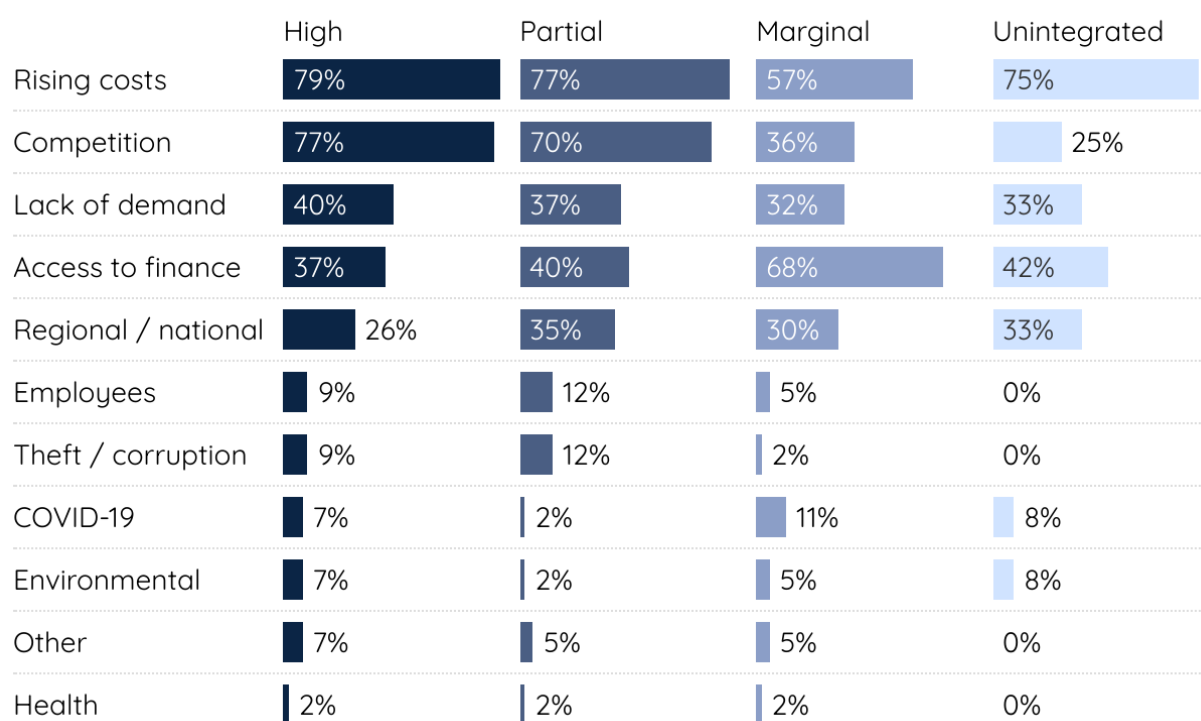
While business practices, aspirations, and working capital are areas of potential intervention to stimulate firm growth, growth is also shaped by factors outside of the firms’ control, such as competition and risk. On competition, 55% of firms report having “a lot of competitors”. Of firms that have “a lot of competitors,” 40% report their competitors are typically the same size as they are, compared to only 18% reporting competitors are larger. This pattern is similar across levels of competitors: most of our respondents say they face a lot of competition from other small firms, and, as noted in Figure 8.8 above, about half of our sample sees this competition as a barrier to achieving their aspirations. To differentiate themselves from competitors, firms’ most commonly reported “quality” (two-thirds of firms), while about half of firms reported differentiating on prices or service. We saw no differences in differentiation strategy across gender or industry. Given the high



level of competition, it is perhaps surprising that 30% of firms report having a business association or similar group with their competitors. When asked about the primary function of these associations, it appears to be social (100% of responses), with fewer being used for cooperation (27% of associations share workers and 44% share tools), or negotiations (20% set prices and 50% negotiate with governments).

Looking further into the responses to the barriers question, if we segment the firms by levels of formal and regulated financial systems integration based on usage of bank accounts and mobile money, there are two notable differences between the more integrated firms and the unbanked and marginally integrated (Figure 8.9). The more integrated firms are far more concerned about both competition and corruption. This large difference could conceivably be reversed—firms at lower levels of integration presumably have more competition and could be more vulnerable to demands for cash bribes. The fact that more integrated firms are much more concerned about corruption speaks to a potential large drag on both increasing integration and formality. The finding suggests that visible success may attract unwanted attention from both competition and corrupt officials.

FIGURE 8.9: MAIN BARRIERS AND CHALLENGES BY INTEGRATION LEVELS (MOBILE AND BANKING)

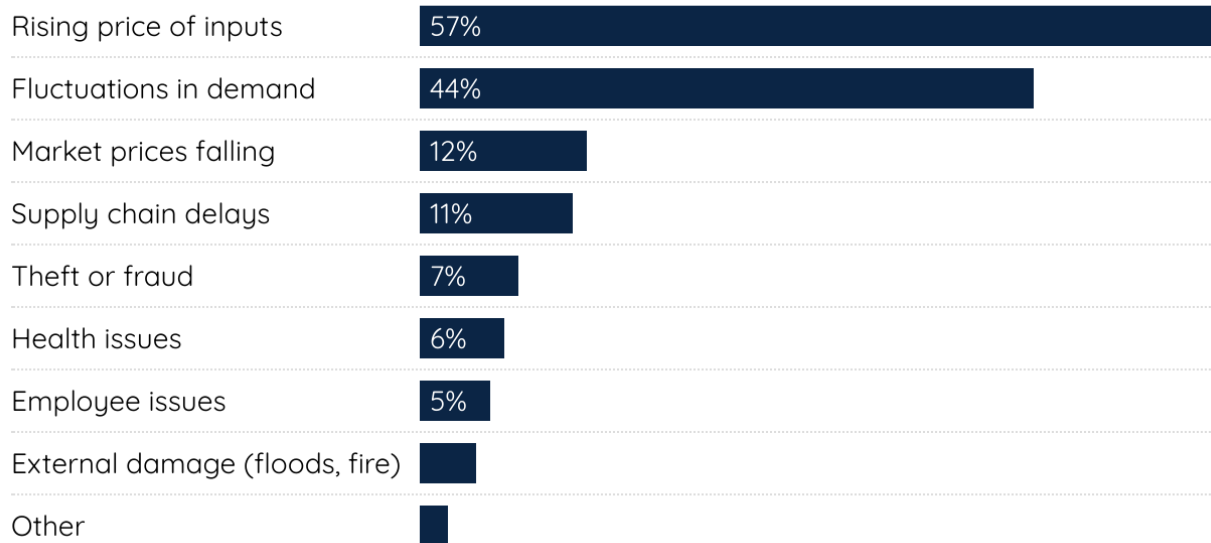


In addition to the named barriers to their aspirations, our firms face a number of other risks outside of their control. As shown in Figure 8.10 below, over half of firms were affected by rising cost of inputs, while 44% faced fluctuations in demand. Risks not directly related to the supply chain, such as theft or weather damage were much less likely to be reported. Of the firms that dealt with the rising cost of inputs, the majority used savings to address the issue—44% compared to just 8%



taking a loan. This is consistent with other findings noting the need for, and lack of, working capital credit.

FIGURE 8.10: RISKS EXPERIENCED BY FIRMS IN THE LAST SIX MONTHS



9. Conclusions and Recommendations

As this report is published, the Small Firm Diaries team is continuing analysis on data from Kenya and other countries in the study. This report provides an overview of the data we gathered in Kenya; it is not intended to be a “final” report. Instead, we publish this data in order to enable others interested in Kenya and especially small firms in Kenya to better understand the Small Firm Diaries and the possibilities this research effort creates. We will continue our analysis but also welcome input and questions that can help further illuminate the situation of small firms in Kenya.

While analysis continues, there are patterns and trends arising in the Kenya data as well as other countries’ data. Here we summarize some of our high-level conclusions and recommendations for next steps.

Four emerging themes are described in this concluding section of the Kenya Country Data Overview. We also share some initial recommendations for how these themes might shape ideas, policies and financial products. In the coming months, we will continue to revise and expand these recommendations in collaboration with government and private sector partners. Follow our work at smallfirmdiaries.org.

1. An “Invisible Middle”

We launched the Small Firm Diaries because firms with 1-20 employees in low-income areas are a little studied, and little-understood group. The data we’ve collected so far—in Ethiopia, Colombia, Kenya, Nigeria, and Indonesia—shows that these firms represent an “invisible middle” quite different from smaller microenterprises and larger, more professionalized firms. They straddle the line between formal and informal, they are more banked than micro-firms but far from fully integrated into the formal and regulated financial system, they are more sophisticated in their business practices but still struggle to realize their aspirations. The attributes of this group of small firms in the “invisible middle” are important for policy and financial services. For instance:

- While these firms experience a lot of volatility—a lot of bumpy ups and downs over the course of a year—they are neither on a strong upwards or downwards trajectory. Most small firms in our sample are resilient and long-lived, but they are also not “escaping poverty” nor are they propelling economies powerfully forward as popular wisdom about small business often claims.
- The firms are an important source of employment and income for people in low-income areas. But because the firms don’t have adequate tools to manage the volatility they face, the jobs that these firms provide—well over 50% of employment in many countries—are equally volatile. The amount employees earn monthly varies dramatically and many of the jobs don’t last more than a few months.
- The firms are “banked” and users of formal financial services at higher rates than microenterprises. They also employ key business practices (such as keeping separate accounts, tracking profit, and negotiating with customers and suppliers) at higher rates



than microenterprises. But the financial tools they have access to, and the practices they employ, are not sufficient to help them manage the volatility they face and they constantly struggle with liquidity and access to working capital.

2. Stability-Seeking Firms

Many policy discussions of small firms and their role in local and national economic growth focus on a binary distinction between, for instance, “gung-ho” and “reluctant” or “growth-focused” and “survivor,” types of entrepreneurs.

The Small Firm Diaries reveal that these profiles miss the largest group of these firms: firms with aspirations to grow but also in need of stability. We call these “Stability Entrepreneurs.” This population aspires to grow, but cannot take on the additional risk (they already face a great deal of risk) that is necessary for rapid growth. They want step-by-step growth that helps reduce volatility and risk.

Kenyan firms, like those in the global sample, experience volatile earnings: both revenue and expenses fluctuate in unpredictable and hard to manage ways from month to month.

When asked about their vision for their business, firms most commonly said they wanted to both grow and gain stability. In interviews, many comment that they see the two goals as complementary, and that they want to pursue the kind of “slow and steady” growth that makes their business more stable.

Firms in the global sample, like their Kenyan counterparts, cite “rising costs and supply problems” and “access to finance” as the main barriers to achieving their vision of growth and stability.

Despite access to finance being a major barrier to firm owners’ vision for success, a majority of firm owners say they rarely or never need a loan. This is true for the global sample and in the Kenyan sample. This is particularly notable as many of the firms are heavy users of formal financial services—clearly there is an unmet need for financial products better designed for the firms.

3. What’s Missing—Liquidity

Most efforts to help small firms have focused on providing loans for equipment or other capital investments. The firms’ cash flows show that working capital and liquidity are more important for their survival and growth.

As in the global sample, the majority of firms in Kenya report relatively low desire for credit, saying they never or rarely need a loan. Desired uses for loans are predominantly within what could be categorized as working capital, rather than for purchasing large assets. Firms closely match revenues and expenses on a month-to-month basis. This helps confirm that they lack working capital/liquidity. Firms rarely take any operating risk that could result in negative monthly cash flow.



Small firms' use of supplier finance is another indication of their need for working capital: use of supplier credit is as common as commercial bank borrowing.

4. Fragile Jobs, Vulnerable Workers

The Small Firm Diaries collects data about employment, including from employees themselves, shedding light on a population that is less studied, and more precarious, than the firm owners themselves.

- The employment picture is different and more volatile than it appears from simple counts of employees. Most workers' pay varies considerably from month to month.
- From the perspective of the firms, the number of jobs they offer fluctuates a great deal month by month; in many cases, the individuals who fill those positions can change several times during the year. In the global sample we find that many jobs only continue for a few months, though it is noteworthy that in Kenya firms are more likely to have a key employee who is employed over a longer period of time.
- The firms are not able to provide consistent income to workers, but those workers also find it difficult to earn income elsewhere.
- Two-thirds of the workers we talked to in the Kenyan sample said that they lacked money to meet their basic or food needs at some point during the study.

Recommendations

Based on the key issues for small firms emerging from the Small Firm Diaries data, we have several recommendations for supporting small firms and their employees.

1. **Focus attention on small firms:** Small firms deserve specific attention. They are distinct from other types of firms, yet are a critical source of jobs and incomes for low-income groups, and make an important contribution to value chains and economic development.
2. **Design policies and programs around achieving stability:** The focus of policies and programs should shift toward helping firms reduce volatility and achieve stability. Public and private partnerships to reduce exposure to demand- and supply-side risks as well as training programs focusing on risk and liquidity management would help firms achieve greater stability.
3. **Explore liquidity and working capital lending:** New products focused on increasing liquidity and managing working capital are desperately needed. Experimentation to uncover sustainable models to increase access to trade credit and leverage information and assets (e.g. stock) to unlock working capital is needed.
4. **Develop support programs for employees (not just firms):** While volatility is passed on to employees, there is no guarantee that greater stability for firms will be passed on to employees. Programs and policies that directly support the workers in small firms should be explored.



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, Tamara Cook and Amrik Heyer.

In addition to funding the Kenyan arm of the study, FSD Kenya served as the local research and engagement partner. The FSD Kenya team contributed to Kenya-specific elements of the research design, supported the data collection process, and collaborated in creating research outputs, including this report. FSD Kenya also convened the MSME Advisory Group which served as a valuable sounding board throughout the project, responding to early research findings, and advising on Kenyan priorities and context.

The authors acknowledge the contributions of Rachael Eplee, Laura Freschi, Yeji Lee, Camila Londoño Sanin, and David Pinedo De La Hoz in creating this report.

The Small Firm Diaries global project is led by the Financial Access Initiative (FAI) at NYU Wagner. Field research was carried out by L-IFT and MFO. Funding for the global study was provided by the Mastercard Center for Inclusive Growth, the Bill & Melinda Gates Foundation and the Argidius Foundation.

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.



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Appendix

Summary Data by Industry

The table on the following page summarizes data on the firms by industry. We do not find large differences in revenue across the three industries we studied, while the services industry has the lowest median operating margins (though the highest earning services firms had the highest overall margins). Services firms both use and say they want to use loans at slightly higher rates than other industries.

We find that a smaller proportion of agri-processing firms grew in revenue, compared to the other two industries. While agri-processing firms are less integrated according to our metric of banking integration, we do find that they report owning mobile wallets for their businesses more than other industries, and use their mobile wallets more. Finally, employee turnover is highest in agri-processing firms.



SUMMARY DATA BY INDUSTRY

	Agri-Processing	Light Manufacturing	Services
Median monthly revenue	KES 111,698	KES 82,020	KES 81,470
Median monthly expenses	KES 77,262	KES 38,925	KES 54,370
Median monthly operating margin	KES 37,242	KES 36,398	KES 30,480
CV monthly revenue	0.51	0.44	0.42
CV monthly expenses	0.59	0.57	0.46
CV monthly operating margin	0.77	0.68	0.94
Percent of firms with positive revenue growth	32%	54%	41%
Percent of firms with bank accounts	44%	70%	73%
Percent of firms with mobile money accounts	86%	57%	55%
Percent of firms with bank loans	33%	25%	28%
Percent of firms with mobile money loans	17%	28%	28%
Percent of firms with MFI loans	22%	23%	0%
Median loan value	KES 42,500	KES 30,000	KES 30,000
Percent of employees paid for less than 3 months of the study	27%	18%	17%

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



Summary Data by County

The following table summarizes several key metrics by county. Of note, monthly revenues, expenses, and operating margin are significantly higher in Nairobi than Kisumu or Kwale. Operating margin variability is also much higher in Nairobi. Fewer firms in Kwale reported owning bank accounts than in Nairobi and Kisumu, while a higher proportion of firms in Kisumu reported owning mobile money accounts and taking loans from mobile money providers for their businesses. Also, a higher percentage of employees in Kisumu are paid via mobile money accounts than in Nairobi or Kwale. More firms in Kisumu paid their employees for 8-10 months of the year as well.



SUMMARY DATA BY COUNTY

	Kisumu	Kwale	Nairobi
Median monthly revenue	KES 78,950	KES 69,505	KES 193,627
Median monthly expenses	KES 55,146	KES 32,200	KES 121,131
Median monthly operating margin	KES 27,425	KES 26,858	KES 67,779
CV monthly revenue	0.38	0.45	0.5
CV monthly expenses	0.38	0.69	0.49
CV monthly operating margin	0.7	0.56	0.91
Median business practices index score	0.61	0.5	0.47
Percent of firms with bank accounts	82%	55%	98%
Percent of firms with mobile money accounts	82%	65%	55%
Median percent of employee payments through mobile money accounts	49%	8%	0%
Percent of firms with bank loans	26%	26%	35%
Percent of firms with mobile money loans	43%	4%	20%
Percent of firms with MFI loans	20%	17%	10%
Percent of firms with informal savings group loans	17%	17%	10%
Median loan value	KES 30,000	KES 20,000	KES 76,000
Percent of employees paid for 8-10 months of the study	60%	40%	45%

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

