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NIGERIA

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 targets firms that fall in between 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, 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 Nigeria, MSMEs make up 96% of companies in the country and provide 84% of job opportunities.[1] 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 and the focused data of individual business case studies. Our goal in this study is to inform policy and practice by a wide variety of actors: financial services providers, business support organizations, government policy makers, funders and other researchers can all use the data and findings of the Small Firm Diaries project to deeply understand and address challenges of small firms in low- and middle-income countries.

PURPOSE OF THIS REPORT

The Nigeria 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 research sites.

[1] PWC, Nigeria SME survey https://www.pwc.com/ng/en/events/nigeria-sme-survey.html#:~:text=In%20Nigeria%2C%20SMEs%20contribute%2048,and%20development%20of%20the%20sector.

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 Nigeria, and individual firm profiles of Nigerian businesses in the sample. The current version of this report and any additional reports using data from the Nigeria sample will be published at smallfirmdiaries.org/nigeria.

2. Sample Overview

SUMMARY

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

In Nigeria, data collection began in August 2021 and was completed in August 2022. The study was conducted in three sites: Enugu, Kaduna, and Lagos. 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 200 firms to participate in the study from three research sites; our final sample contains 161 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, 40% of the firms are owned by women (the study protocol set a floor of 30% of firms with a female owner, and in Nigeria we achieved this and more), and 12% are co-owned by a man and a woman; the remaining 48% of firms are owned by men. The study was limited to firms in three industries: light manufacturing, agri-processing, and services. In the Nigerian sample, about 40% of the firms are engaged in light manufacturing (e.g. carpentry, metal works, and garment production); 34% in services (e.g. printing, household services, and private schools); and 25% in agri-processing (e.g. livestock, animal feed production, and milling).

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 paid workers (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 targeted firms that fall in between 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, have higher incomes, and are more fully integrated into the financial system and economy. We set a size limit for the firms selected as those that reported having between 1 and 20 employees at baseline. 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.

MSME CLASSIFICATION IN NIGERIA

The terms "micro," "small," and "medium enterprises" vary considerably in their definitions across different countries and contexts. Even within the same country, definitions can vary, as is the case in Nigeria. This is one reason why we used a different term, "small firm," for the firms included in the present study with 1-20 employees (by extension, we define "micro firms"— as sole proprietorships with no non-household-member employees).

The classification adopted by the Small and Medium Enterprises Development Agency of Nigeria (SMEDAN) for the National Policy on SMEs [2] defines a micro business as one employing 1 to 10 workers, with assets of less than NGN 5 million, and a small business as one employing 10 to 49 workers, with assets of NGN 5 to 50 million. Definitions of the Bank of Industry (BOI) for these categories are similar, with a larger cap on assets for small businesses, and a third criteria, for annual turnover.

As such, the "small firms" included in this global study straddle the Nigerian micro and small categories, with the majority falling under the Nigerian definition of micro.

The sites for the study were selected in conversation with local partners and advisors to provide a view of the varied regional economies of Nigeria. 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 (agri-processing, light manufacturing, and services). We selected these sectors where, for firms that desire growth, 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.[3] 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.

[2] National Policy on Micro, Small, and Medium Enterprises, Small and Medium Enterprises Development Agency of Nigeria (SMEDAN)

[3] Retail globally is a low margin sector, where profitability is tightly linked to 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.

SAMPLING RESULTS

We began the study with 200 firms: 89 firms from Lagos, 56 from Kaduna, and 55 from Enugu. Thirty-nine firms dropped out, resulting in 161 active firms (80% of the original sample).

Gender

Of the final sample, 40% are owned by women (the study protocol set a floor of 30% of firms with a female owner), and 12% are co-owned by a man and a woman; the remaining 48% are owned by men.

FIGURE 2.1: FIRM COUNT BY OWNER GENDER, N = 161

Industry

We selected firms from three sectors: agri-processing, light manufacturing, and services; Figure 2.2 shows the sectors included within each industry. Thirty four percent of the firms are in the services sector. Light manufacturing constitutes 41% of the total firms, and the remaining 25% of firms are in the agri-processing sector.

FIGURE 2.2: TYPES OF FIRMS IN THE NIGERIA SAMPLE

Light manufacturing (66 firms)		Services (55 firms)		Agri-processing (40 firms)	
Garment production	36%	Printing	40%	Livestock	38%
Leather goods	26%	Household services	18%	Animal feed	23%
Carpentry	18%	Private School	18%	Milling	15%
Metal works	17%	Oil pressing	15%	Food preparation	10%
Other	3%	Health Clinics	7%	Meat and fish preservation	8%
		Other	2%	Other	8%

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 firms one notch smaller than those in the study suggests that small firms' revenues and profits are likely to be highly variable and that extrapolating annual revenue or profit from short-term measures is 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.

An important note that applies to all of the analysis and charts of cash flow data in this report: we exclude the first two months of data collected, and report data for months 3 through 12. This is because during the initial two-month period the field researcher and firm owner are still establishing familiarity and confidence; consequently we consider data from this period to be less reliable.

OPERATING MARGIN AS AN APPROXIMATION OF PROFIT

Measuring the profits of firms without formal accounting mechanisms and practices is very difficult. Accounting standards call for profit measures to include amortized values of assets, loans and future commitments (not to mention the differences between cash and accrual methods of calculating these figures)—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 or when household needs demand it). 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 NGN 2.3 million and NGN 768,120[4] 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 median revenue of all firms in the final sample is NGN 223,250. This of course obscures the differences between firms and the distribution of revenues. More than half (62%) of our sample has a median monthly revenue lower than NGN 300,000 and 47% of our sample has a median monthly revenue lower than NGN 200,000. Figure 2.3 presents the monthly median data with conversions to PPP dollars.

Firms' monthly median operating margin was NGN 78,575. Of all firms, 93.8% (151) had positive monthly median margins. While most firms have positive operating margins, their margins are slim. The 60% of firms (97 firms) with positive median monthly margins have a median monthly operating margin below NGN 120,000, and half have a median monthly operating margin below NGN 87,750. Only 20% of firms have a monthly operating margin above NGN 200,000. The 10 firms with negative median monthly operating margins range from NGN 8,400 to NGN 353,200 in losses. Financial performance is outlined in further detail in Section 3.

[4] Exchange rate: PPP/NGN = 152.57

FIGURE 2.3: MEDIAN MONTHLY CASH FLOW

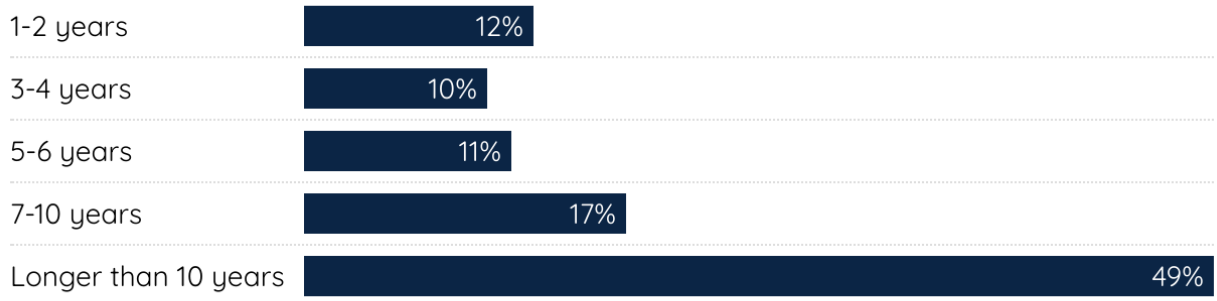
	Revenue	Expense	Operating margin
NGN	223,250	87,050	78,575
PPP	1,463	571	515

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.[5] 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 50% had operated for more than 10 years.

It's important to note that it is possible that our sample misses firms that grow rapidly from inception 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, Lagos has many more firms compared to the other two research sites, by design. Enugu is the only city that has more women-owned firms than men-owned firms. We also see that a greater proportion of services firms are located in Lagos (the site with the highest median monthly revenue), while the Kaduna sample has a higher concentration of light manufacturing firms. Firms located in Lagos earn significantly more in monthly revenue compared to those in Enugu or Kaduna. For more city-level comparisons, see the Appendix.

[5] Shane, Scott, 2008

FIGURE 2.5: CITY-LEVEL SAMPLE DATA

		Enugu	Kaduna	Lagos
Owner Gender, Firm Count	Men	16	27	37
	Women	26	13	24
	Co-Owned, Mixed	5	4	9
Industry, Firm Count	Agri-processing	14	7	19
	Manufacturing	17	29	20
	Services	16	8	31
Cash Flows, NGN	Median Monthly Revenue	186,700	137,125	230,550

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. As noted in Section 2, we exclude the first two months of data collected from all analysis and charts as part of the cleaning process, and report data for months 3 through 12.

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.[6] Our firms experience significant volatility in revenue and expenses, and extremely high levels of variability in operating margins. Importantly, in Nigeria this variability is mostly in positive territory—only 20% of firms have more than 2 months of negative operating margins, suggesting that the firms are likely closely matching expenses to revenues, and as we discuss later, also likely indicative of a lack of liquidity to cover short-term shortfalls. 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 NGN 0 to NGN 54 million (PPP ~374,194).[7] Half have a median monthly revenue of NGN 223,250 or less (PPP 1,547), and around 75% of them NGN 440,000 (PPP ~3,048) or less.

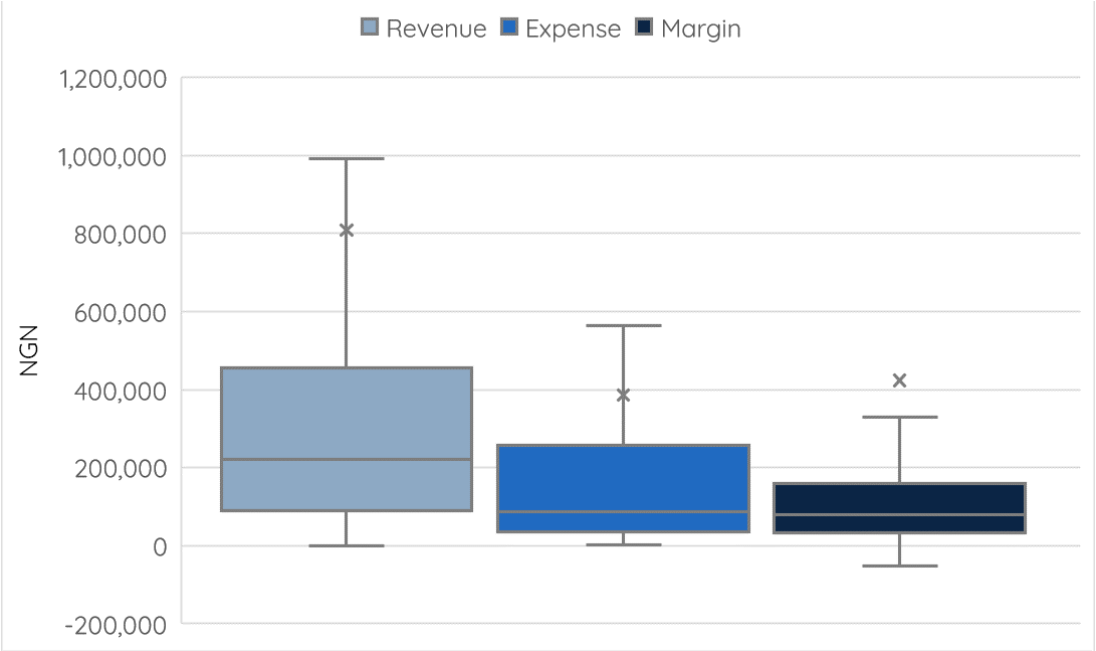
[6] The coefficient of variation (CV) is a statistical measure defined as the ratio of the standard deviation to the mean. It is a useful way of comparing variation between months given the dispersion in sizes of cash flows.

[7] Exchange rate: PPP/NGN = 152.57

The range of the median monthly expense distribution across our sample firms is as wide as that of the revenue: from NGN 3,200 to NGN 16.6 million. Half of the firms have a median monthly expense of NGN 87,000 or less, and around 75% have a median monthly expense of NGN 256,000 or less.

With respect to operating margin, half of our firms have a median monthly margin between NGN 10,000 and NGN 110,000. Most of our firms have operating margins of less than NGN 160,000 a month. Only ten firms show a negative median monthly margin, going as low as negative NGN 353,200.

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

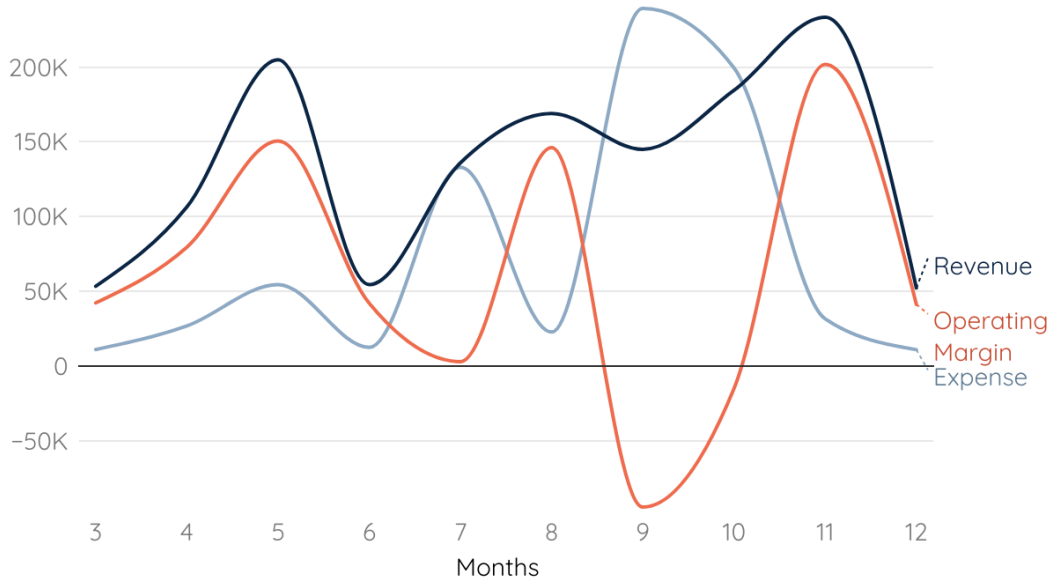


While medians are useful for understanding the size of the small firms, they obscure one of the key findings of the study: the very large amount of volatility the firms experience from month to month. The coefficient of variation (CV) is a measure used to understand the spread of data, especially when comparing different subjects with different ranges of values. The median CV of monthly revenue for firms in our sample is 0.44[8]. To better understand CV, consider the case of a particular firm as seen in Figure 3.2.

[8] For comparison, the CV of monthly revenue was also 0.44 in Kenya and was 0.39 in Indonesia

FIGURE 3.2: OPERATING MARGIN VOLATILITY

Cash flow (NGN) for garment production firm, months 3 to 12



This firm's monthly average revenue is about NGN 130,000 (Figure 3.3), but rarely is the actual monthly figure within NGN 50,000 of that average; specifically the standard deviation tells us that monthly income tends to be about NGN 65,000 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 0.49, it means that on average, the monthly revenues are about 49% 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.

FIGURE 3.3: GARMENT PRODUCER CASH FLOW

	Monthly Average	Monthly St. Dev.	Monthly CV
Operating Margin	NGN 59,750	NGN 88,039	1.47
Revenue	NGN 133,960	NGN 65,887	0.49
Expenses	NGN 74,210	NGN 85,148	1.15

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.

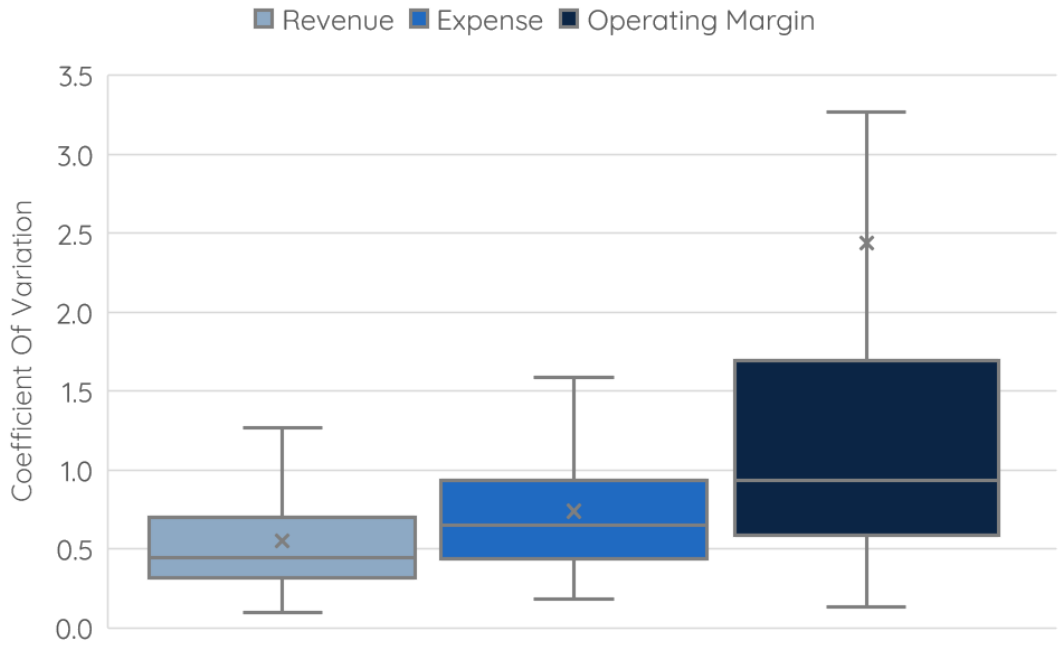
There are several ways that a firm could manage revenue volatility. A firm that has reserves of working capital or ready access to credit could essentially ignore revenue volatility and make choices about expenditures to optimize the long-term success of the company, by drawing on working capital or 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. 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 0.65 (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 0.84—and also has a higher range (indicating that firms have different capacity to manage expenses).[9] 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.

[9] 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



Revenue Categories for Small Firms

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).[10] The majority of our firms typically have revenue less than NGN 440,000 per month.

FIGURE 3.5: REVENUE CATEGORIES

Bucket	Median monthly revenue, NGN	Count of firms
Low	Less than 120,000	54
Medium	120,000 to 320,000	52
High	320,000 to 1,000,000	39
Outlier	1,000,000 or greater	16

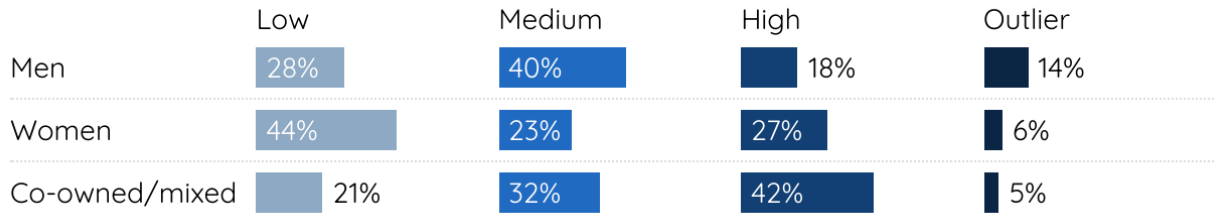
[10] Buckets were created based on observed breaks in the sample-wide distribution of median monthly revenues.

Revenue and Gender

Given the large gender differences that persist globally when it comes to firm ownership, size, income, and wealth, 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 these small firms in Nigeria. On basic measures of revenue and particularly operating margin, we see a gender gap, but we also found some areas where women were on a par with male owners. This is discussed in more detail in the following section that focuses on women-led firms. In this section, we'll describe the basic measures of firm size and operations.

As shown in Figure 3.6, the distribution of firms across the revenue categories defined above differs across men- and women-owned firms; the largest proportion of women is concentrated in the "low" revenue bucket, while the largest proportion of men falls into the "medium" revenue bucket. However, a higher proportion of women are categorized as "high" earners than men. There is also a significant gap between women-owned firms and men-owned firms in terms of median monthly operating margin, despite male and female firm owners being similarly distributed across industries (e.g. 22% of men and 22% of women run agri-processing firms in our sample). Even when we compare only firms with positive operating margins, men-owned firms have median monthly operating margins of NGN 121,000 compared to NGN 55,752 for women-owned firms.

FIGURE 3.6: REVENUE CATEGORY DISTRIBUTION ACROSS GENDERS



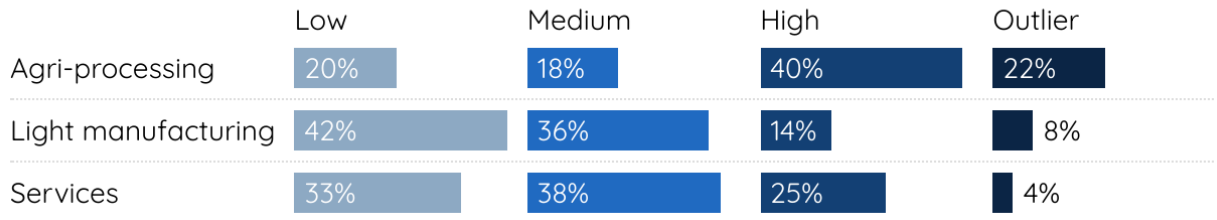
Revenue and Industry

There was less ex-ante expectation of an industry gap than a gender gap, however we found that agri-processors had higher revenues than the other two industries. The percentage of agri-processing firms that are classified as low income is 10% less than that of services firms and about 20% less than that of light manufacturing firms (Figure 3.7). Agri-processing firms are more represented both among "high" earners (40%) and "outlier" earners (22%). Agri-processing is the only industry from our sample in which the sum of high earners plus outlier earners is greater than the sum of low and medium earner firms.

We do find differences in terms of operating margin. In the agri-processing industry around half of the firms are concentrated below NGN 100,000, while for the other industries around half of the firms are concentrated below NGN 75,000. Nonetheless, it's important to note that agri-processing is the only industry with firms that show a negative median monthly margin.

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

FIGURE 3.7: REVENUE CATEGORIES ACROSS INDUSTRIES

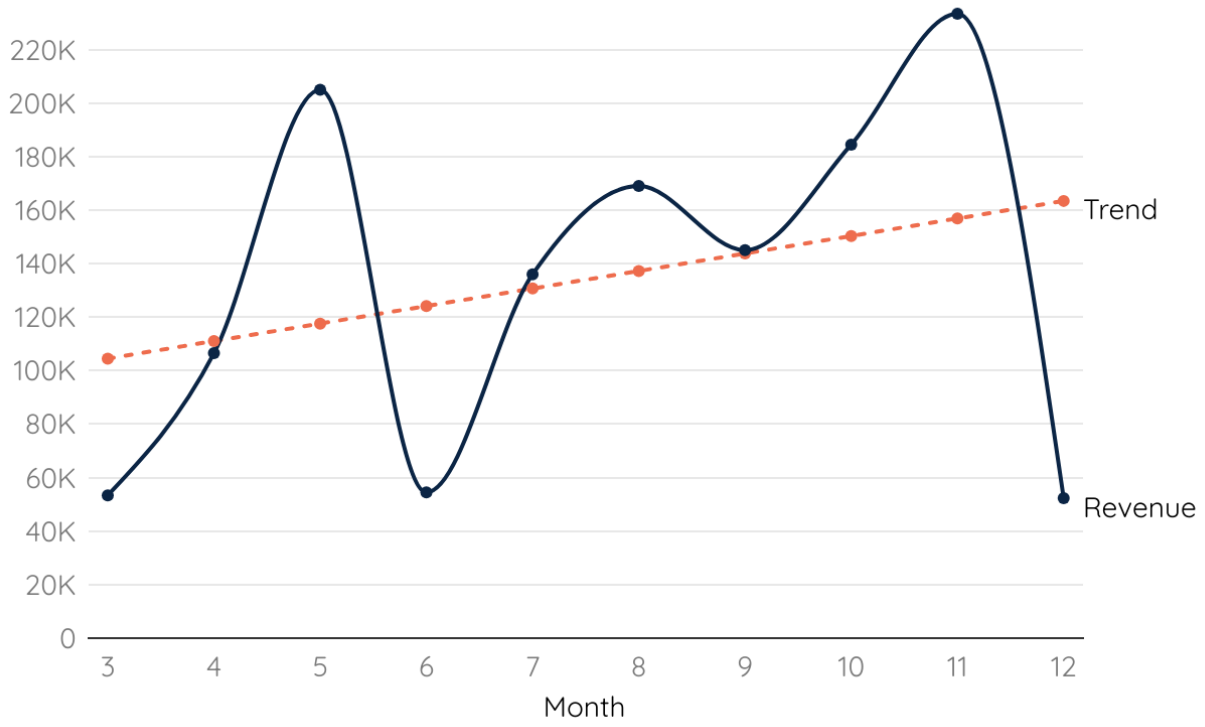


Revenue and Growth

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.

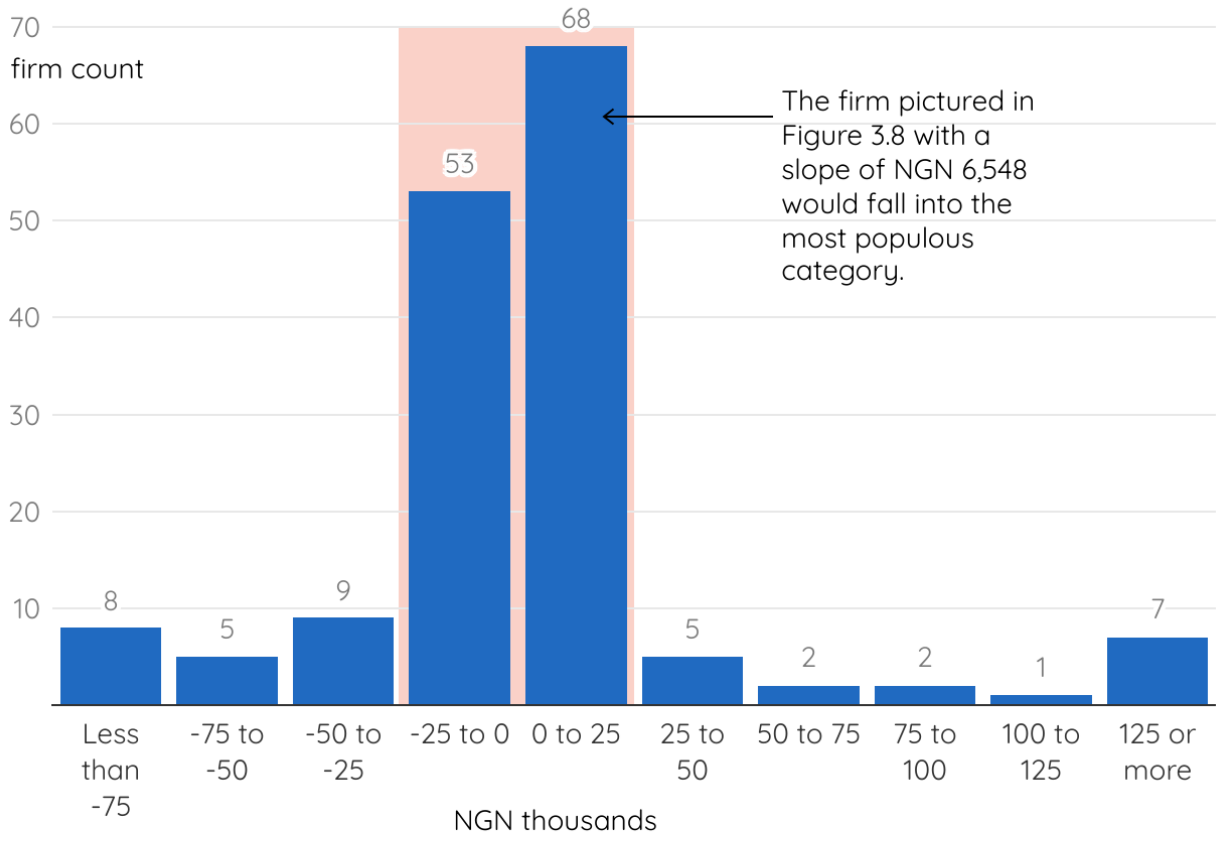
We see an example firm in Figure 3.8 which shows the monthly revenue for months 3 through 12 (the first 2 months of data are discarded as part of the cleaning process). If we only compared the two data points of months 3 and 12, we would categorize this firm as a "not-grower" as the revenue in month 12 was 2% 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 5, 8, and 11, and valleys in months 3, 6, and 12. 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 28%; in other words, on average, the firm's revenue grows by 28% from one month to the next. Once again, looking at the graph, we can see that this is an overestimation of the firm's 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 more of our monthly 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 positive slope equal to a monthly increase in revenues of NGN 6,548. As the slope is positive, we categorize the firm as a "grower".

FIGURE 3.8: MONTHLY REVENUE (NGN) 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, 121 (75%) of our firms are either slightly declining (NGN -25,000 to NGN 0 slope of monthly revenue) or slightly increasing (NGN 0 to NGN 25,000). The remaining firms are spread across the distribution with 7 outlier firms showing positive slopes higher than NGN 125,000 a month.

FIGURE 3.9: DISTRIBUTION OF FIRMS BY MONTHLY REVENUE GROWTH*



*Where monthly revenue growth is defined by the value of the slope of the best linear fit for monthly revenue.

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

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 positive non-linear relationship between variability of revenues and growth in revenues.

FOCUS: Women-Led Firms

SUMMARY

Throughout the Nigeria Country Data Overview we discuss gender-disaggregated data. In this section we summarize those analyses of differences and similarities between men-owned and women-owned firms in the study,[11] and we examine the entrepreneurial motivations and confidence of our women-owned sample.

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%, while in Nigeria, the average of small firms with female representation in ownership is 16.8%.[13] The gap increases in large firms, where female ownership is 12.2%.

As noted in Section 3 of the report, on basic measures of revenue and particularly operating margin, we see a gender gap. The differences prevail across some metrics—more women perceive their businesses to be informal and female firm owners typically take lower value loans. However, on other metrics, we found no differences across gender—female firm owners are banked at similar rates to men, aspire to the same goals for their business, and score the same in business practices evaluations. When considering the gender gaps in the sample, it's important to note that women leading firms with paid workers are likely different in many ways from the statistically "average" woman in Nigeria. In order to become a small firm owner, these women have already overcome some common barriers to success, although other barriers clearly remain.

We must say clearly at the outset that our sample is not representative of either men- or women-led small firms in Nigeria, much less of men and women globally. The findings we note here should not be directly extrapolated to Nigeria as a whole or to other contexts. 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

[11] 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.

[12] World Bank Gender Data Portal, "Firms with female participation in ownership (% of firms)"
[13] World Bank Enterprise Survey: Nigeria 2014 Country Profile, page 13

Using median monthly revenue to group our firms into earning categories, we find about half (44%) of women-owned firms, compared to about 30% of men-owned firms, are categorized as "low" earners. Women are less represented among "medium" earners (23%) compared to men (40%), while more women owned-firms belong to the "high" earners category than men: 27% of women compared to 18% of men.

There is a gender gap in operating margin as well. Even when we compare only firms with positive operating margins, men-owned firms have median monthly operating margins more than 2 times larger than women-owned firms: NGN 121,000 for men-owned firms compared to NGN 55,752 for women-owned firms. In terms of revenue growth, and margin growth between men and women-owned firms, our data does not suggest any significant difference.

Despite the gap in monthly margin and monthly revenue, there is no meaningful difference in growth of operating margins or revenue across genders.

Financial Access

Across gender, firm owners are unbanked at a similar rate, 8% of female firm owners are unbanked compared to 12% of male firm owners. Female firm owners are more likely than male firm owners (28% vs. 14%) to fall into our highest category of financial integration, which measures to what extent they take part in the formal and regulated financial system (including regulated microfinance, traditional banking, and mobile money). 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 45% 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 40%.

A similar proportion of our female and male firm owners took loans, 45% vs 47% respectively. However, women business owners, on the median, took lower value loans than men—NGN 57,000 compared to NGN 93,000. Across both genders, cost was the most frequently cited barrier to credit. Female and male firm owners also report separating personal and business finances at the same rate (76%).

Formalization

Female firm owners were less likely to report their firms as formal (30% of women-led firms compared to 44% of men-led firms identified as formal). And indeed a lower percentage of women-owned businesses reported having registered with the Corporate Affairs Commission (33% vs 44%). However, a higher percentage of women-owned businesses reported registration with the tax office (23% vs. 17%) and with the local or municipal government (28% vs. 24%).

Business Practices

On the McKenzie and Woodruff Business Practices Index score (a measure of business practices associated with business success; see Section 7 for more details), women in our sample typically

scored the same as men. Among our firms, negotiating with suppliers was the most common set of business practices, with women being more likely to report it (89%) than men (78%).

Aspirations

Growth in profit and stability were the two most common answers for every type of firm, without meaningful differences between male and female firm owners.

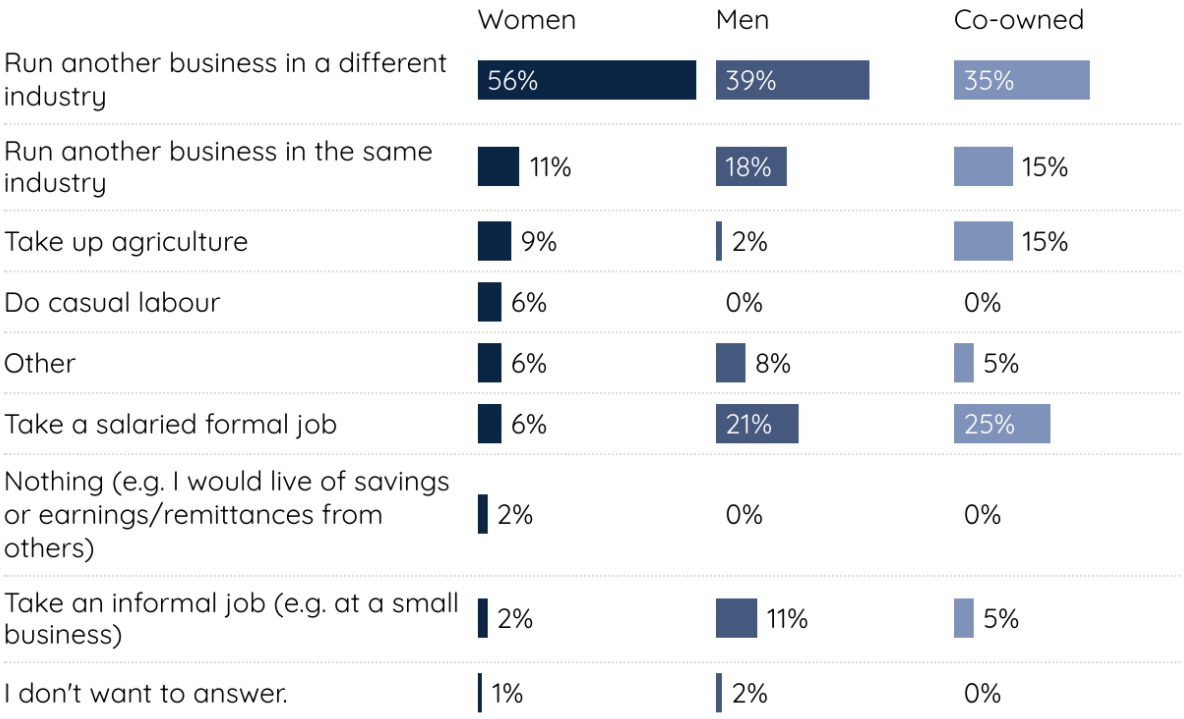
ENTREPRENEURIAL CONFIDENCE AND PERFORMANCE: A CLOSER LOOK

We wanted to understand if male and female firm owners of different genders had differing motivations for starting a business that might affect their management practices and performance. The top two reasons for opening a business were the same across genders: the firm owners reported opening their business because they needed to earn a living and had had difficulties finding a job, and in second place people cited passion or interest in their business area. Within these categories, however, a higher proportion of men reported opening the business to earn a living (47% vs. 36%) and a higher proportion of women reported being driven by a passion for their business area (40% vs. 19%).

Given that the majority of the sample opened a business as a source of income, it is not surprising that when we asked firm owners what they would do for income if they were not running their current small firm (Figure W.1) opening another business in a different industry was the most popular answer. Interestingly, despite the high proportion of women driven by interest or passion to open the business, 20% more women reported they would change industries than men, while more men reported they would open a business in the same industry. Male firm owners were also more likely to take a salaried job if their business closed than women.

FIGURE W.1 ALTERNATIVES TO SMALL FIRM OWNERSHIP

If you weren't running this business, what would you do to earn income instead?

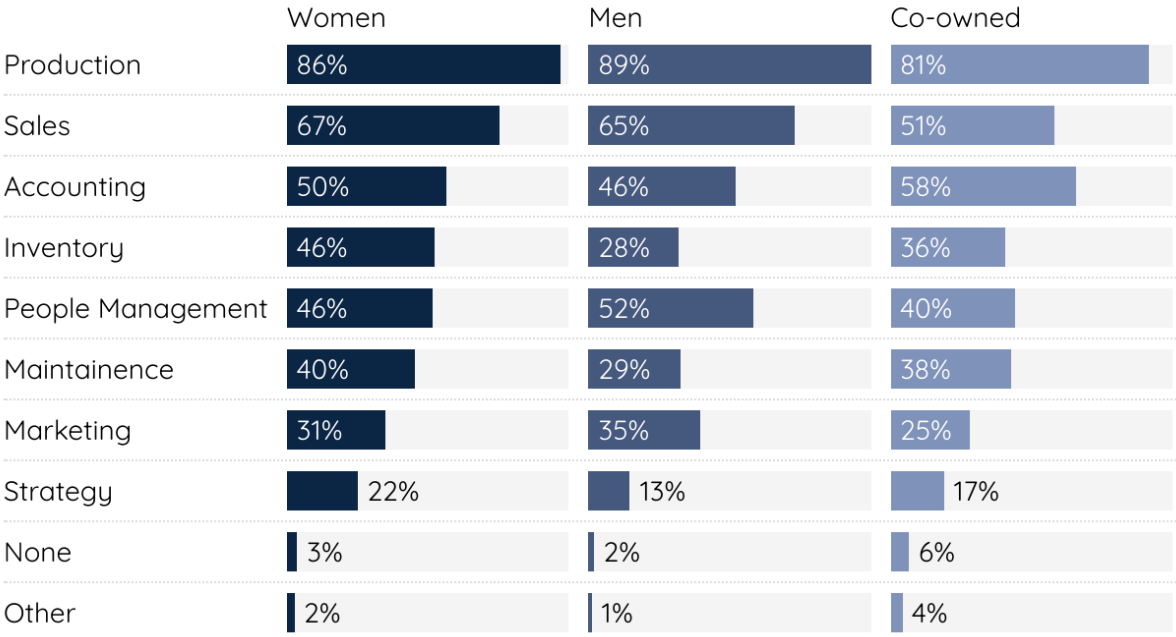


When asked about specific business practices, female firm owners reported roughly the same levels of confidence in their specific business skills as male firm owners. For instance, more than half of both men and women reported a "very strong ability" to manage financial accounts. However, women reported lower confidence levels in their ability to obtain credit to expand an existing business (17% vs 37%).

Despite differences in confidence between genders, we found few differences in their time use reports. Note that this is not a report of the amount of time spent, but on the number of activities where any time was spent. (Figure W.2)

FIGURE W.2: TIME USE

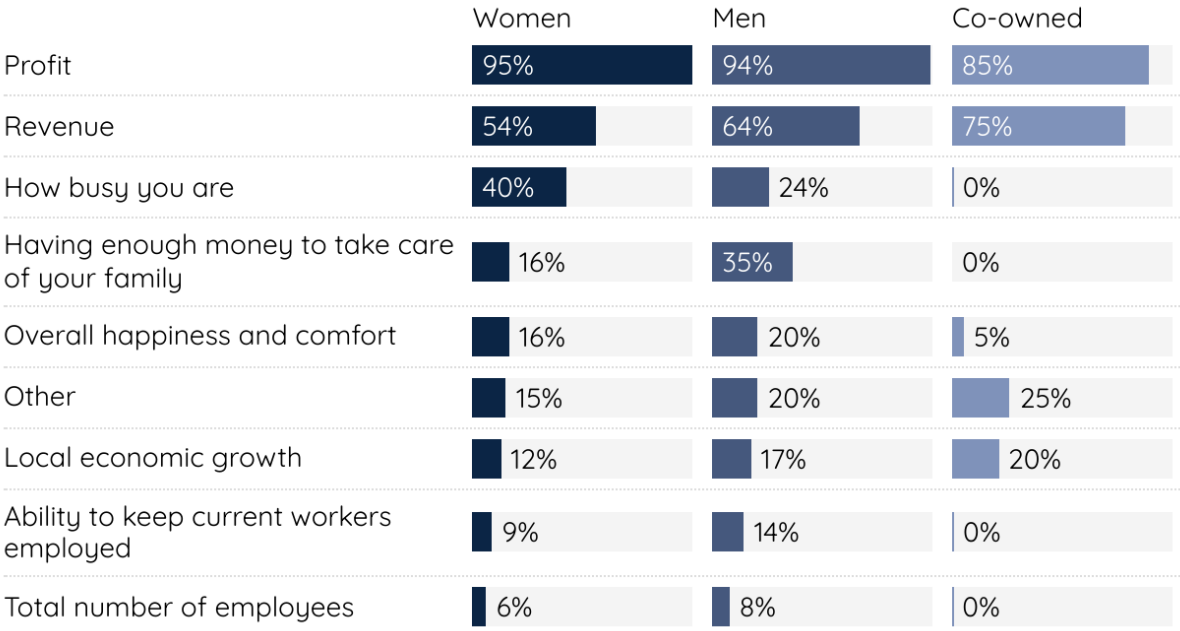
Which of the following activities did you spend any time on the past two weeks?



The alignment in reported time use continues into similarities 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, for example "having enough money to take care of your family," we actually saw more than twice as many men select this option than women. At the same time, women were nearly twice as likely to measure success based on how busy they are than men. (Figure W.3).

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."[14] Efforts to bring more people into the formal and regulated financial system, comprising regulated microfinance, traditional banking and mobile money, have borne fruit in many parts of the world as shown in the 2021 Global Findex,[15] 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* to describe a firm's integration into the banking system. 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 Nigeria Manage their Finances,* available at smallfirmdiaries.org/nigeria.

We find that almost 100% of firms in the study reported owning a bank account for business purposes. However, only 47% of firms use a bank account for 25% or more of their aggregate transaction value. Overall, cash is still the predominant tool—80% of firms used cash boxes for 25% or more of their transaction value.

In our sample, we find a relationship between being banked and credit usage. However, while a higher percentage of banked firms have credit than unbanked firms, we see little relationship between the *level* of banking system integration and credit usage. Firms that are only marginally integrated borrow from banks at higher rates to those that are more integrated. (See Figure 4.4 for how we categorize firms according to levels of banking integration). Credit usage for business purposes is relatively low: only 46% of our sample in Nigeria had at least one active formal or informal loan for their firm during the study period, compared to 49% in Kenya, and 54% in Indonesia. Suppliers were the primary providers of credit.

At the same time, the firms are an important *source* of credit: 93% of firms that engage in any form of supply chain finance[16] *give customers credit.* But perhaps the most important credit-related finding from the Small Firm Diaries is that working capital, or liquidity management credit, is the most pressing need for many firms.

BUSINESS ACCOUNT OWNERSHIP

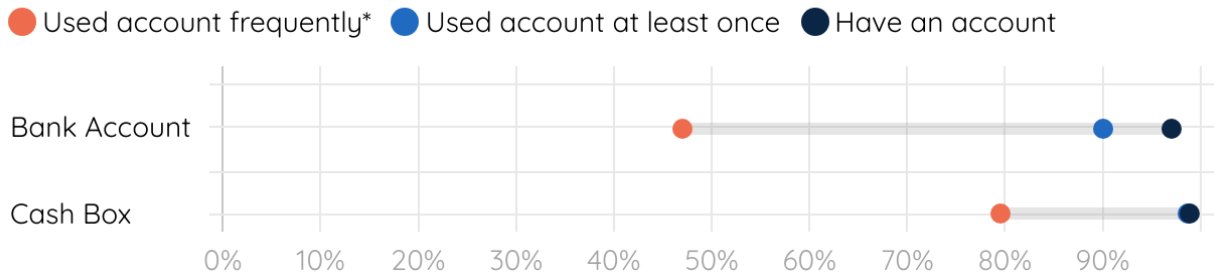
At the beginning of the Diaries, we asked each firm owner to list the accounts they used for the firm. Almost 100% of our firms say that they own a bank account they use for the business, while the same proportion use a cash box for the business as well. Other account types are less prevalent –

[14] Chaia et al., 2013
[15] The World Bank, The Global Findex Database 2021, https://www.worldbank.org/en/publication/globalfindex
[16] Defined here as getting or giving credit to suppliers or customers, whether in currency or in kind.

40% have an account with informal savings groups; only 6% have an account with a microfinance institution (MFI) and 2% have a mobile money wallet. Looking deeper not just at reported ownership, but those who reported using an account type at least once during the study, we see a small gap: 90% of all firms—7% less than firms that report owning an account—use their bank accounts at least once. (Figure 4.1). We see a bigger gap when we look at firms that use their accounts for at least 25% of total transaction value (inflows and outflows): in this case bank accounts were used by 47% of firms, while cash boxes are the predominant tool (80% of firms used cash boxes for 25% or more of their transaction value). This reveals that while a high percentage of our firms report owning a bank account used for the business, few used their bank account for a meaningful percentage of their business.

FIGURE 4.1: BANK ACCOUNT AND CASH USE FOR BUSINESS PURPOSES

In Nigeria, 97% of the small firm owners had a bank account, but less than half used it frequently.



*for 25% or more of transactions by value

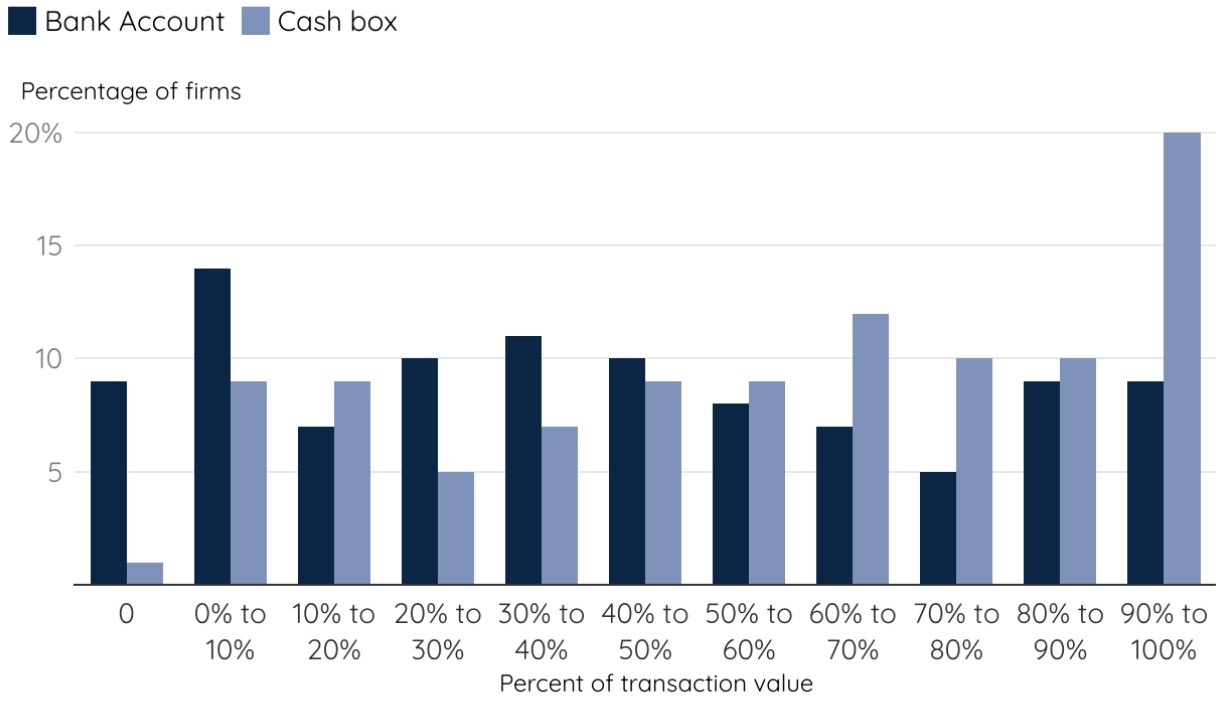
Of the firms that do use their bank accounts, we can use the high frequency data gathered to see how important a bank account is in each firm's financial management. As our methodology allows firms to bundle small transactions, and most small transactions happen in cash, we choose to focus on *value* 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 (for instance) a cash payment from a customer that the firm owner later 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, in this report we look deeper into the cash flow data to categorize a firm's level of banking activity based on the value of its total

transactions from or into a bank account. 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 banking activity across our sample (see Figure 4.2).

FIGURE 4.2: PERCENT OF TRANSACTION VALUE TRANSMITTED VIA ACCOUNT TYPE



Based on the recorded flows, the most important dimension for integrating small firms like those we studied more firmly into the formal system is increasing the usage of formal financial services of the firms (about 52% of firms for banks) that are using formal finance but for less than half of their financial activity.

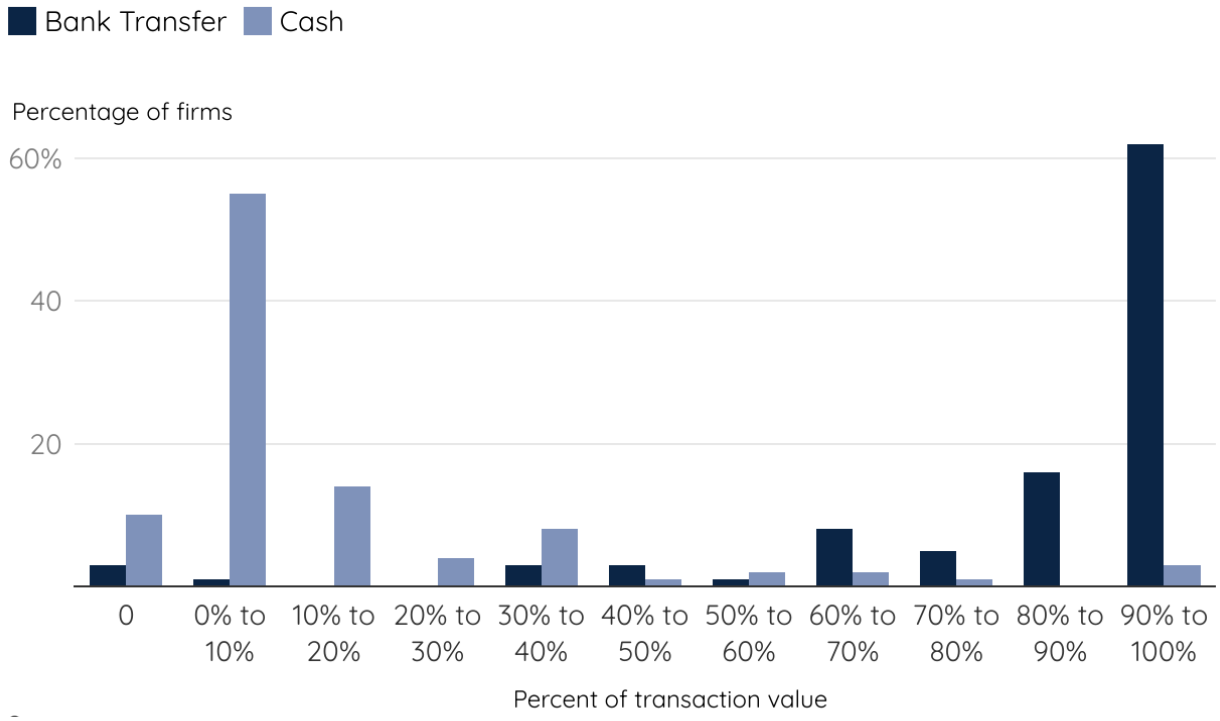
TRANSACTION MECHANISMS

In this section, we focus on banking integration based on the account types that firms report using to originate or terminate a transaction. As noted, using this metric 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. We collected data on these "transfer mechanisms" separately.

Figure 4.3 outlines the relationship between "account used" and "transaction mechanism" and shows the distribution of firms by transaction value from a bank account via bank transfer vs. cash. Roughly 60% of firms make bank transfers for 90% or more of the value they process through their bank account. The small discrepancies between account used and transaction type illustrate that firms rely on banks for both storage and for the transfer mechanisms offered directly, apparently seeing high value in the built in transfer tools provided by banks. This comfort and use of bank

transfers is likely to be a challenge for pure mobile money operators seeking to increase penetration in the small firm segment.

FIGURE 4.3: PERCENT OF BANK ACCOUNT TRANSACTION VALUE VIA TRANSACTION MECHANSIM



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.

SEPARATION OF FINANCES

A second key metric for understanding the finances of small firms is the degree to which owners separate their business 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 three quarters —74%—of our total sample (including firms that are unbanked) report keeping specific separate accounts for their business. Banked firms report keeping separate finances at higher rates than unbanked firms: 78% vs. 40%. Banked firms are still more likely to have a cash box dedicated solely to their business than a bank account just for the firm—66% percent of firms have a business cash box compared to 48% for bank accounts. In contrast, bank accounts are still commonly used by firms that do not separate their finances: 91% of firms have a "mixed use" bank account vs. 59% for cash boxes.

Size of firms (by revenue) is a somewhat better proxy for separation of finances: 81% of firms in our highest revenue segment separate finances, while 76% of those in the lowest tier of revenue

segmentation do so.[17] Female and male firm owners report separating their finances at the same rate (76%).

We did not verify the legal status of the bank accounts firm owners report. 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 based on our review of bank websites, the most common requirements were a Corporate Affairs Commission Registration and a tax registration. While only 44% of the firms have a tax registration, 75% of firms have Corporate Affairs Commission registration. Given this, we surmise that at least some of the accounts are not legally registered to the business, but to the owner. Firms with a CAC registration are more likely to be banked—95% of firms with a CAC registration are banked. Different patterns exist for perceived formality. Firms that are heavy users of bank accounts are not more likely to perceive themselves as formal—42% of highly banked firms perceive themselves as formal, compared to 40% of unbanked firms.

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).

[17] Per Figure 3.5, firms are categorized based on median monthly revenue. The cutoffs are: Low: less than NGN 120,000; medium: NGN 120,000 to NGN 320,000; and high: NGN 320,000 to NGN 1 million. Firms with revenue above NGN 1 million are considered outliers.

FIGURE 4.4: LEVEL OF BANKING INTEGRATION

Level of banking integration	Definition	Percentage of firms
High	More than 75% of transaction value conduction into or from a bank account	20%
Partial	Between 25% and 74% of transaction value conduction into or from a bank account	43%
Marginal	Less than 25% of transaction value conduction into or from a bank account	27%
Unbanked	Do not report using a bank account	9%

There is a positive relationship between financial integration and revenues—highly integrated firms have higher monthly revenues than partially or marginally integrated firms (NGN 478,000 vs. NGN 238,000 and NGN 221,00 respectively), while the few unbanked firms have significantly lower median monthly revenues (NGN 145,000). However, there is still 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)

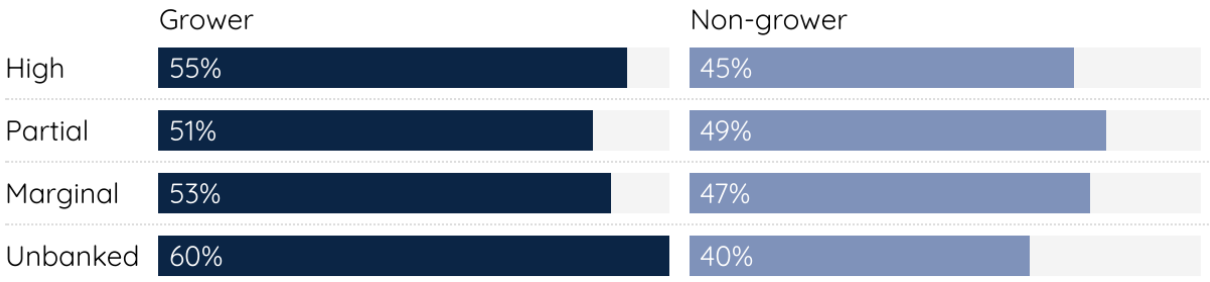
FIGURE 4.5: REVENUE PARAMETERS BY LEVEL OF BANKING INTEGRATION

	Median	MIN	MAX	Median CV
High	$477,950.00	$39,650.00	$4,475,700.00	0.44
Partial	$238,267.50	$27,500.00	$54,724,595.00	0.42
Marginal	$221,000.00	$24,250.00	$2,337,185.00	0.38
Unbanked	$145,750.00	$17,975.00	$1,120,500.00	0.44

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 55% of our highly integrated firms are "growers" (as defined in Section 3 as those firms with positively sloping monthly revenue trendlines), compared to 60% of unbanked firms.

FIGURE 4.7: LEVEL OF BANKING INTEGRATION AND FIRM GROWTH



As there is a global effort to increase adoption of digital financial tools by encouraging employee payments via digital financial services, we looked specifically at the use of types of accounts for employee payments and how common cash is. We find that while highly integrated firms essentially never use cash to pay their employees, firms at all other levels of banking integration do (see Figure 4.7). In comparison, partially integrated firms were more likely to equally split other expenses and revenues between cash and bank payments.

FIGURE 4.7: ACCOUNTS USED TO PAY EMPLOYEES

Median percentage of transaction value by account type

	Bank Account	Cash Box
High	92%	8%
Partial	31%	69%
Marginal	0%	99%
Unbanked	0%	100%

Male and female firm owners were unbanked at a similar rate: 8% of female firm owners are unbanked compared to 12% of male firm owners. Female firm owners have a higher proportion of highly integrated respondents: 28% vs. 14% of men. 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 45% 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 40%.

Firms in different industries are similarly distributed across levels of banking integration. The

median percent of value flowing through a bank account is similar across industries: 35%, 45%, and 42% for agri-processing firms, light manufacturing firms, and services firms respectively.

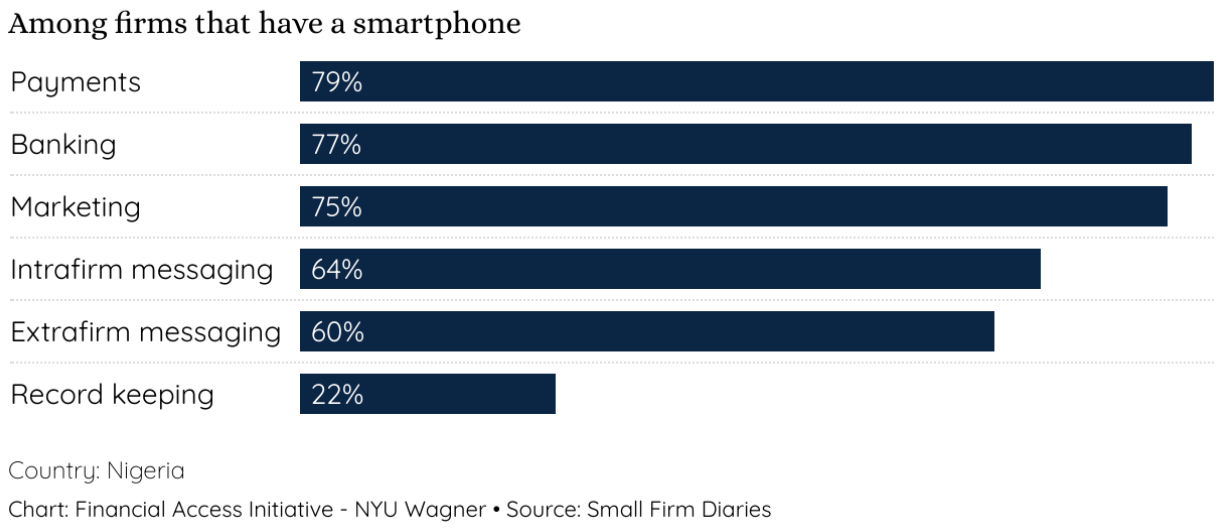
Looking at the relationship between formalization and financial integration, we find that, while firms with a CAC registration are much more likely to be banked, having a CAC registration does not perfectly predict financial system integration, as partially integrated firms are more likely to have a registration than highly integrated firms. In addition, we did not 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 Nigeria Manage their Finances,* available at smallfirmdiaries.org/nigeria.

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).

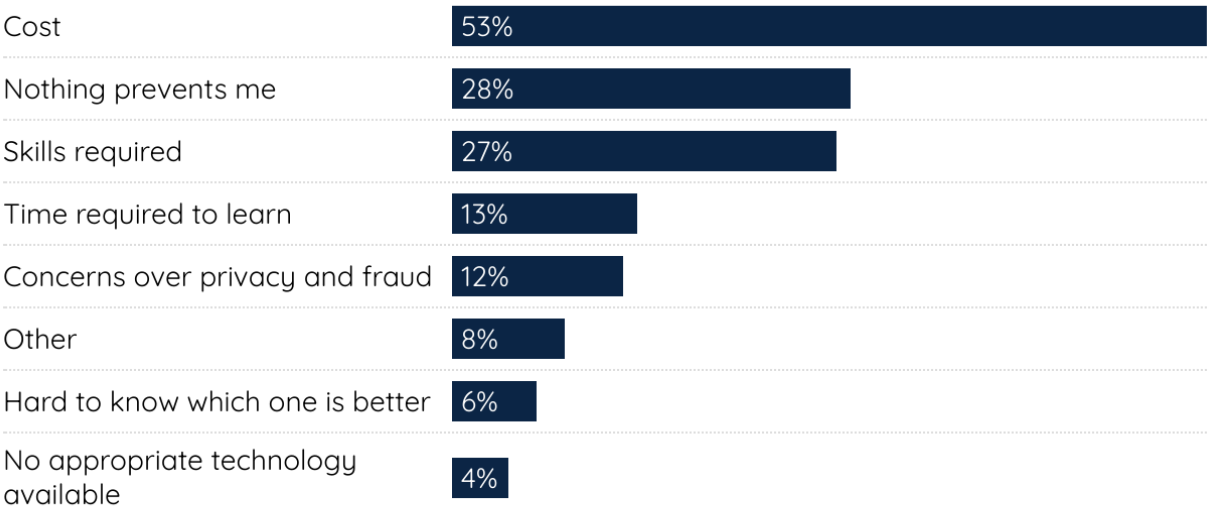
Smartphones are important tools for the majority of businesses in our Nigerian sample. Over 74% of our firms use a smartphone for their business. A higher percentage of men use a smartphone for business than women (80% vs. 61%). Unbanked and marginally integrated firms also have lower smartphone adoption rates than highly and partially banked firms (64% vs. 80%). Of the 74% of firms that use a smartphone for business, the most common reasons for use are payments and mobile banking (see Figure 4.8).

FIGURE 4.8: BUSINESS USES FOR A SMARTPHONE, PERCENT OF FIRMS



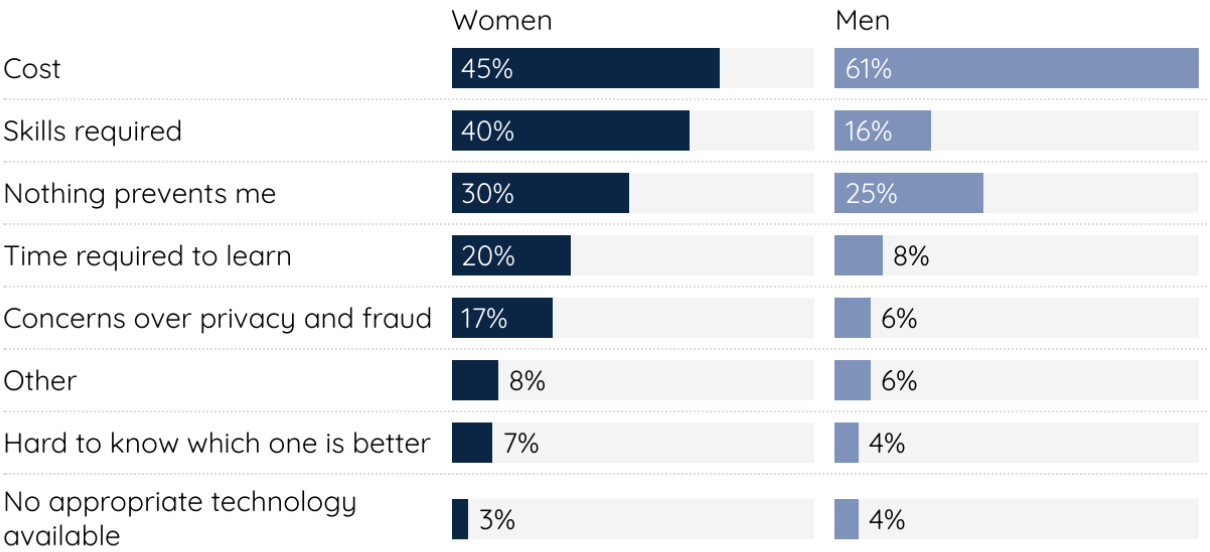
In a separate survey on attitudes towards and adoption of technology, we asked firms what prevents them from using technology broadly (Figure 4.9). Over half of firms reported cost as a barrier to using technology, while only a quarter reported a skills barrier. Interestingly, given Nigeria's global reputation as a source of financial scams, less than 15% of firms reported concerns over privacy and fraud.

FIGURE 4.9: BARRIERS TO TECHNOLOGY ADOPTION, PERCENT OF FIRMS



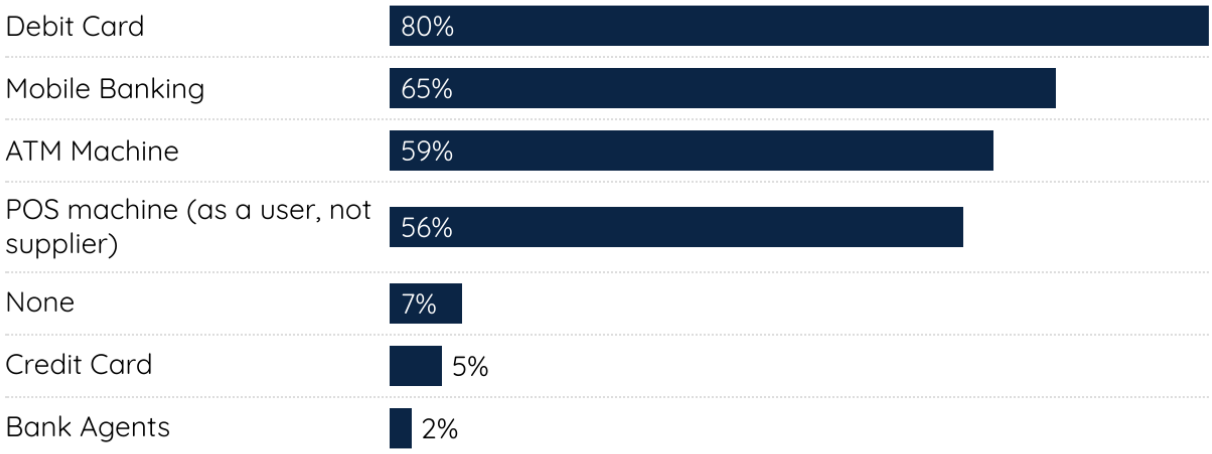
As shown in Figure 4.10, women were also more likely than men to report skills and time required to learn as barriers to adoption (40% of women as opposed to 15% of men). While men were more likely to report cost as a barrier.

FIGURE 4.10: BARRIERS TO TECHNOLOGY ADOPTION, PERCENT OF FIRMS BY 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 banking and debit cards (Figure 4.11). Notably, the use of mobile banking is exponentially higher than bank agents, but debit card usage still outweighs mobile banking.

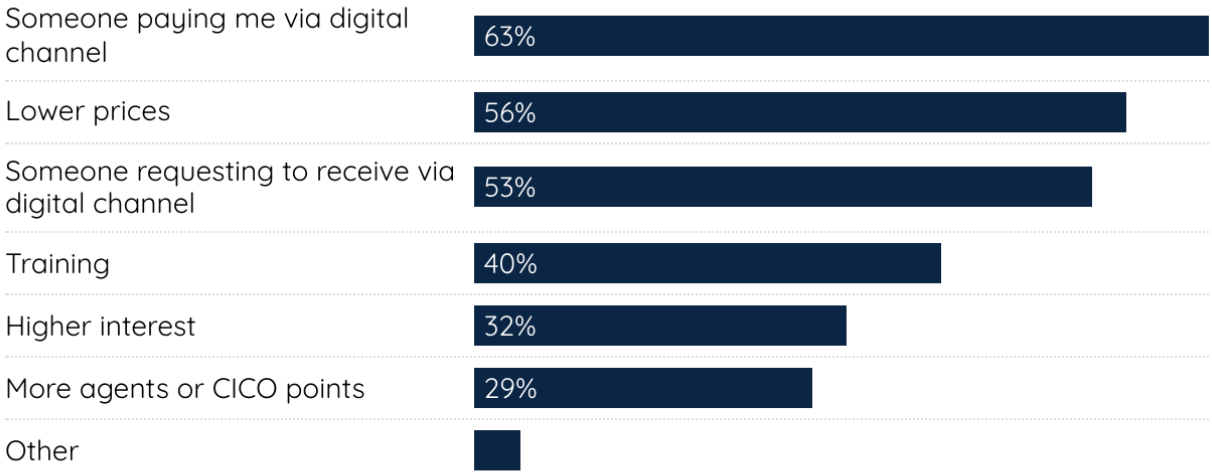
FIGURE 4.11: REPORTED DIGITAL FINANCIAL SERVICES, PERCENT OF FIRMS



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 issue reported was money arriving late (60% of firms with issues), followed by loss of access and missing money (30% of firms with issues for both). The challenges were similar across banking integration levels.

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 4.12). Over half of firms report lower prices as a reason to use digital payments more. However, receiving a payment was a more common reason, at 63%, and a request to send a payment was as common as lower prices. We see slight variations in drivers of adoption across levels of bank integration. For highly integrated firms the most common driver was a customer sending them a digital payment, followed by a supplier requesting a digital payment. In contrast, for marginally integrated firms, lower prices was the most commonly reported potential driver.

FIGURE 4.12: REASONS TO USE DIGITAL PAYMENTS MORE, PERCENT OF FIRMS



CREDIT ACCESS AND USAGE

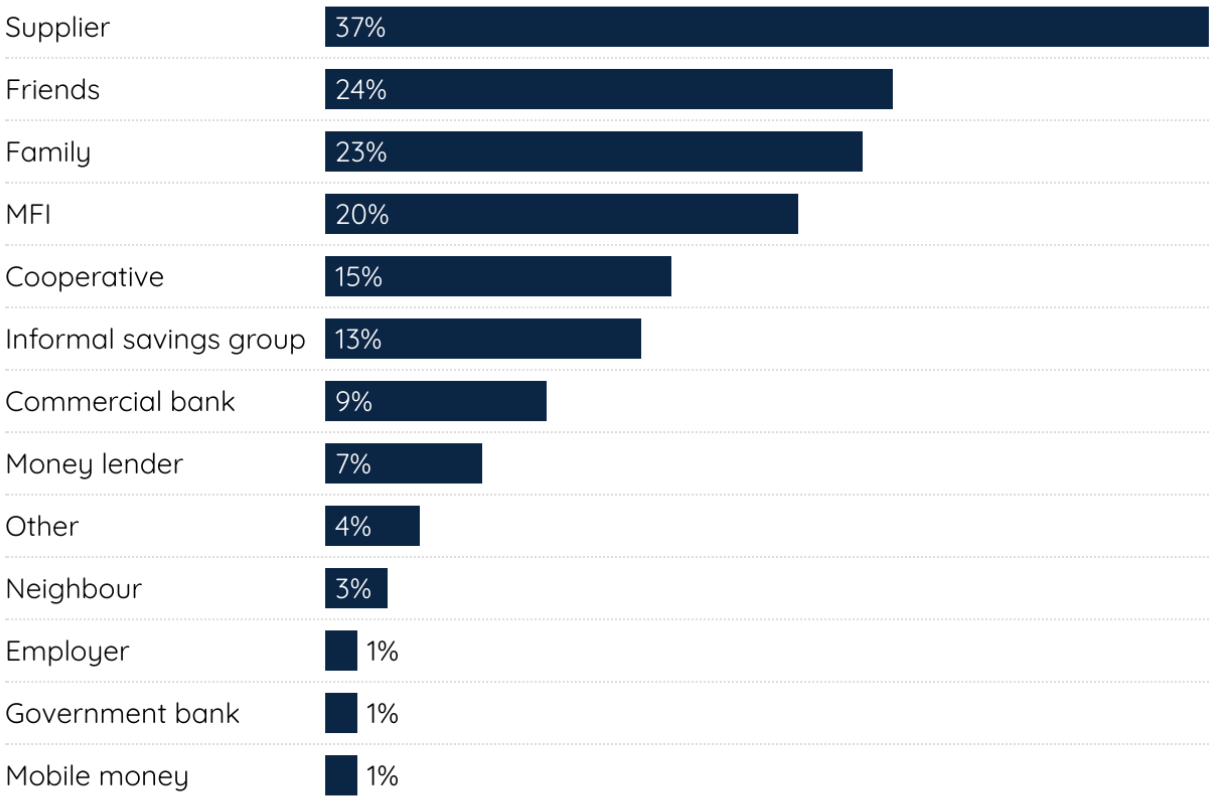
In the Small Firm Diaries we were eager to understand the credit access, needs and behaviors of small firms. Were the firms "graduates" of microfinance programs? Did they have access to credit at all? If so, where was the credit coming from? How big of a barrier was credit access to their growth and 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 (46%) 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 similar proportion of our female and male firm owners took loans (45% vs 47% respectively). However, women business owners, on the median, took lower value loans than men—NGN 57,000 compared to NGN 93,000. There were some differences across industries: agri-processing firms were most likely to take a loan (56%), compared to 49% for light manufacturing firms, and 37% of services firms. Agri-processing firms took higher value loans than services or light manufacturing firms, on the median, at NGN 340,000 compared to NGN 100,000 and NGN 30,000 respectively.[18]

Suppliers, friends, and families are the most common loan sources in Nigeria (see Figure 4.13). Many firms (40%) rely on more than one source of credit. For example, 72% of firms with a loan from an MFI also have a loan from an informal source.

[18] For a more complete comparison of differences between industries, see the Appendix.

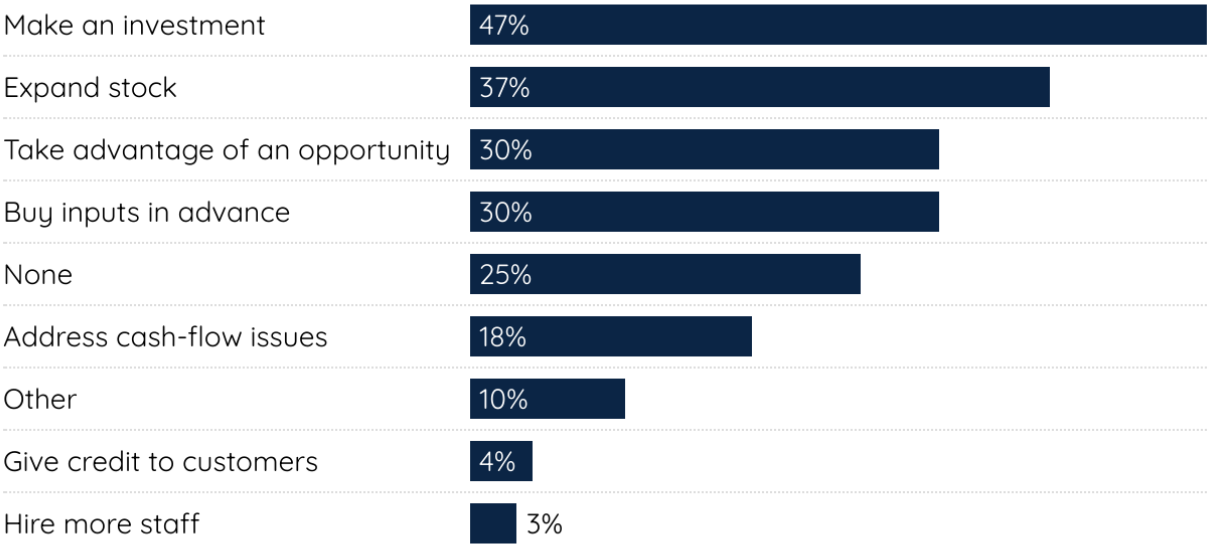
FIGURE 4.13: BUSINESS LOAN SOURCES, PERCENT OF FIRMS



During the study, we asked firm owners what they use or would want to use a loan for, with a variety of options (Figure 4.14). The answer choices were not mutually exclusive: firm owners could choose multiple responses. The most popular response was "make an investment," followed by "expand stock."

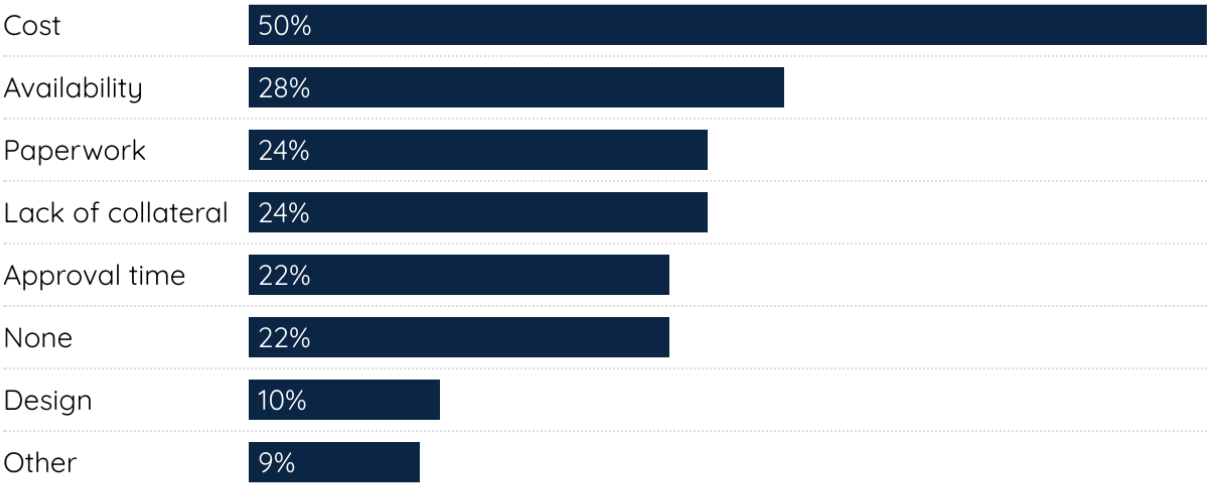
To better understand what firms considered investments, we looked at the "assets" and the large purchases they reported during the study. During the study, 27% of firms reported buying new "assets." Of these firms, 60% reported buying new machinery for their business (the most common type of asset purchase). The second most frequent asset purchase was an electrical appliance, reported by 12% of firms. In contrast, the vast majority of "large purchases" (single expenses with an amount that is larger than three times the standard deviation above the mean of single expenses for the given firm) were for raw materials/inventory (61% of large purchases and 67% of firms). For context, only 26% of firms that made large purchases reported these as purchases of an asset. Given the majority of large expenditures were on raw materials, we believe that at least some portion of the "make an investment" answers to desired use of loans are related to purchases of raw materials. Thus, of the firms that want to use loans, the desired uses for loans are frequently for working capital needs in addition to capital investments.

FIGURE 4.14: DESIRED USES FOR LOANS, PERCENT OF FIRMS



We also asked firms about the barriers that prevented them from accessing credit. Cost was the most frequently cited barrier, reported by half of firms. Notably, issues at the forefront of policy design, such as lack of collateral, availability, and design were reported half as often or less (28%, 24%, and 10% respectively) (see Figure 4.15). Regardless of loans taken, firm owner gender, or industry, cost was the main barrier cited, followed by availability of loans.

FIGURE 4.15: PERCEIVED BARRIERS TO ACCESSING CREDIT, PERCENT OF FIRMS



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, 49% of formal firms and 47% of semi-formal firms have a loan, compared to 33% of informal firms. Given the prevalence of informal loan sources, we found that formal and informal loans alike rely on these sources. For example 11% of both formal and informal firms with loans have

a loan from a commercial bank (just 4 and 2 firms respectively); similarly 25% of formal and 18% of informal firms with loans have borrowed from family. Microfinance institutions (MFIs) were the most common loan supplier for informal firms (35% of informal firms with loans), while suppliers were the most common loan supplier for formal firms (39% of formal firms with loans). 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.

We also found that, while a higher percentage of banked firms have loans than unbanked firms. Credit usage does not increase with level of integration—44% of marginally integrated firms have loans compared to 39% of highly integrated firms. They also use "formal" credit tools at similar rates—7% of both highly integrated and marginally integrated firms have a loan from a commercial bank.

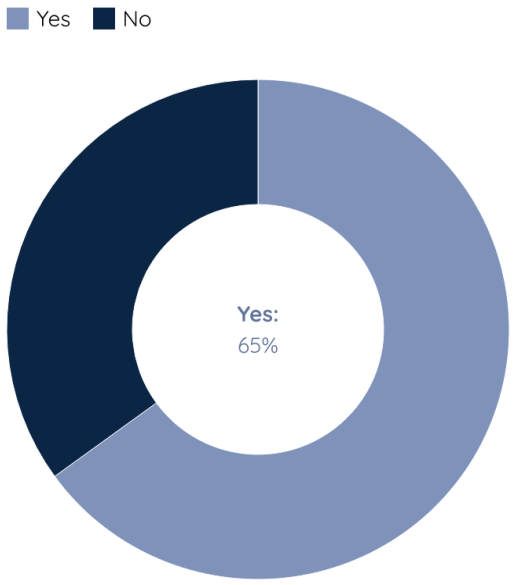
SUPPLY CHAIN FINANCE

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 65% of our firms give or receive credit through supply chain finance. 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.

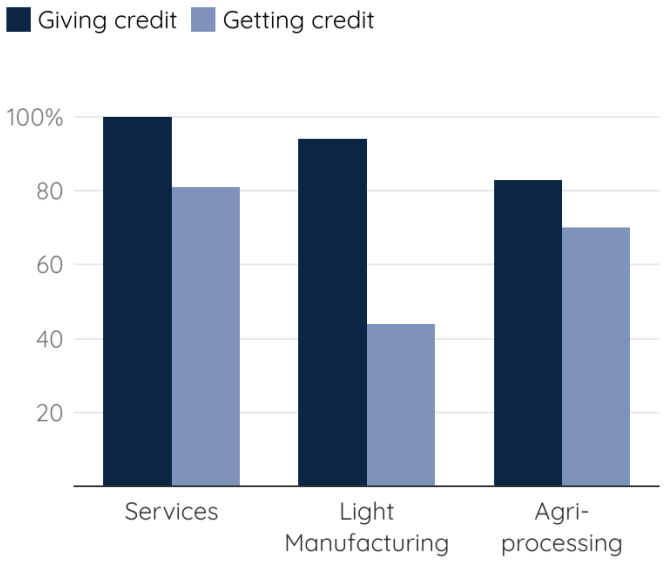
We can separate out the use of supply chain finance into two categories: getting and giving credit. Based on the struggles with liquidity that firms face it is at first glance surprising that the firms give credit—transferring liquidity to customers—more than they receive it (Figure 4.16). However, it 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 light manufacturing firms receive less credit than agri-processing or services.

FIGURE 4.16: USE OF SUPPLY CHAIN FINANCE

Does your firm use supply chain finance?



What type of supply chain finance does your firm use?*



*Among firms that say they use supply chain finance

Users of supply chain finance see a variety of advantages compared to other sources of credit (see Figure 4.17). Users most commonly cite its flexibility and ability to strengthen business relationships, while non–users most frequently report being unaware of benefits, followed by its ability to strengthen business relationships Of course there are risks as well as advantages (Figure 4.18). Non-users and users of supply chain finance alike believe that it poses a risk to their relationships with suppliers and customers or can create a dependency on one supplier or customer.

FIGURE 4.17: ADVANTAGES OF SUPPLY CHAIN FINANCE

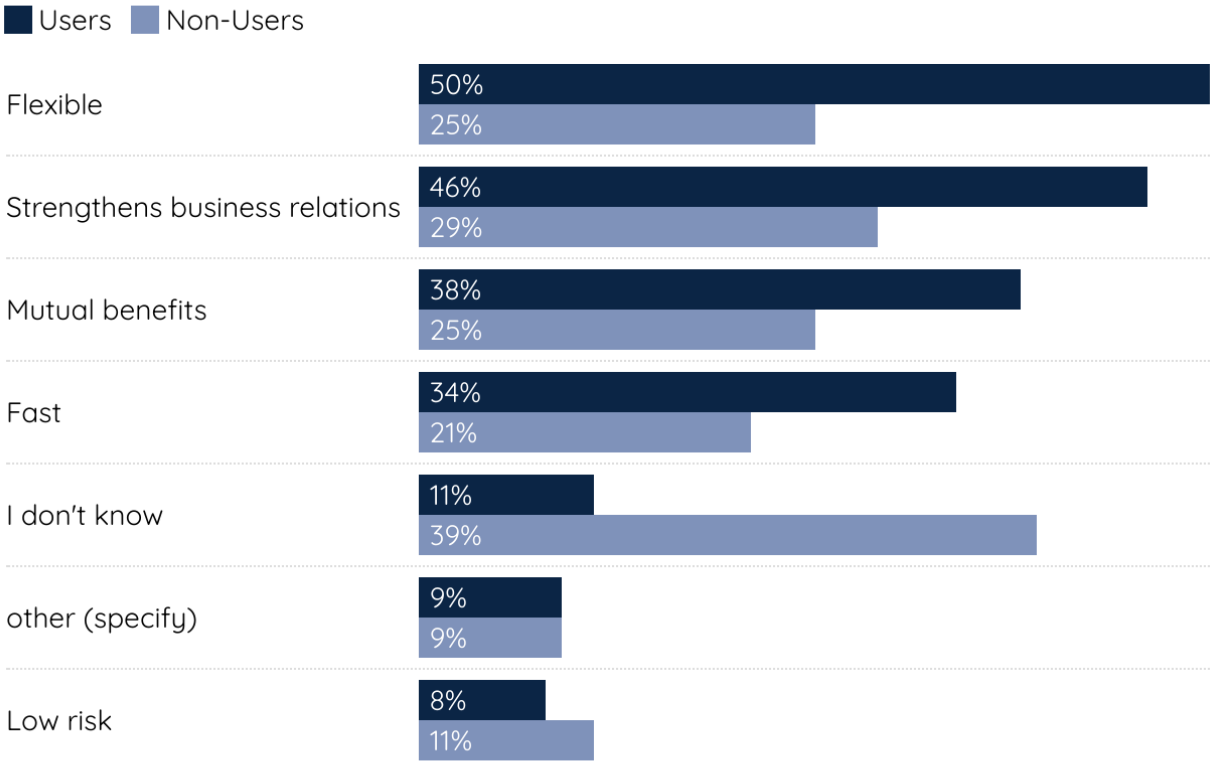
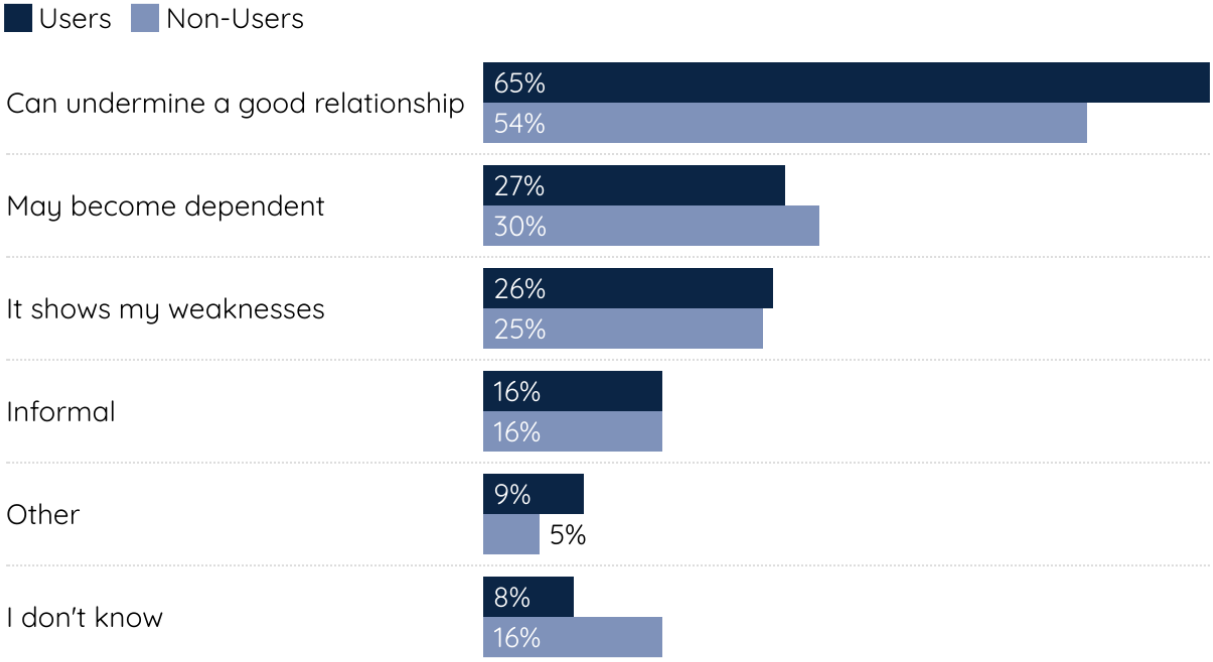


FIGURE 4.18: DRAWBACKS OF SUPPLY CHAIN FINANCE



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. Becoming formal 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.[19] 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 have the registrations required to be considered formal. In this section, we look at the firms' self-reported levels of formalization and compare that to the registrations they report holding. We also look at barriers to becoming formal, 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.

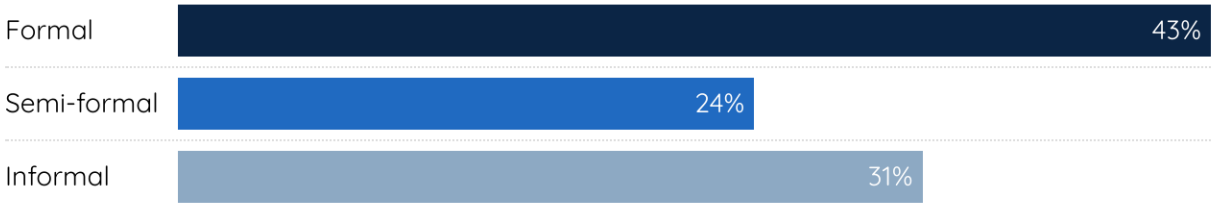
LEVEL OF FORMALIZATION

In Nigeria, firms must register with the Corporate Affairs Commission (CAC), federal and state tax agencies, and other local registration requirements, including registration within the Local Government Area of domiciliation. Other specific requirements may be relevant to the industry, service or product, for instance registration with the National Agency for Food and Drug Administration and Control (NAFDAC). 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, 42% of firms reported having registered with the Corporate Affairs Commission, 23% with the tax office, and 27% with the local or municipal government. A higher percentage of men-owned businesses compared to women-owned businesses reported registration with the Corporate Affairs Commission (44% vs. 33%), while a higher percentage of women-owned businesses reported registration with the tax office (23% vs. 17%). A higher percentage of women-owned businesses also reported registration with the local or municipal government (28% vs. 24%).

We asked firms whether they considered themselves formal, semi-formal or informal. As shown in Figure 5.1, the majority of firms consider themselves formal (43%), while nearly one quarter consider themselves semi-formal (24%), with the remaining considering themselves informal (31%).

[19] Bruhn and McKenzie, 2014

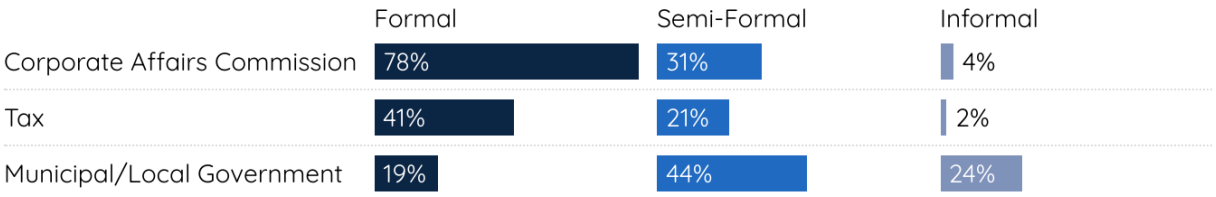
FIGURE 5.1: SELF REPORTED LEVELS OF FORMALIZATION, % OF FIRMS



When comparing perceived formalization and reported registrations, we found that the majority of "formal" firms reported a CAC registration. Firms did not perceive that a tax registration was required to be formal: less than half of firms that identified as formal reported tax registration (Figure 5.2). Formal firms considered registration with the local or municipal government to be even less relevant, though both semi-formal and informal firms were more likely to have registered with the municipal or local authority (44% and 24%, respectively), than to have registered with the tax authority .

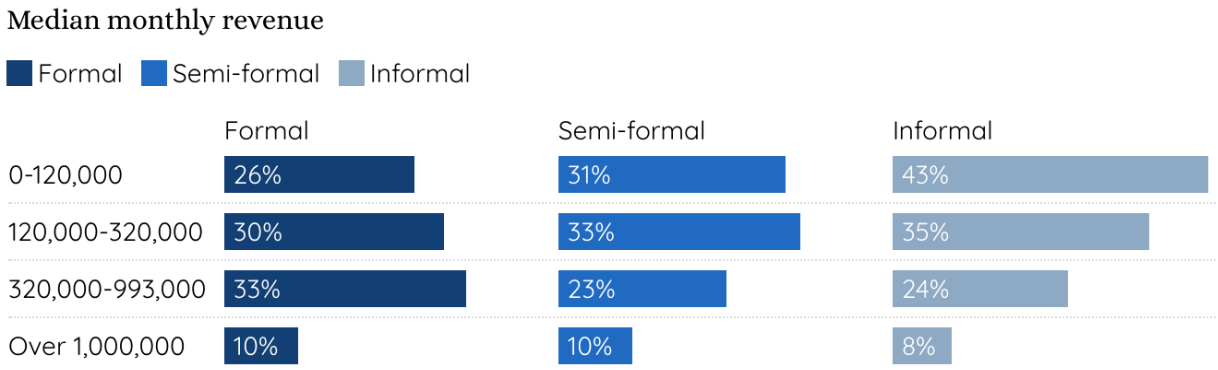
FIGURE 5.2: REGISTRATION TYPES BY SELF-REPORTED LEVEL OF FORMALITY, PERCENTAGE OF FIRMS

Many firms have more than one type of registration



Unsurprisingly, firms that considered themselves informal were usually the lowest earning: 43% of them earn less than NGN 120,000 in monthly revenue (Figure 5.3). Services firms were also more likely to report they were formal (58%), and formal firms were more likely to be in the high-income range. Gender was also an important contributor to perceived levels of formalization: 30% of women-led firms self-identified as formal, whereas 44% of men-led firms identified as formal.

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



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 followed by the threat of fines for not being registered. Other incentives such as client preference or increased competitiveness 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

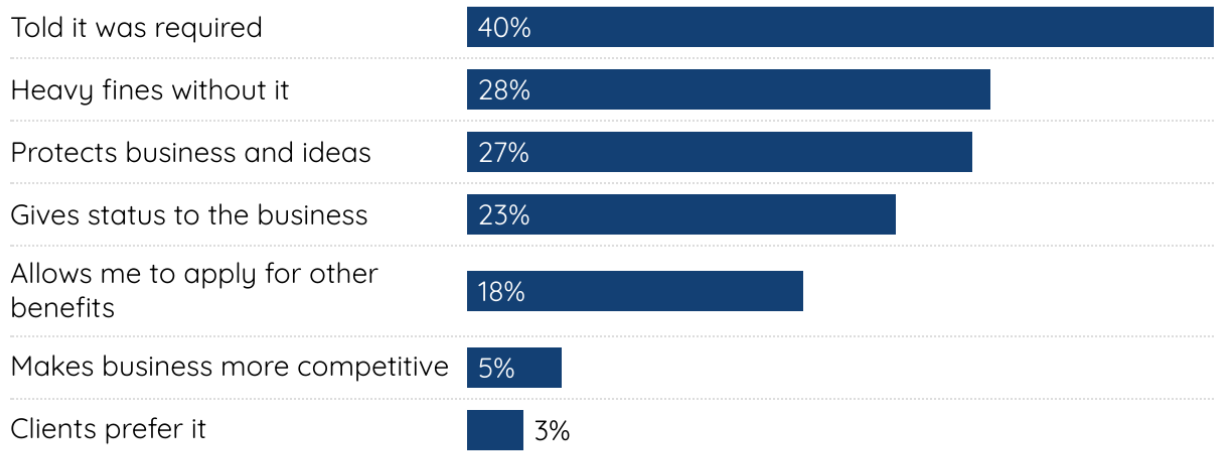
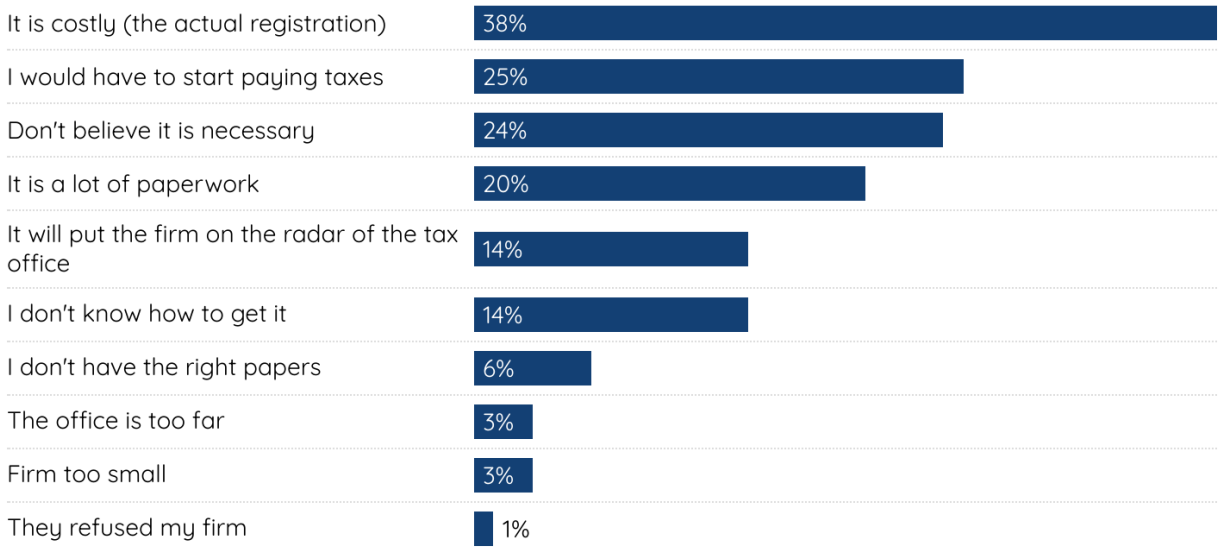


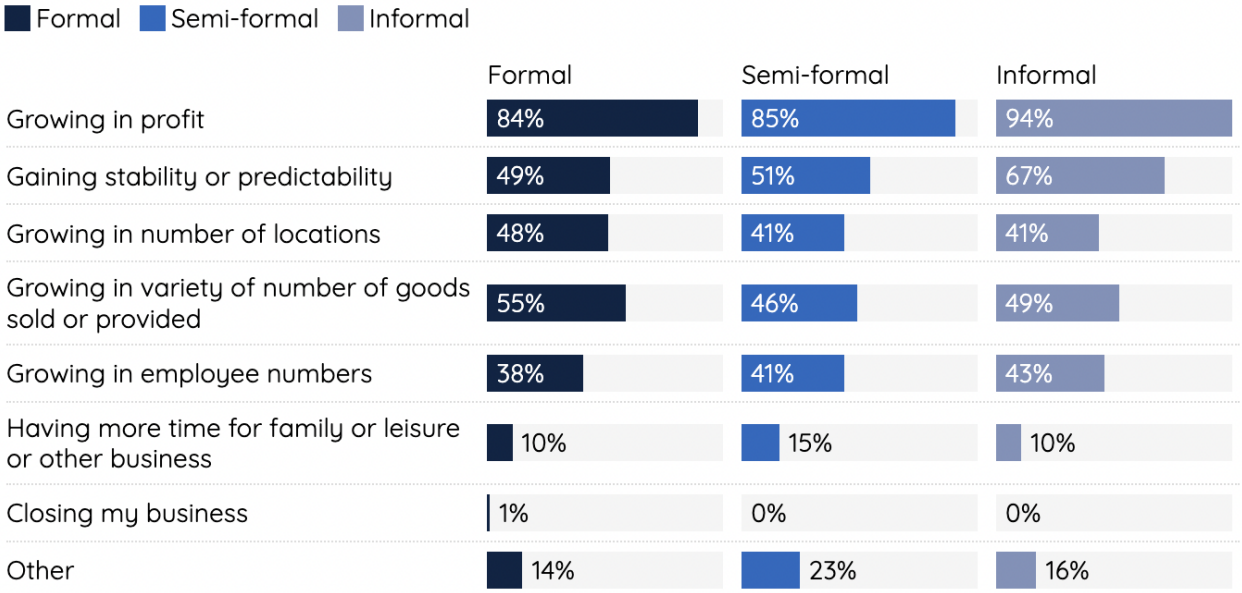
FIGURE 5.5: REASONS FOR NOT OBTAINING REGISTRATIONS



Formalization also does not appear to be strongly influenced by aspirations (Figure 5.6). Formal and informal firms reported growth aspirations at roughly similar levels (for all forms of growth; see Section 8 for more on firm aspirations). Growing in profit was the most common aspiration at all levels of formalization, though most common amongst informal firms (94%). This survey result stands to reason, given the fact that informal firms were the most likely to be low-earners, as previously established (see figure 5.3). Informal firms were also the most likely to indicate gaining stability and predictability as an aspiration within the next five years (67%). While gaining stability and predictability was the second more commonly cited priority for semi-formal firms as well (51%), formal firms were more likely to prioritize growing in variety or number of goods provided (55%) over increased stability and predictability (49%).

FIGURE 5.6 FORMALIZATION AND ASPIRATIONS

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



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:

- Overcoming administrative barriers: "It enables you to run your business smoothly without fear or intimidation." *(A formal services firm in Lagos)*
- Consumer confidence: "It builds customers' trust and gives people a good impression about the firm." *(A semi-formal services firm in Lagos)*
- Access to opportunities: "Allows me to deal with corporate clients, penetrate markets and gives me access to funding and other investment opportunities." (*A formal agri-processing firm in Kaduna*)

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

- Cost: "The local government registration and yearly renewal is expensive and I haven't benefited in any way from government." *(A semi-formal agri-processing firm in Enugu*)
- Tax Burden: "I pay money to the government whether I am getting good business revenue or not." *(A semi-formal light manufacturing firm in Enugu)*
- Hassle: "Renewal of some of the certificates is stressful, it is not about the money but the stress of going back to get it done is tiring." *(A formal agri-processing firm in Lagos)*

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.[20] As noted in the introduction, in Nigeria, MSMEs (defined as 0 to 99 employees) make up 99.8% of companies in the country, provide 84% of job opportunities, and contribute approximately 49% to the Gross Domestic Product according to the ILO.[21]

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.

These facts suggest that one-time household surveys and firm surveys obscure important and policy-relevant details of this major source of employment in Nigeria.

[20] ILO, "The power of small: How SMEs are driving job creation and inclusive growth"
[21] https://www.pwc.com/ng/en/assets/pdf/pwc-msme-survey-2020-final.pdf

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 complex in high-income countries, as contractor workers and platform work (e.g. delivery apps) proliferate. Given 18% of our firms are not formally registered in any way, and the varying definitions of an "employee" in Nigeria (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 512 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; 45% of firms reported three or more employees.

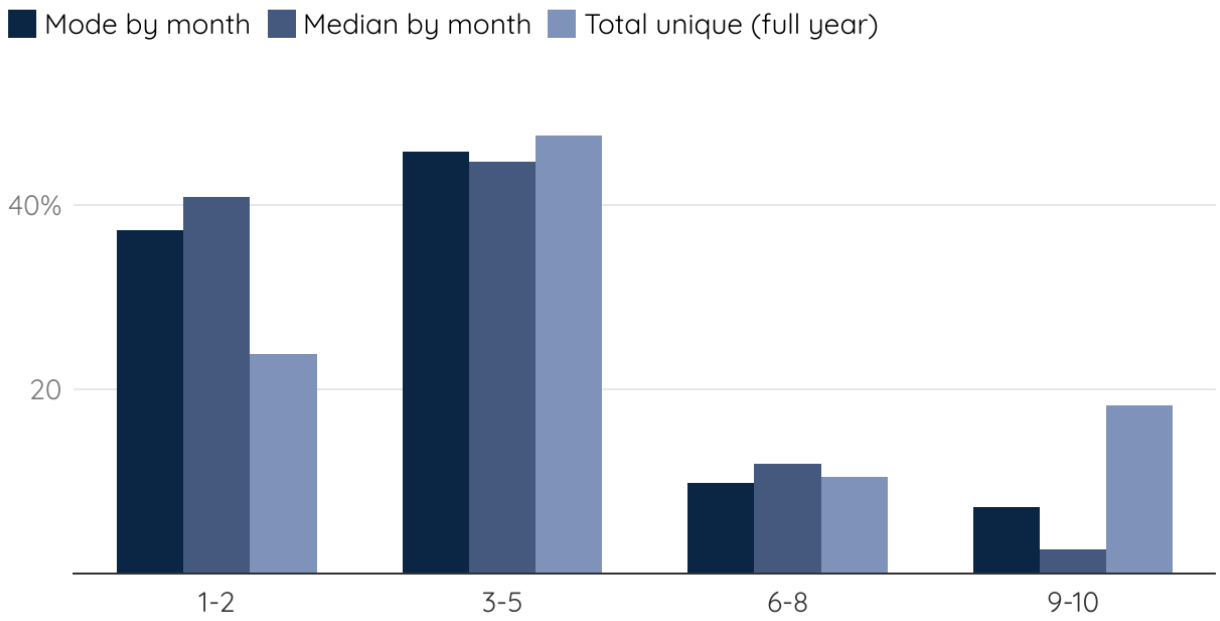
FIGURE 6.1: REPORTED NUMBER OF EMPLOYEES FROM BASELINE SURVEYS

Reported employees	Number of Firms	Percent of Firms
1 - 2	86	55
3 - 5	49	32
6 - 20	20	13

Based on employee payments, however, almost all firms are closer to the lower bound for participation in our study. In any given month, firms paid on average two to three employees. While some firms had low turnover and also paid a total of two unique employees, 86% of 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 22% of the employees get paid 8 months or more in a 10-month period; 56% of employees work at the same firm for fewer than 5 months (Figure 6.3). Turnover was the highest in the service industry where 62% of employees work for 5 months or less in a 10-month period compared to 56% and 45% in light manufacturing and agri-processing.

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	98	20%
2 to 4 months	172	36%
5 to 7 months	105	22%
8 to 10 months	106	22%

While more than half of the 512 employees are short-lived, 38% 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)

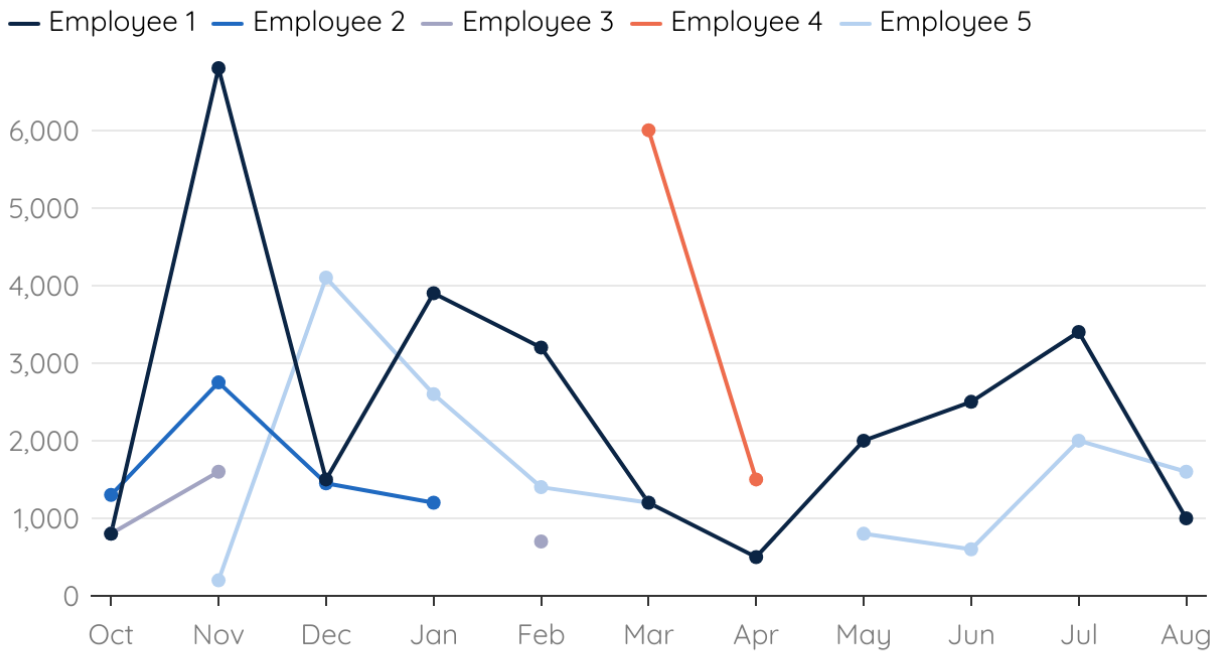
FIGURE 6.4: MAXIMUM NUMBER OF MONTHS PAID TO A SINGLE EMPLOYEE

Maximum number of months paid to a single employee	Number of firms	Percent of firms
1 month	14	10%
2 to 4 months	31	21%
5 to 7 months	45	31%
8 to 10 months	55	38%

To better understand the shape of employment, Figure 6.5 gives an example from a single firm. The firm started the survey with three employees, but of those, only one remained for the whole ten months and two other individuals were hired after the start of data collection. Employee 2 was let go in January, Employee 3 worked in October and November, but not again until February and then did not return. Employee 4 only worked between March in April, when the firm had an influx of orders, and even though Employee 5 worked throughout the year, there was a two month gap for them between March and May. Even those who worked throughout the duration of the study saw their salaries change every month by varying amounts. Curiously, the second highest sum paid to an individual in one month went to the employee with the shortest tenure (Employee 4).[22]

[22] 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 (NGN) PER EMPLOYEE AT A METAL WORKS FIRM IN KADUNA



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 Nigerian labor law (see callout box on the Nigerian 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 Nigeria, owners report little spending on this category; just 10% of firms in Nigeria reported having a casual worker and payments to casual workers made up just 3% of total payments to employees. In contrast, a third of firms reported "salaried" employees and payments to fixed salary workers made up 38% of total payments to employees. However, 36% 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, casual laborers are paid a median of two out of ten months and formal salaried employees are paid a median of four. However, for formal salary workers paid in three or more months, the median CV of their payments is 0.1, compared to 0.4 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 four out of ten months and the median CV of their monthly payments is 0.3.

THE NIGERIAN LABOR MARKET

The Nigerian Labor market is regulated by laws that govern employment relationships nationwide. These include the Labour Act (2004), the Employees Compensation Act (2010), the Industrial Training Act (2011), the Pensions Reform Act (2014), the Trade Unions Act (2005), the Trade Dispute Act (2004), National Minimum Wage Act (2019), the Nigerian Factories ACT (2004), Discrimination against Persons with Disabilities (prohibition) Act (2018), National Industrial Court Act (2006), and the Constitution of the Federal Republic of Nigeria (1999). These constitute the major legal structures around which the Nigerian labor market is organized. Generally, the Nigerian law recognized three (3) types of employment.

1. Employment governed by a statute: This is a form of employment in which appointment and termination are governed by state, federal or local laws. The statutes, such as the Labour Act, govern the employment procedures and the termination of a contract between the parties, with rights and privileges assigned to each party. Such governing statutes define the terms and conditions of employment and possess the power of enforcement in case of a conflict between the parties to the employment.

2. Employment by written contract: The Nigerian Labour Act defines a contract of employment as "any agreement, whether oral or written, express or implied whereby one person agrees to employ another as a worker and that other person agrees to serve the employer as a worker." In this case, "contractual provisions" regulate the relationships between employer and employee. It also defines the duties, rights, privileges, responsibilities, wages, duration, and contract termination between the employer and employee. The Nigerian Labour Act stipulates that employers must issue a contract of employment to their employees within three months of employment.

3. Employment at will: This occurs when an employee is only employed at the employer's pleasure. Unlike employment by statutory provisions, an employee's employment status in this category is subject to the employer's decision. Examples of employment under this category are political appointments, where the employer has wide volition to "hire and fire" at will. Thus, employee loyalty, in this case, is usually directed towards the employer and not necessarily towards a common good.

Certain types of formal arrangements may be deduced as constituting key employee-employer relationships in Nigeria:

1. Continuous contracts are verbal or written arrangements with no stipulated end date.

2. Temporary 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 for a person to perform a specific task.
4. Casual employment refers to an individual who receives a wage at the end of each working day and is only engaged for a maximum of 24 hours.
5. Apprenticeships are employment for minors with the permission of their parents or guardian.

Despite the comprehensive legal protection of employees, poor enforcement of labor laws is common in Nigeria, and low awareness of employee rights contributes to a high prevalence of casual employment.

APPRENTICES

Another important labor source in Nigeria are apprentices working to develop a skill or trade, especially given that a quarter of our firms feel they have too few employees. According to Nigerian labor laws these apprentices should be minors though practice varies. In our sample, close to a third of firms (28% reported having an apprentice working for them during the study, and apprentices made up 21% of all employees in the study).

Apprentices can be a source of cheap labor for our firms: despite making up a fifth of the labor pool in the study, apprentices only received 8% of the total value of payments to employees. Apprenticeships are typically short lived, or at least paid infrequently, as apprentices in our sample were paid four out of ten months on median. Qualitative interviews revealed that apprentices frequently worked for free, and in fact often paid a sum of money to the small firm owner. In return, the firm owner allowed them to learn on-the-job; in some cases he or she helped the apprentice set up their own shop when the training period was over, though training periods seemed not to conform to a standard length. Across firms in all industries, apprentices typically worked in service (40% of apprentices) or production (57%), as opposed to a small percent in administration or management.

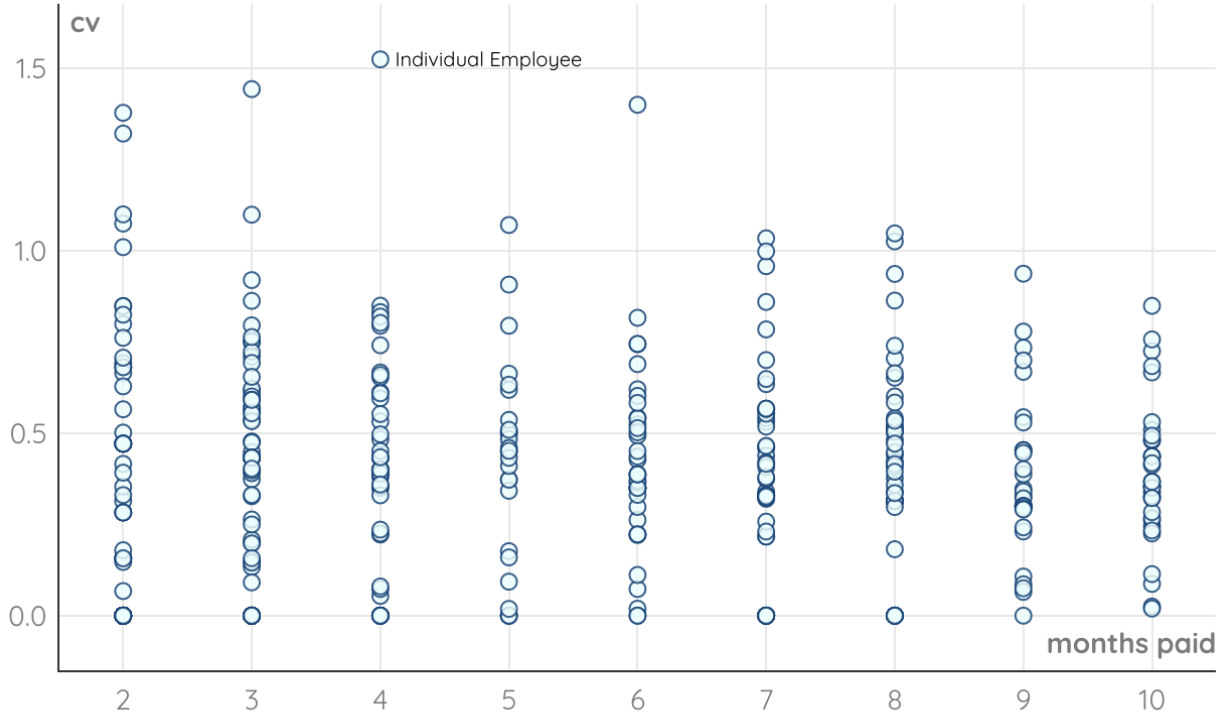
EMPLOYEE PAYMENT

The most common payment arrangements are a formal salary and apprenticeship (each accounting for 21% of employees). The rest are piece-rate pay (19% of employees), informal salary (17%), in-kind pay (9%), and withdrawals as needed (9%). Looking at how these payments were made, 91% of individual employee payments and overall payment value 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

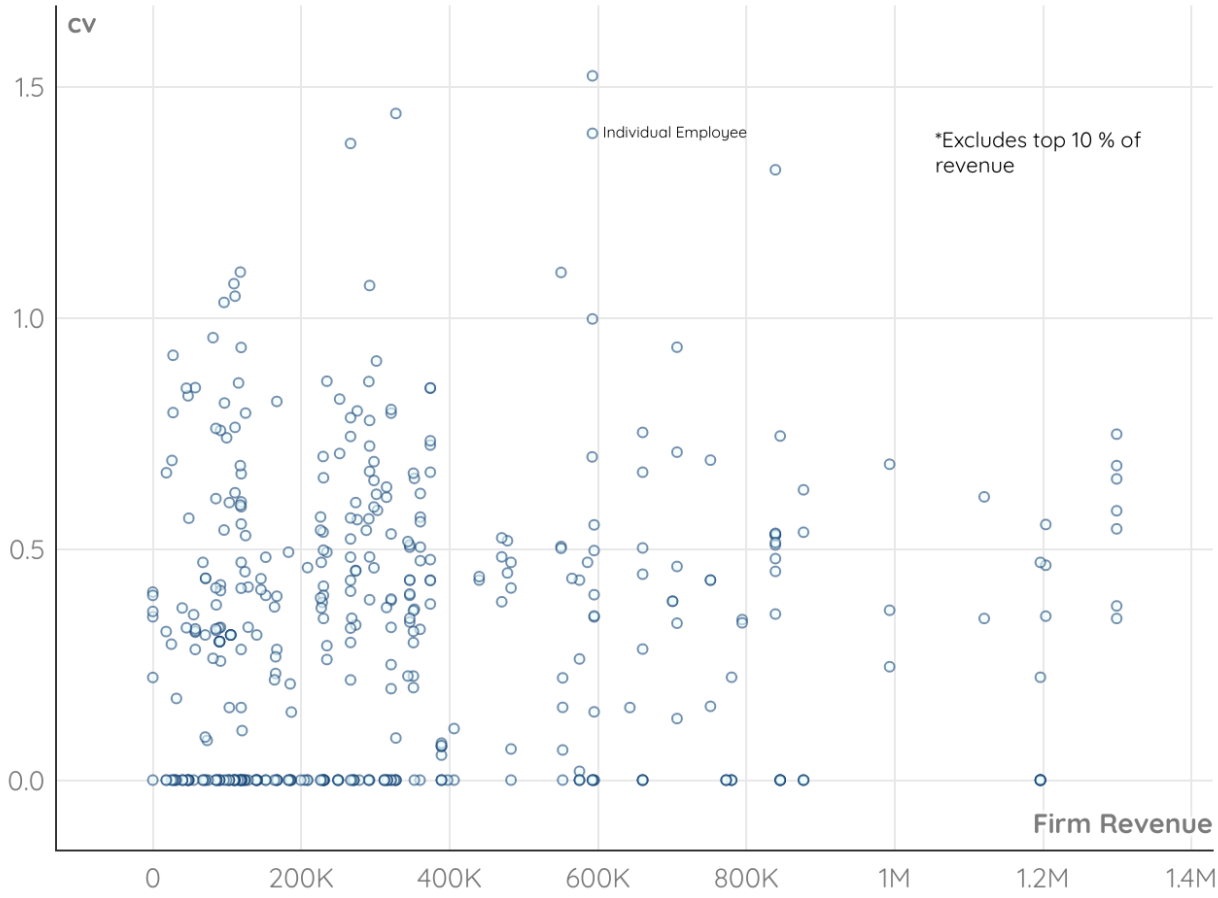
payments by the number of months they were paid—both levels of volatility and the dispersion of CV are similar at each number of months paid.

FIGURE 6.6: VOLATLITY 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 19% 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 141 employees (28% of all paid employees in the study year, 78% 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 52% who reported that children in their household had not eaten enough in the past week.

FIGURE 6.8: EMPLOYEE WELFARE INDICATORS

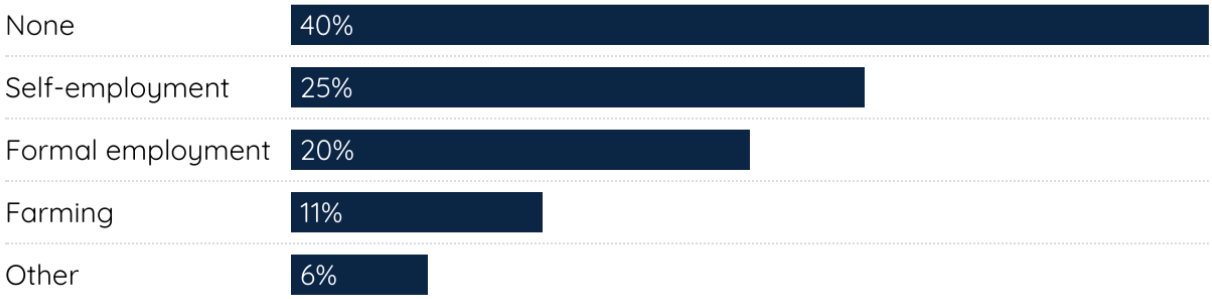
Does your household ever run short of money for food or other necessary items?

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

The volatility of employee income from the small firms appears to matter a great deal to the employees' households. As shown in Figure 6.9, 40% 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 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

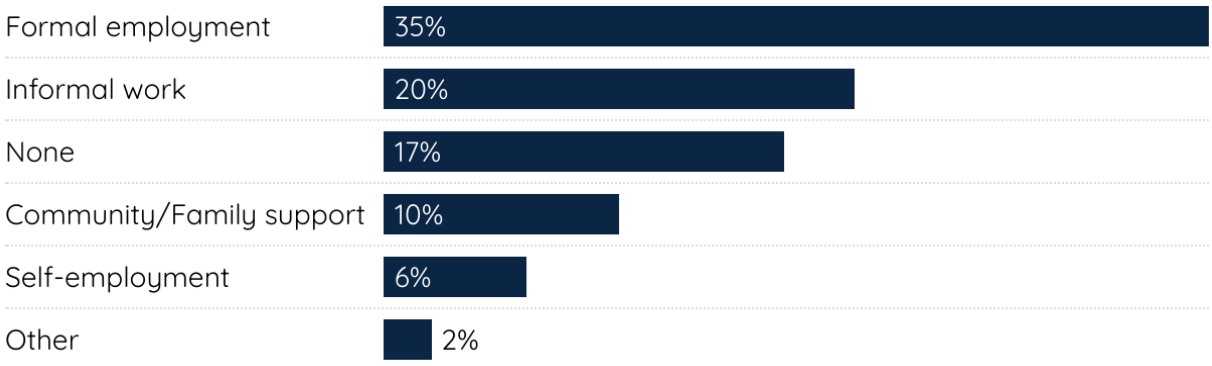
struggle to cope with the volatility of small firm employment through other means.

FIGURE 6.9: OTHER SOURCES OF INCOME FOR SMALL FIRM EMPLOYEES



To the extent that we can see in our data, employees of the small firms are drawn from a distinct labor pool whose main source of employment is in small firms (Figure 6.10). When a job at one firm ends, the employees move to another small firm—35% 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 (6%) 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



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.[23] 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.[24]

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 (in turn 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, 74% 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 0.83, with most firms clustered between 0.25 and 0.59, and half of them between 0.25 and 0.50. Consistent with the McKenzie and Woodruff findings, higher scores are correlated with higher monthly revenues.

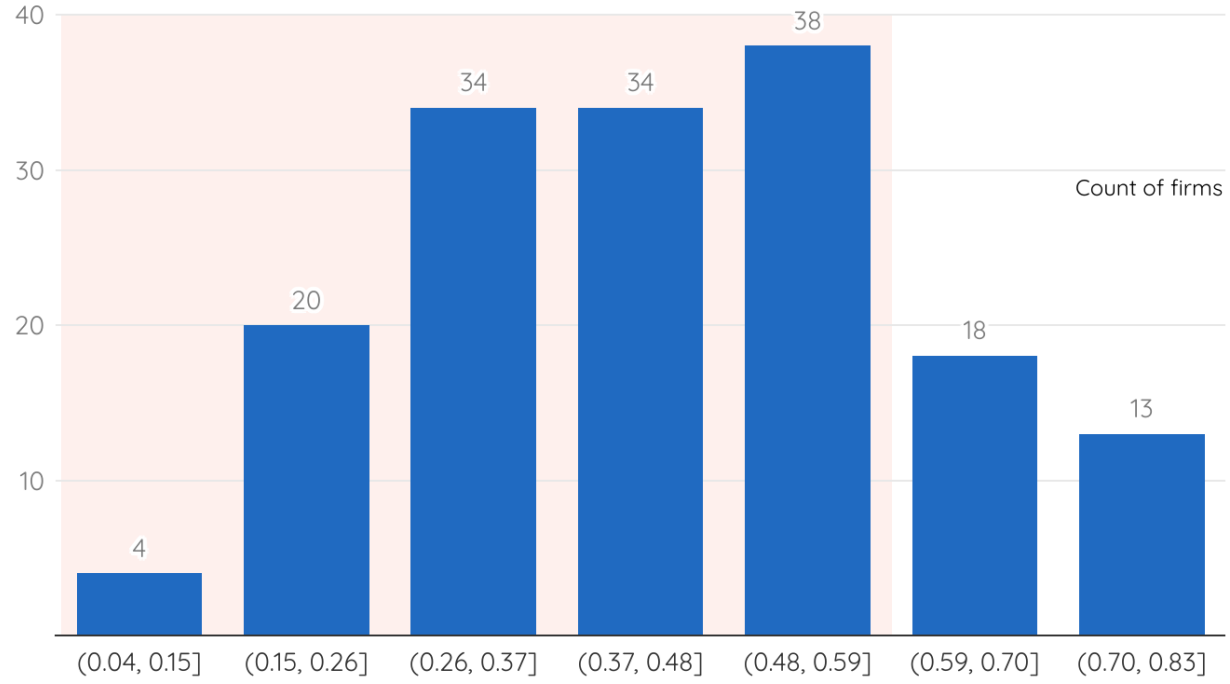
Looking at specific practices, the most commonly used practices are related to negotiating with suppliers; comparing suppliers was employed by 76% of the firms. Marketing and planning practices were employed by 68% of firms. While record-keeping practices for stock control were far less common (26%). Of note, the most common practices in Nigeria were different from other countries in the study.

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

BUSINESS PRACTICE INDEX

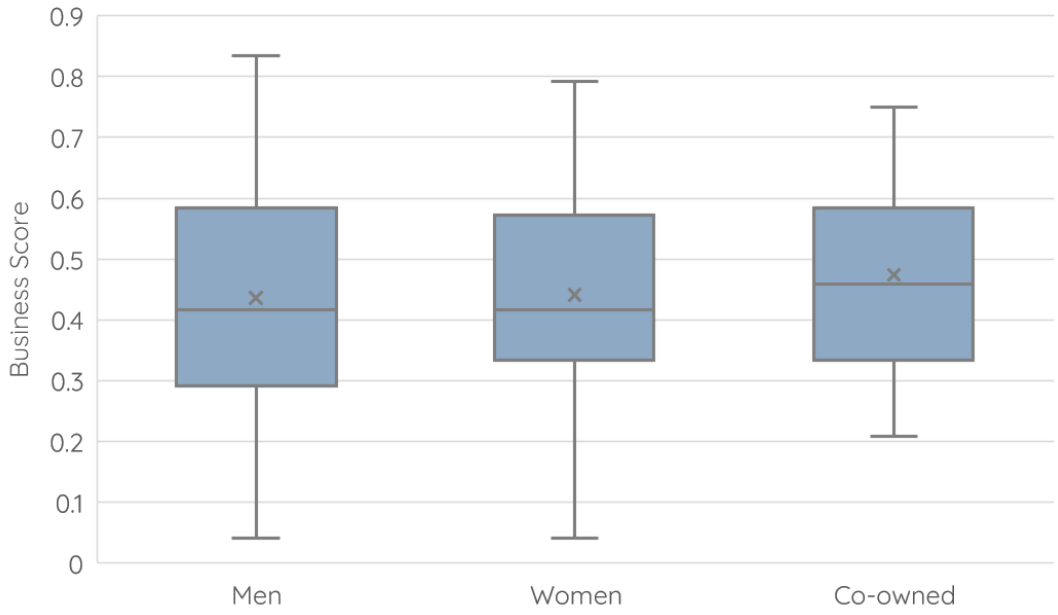
On the McKenzie and Woodruff Business Practices Index Score our sample ranges from 0.04 to 0.83, with two-thirds of the firms having a score below 0.54 (Figure 7.1). McKenzie and Woodruff include a survey from Nigeria (the sample is made up entirely of highly educated entrepreneurs) in their review and find a mean score of 0.72.

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



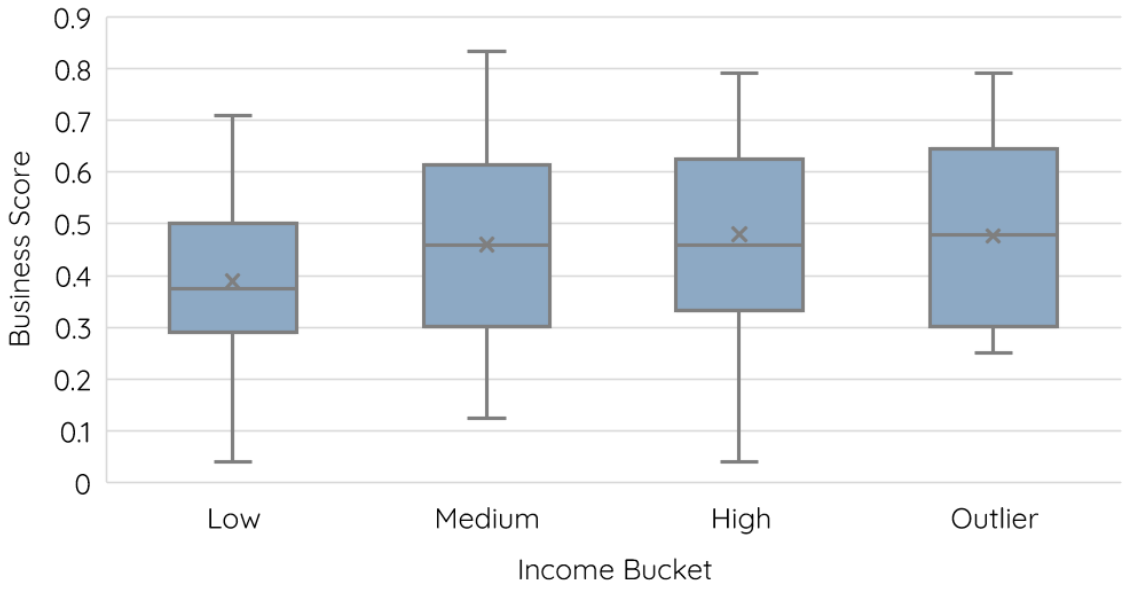
When analyzing the score distribution by gender (Figure 7.2), men-owned firms have a median score of 0.41, with half of the firms ranging between 0.29 and 0.57. Women-owned firms have the same median score of 0.41, with half of the firms ranging from 0.33 and 0.55. Co-owned firms (a total of 18 firms) have the highest median score of 0.46, with half of the firms ranging from 0.35 to 0.56. For comparison, in the McKenzie and Woodruff study, comprising surveys mostly of microenterprises 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



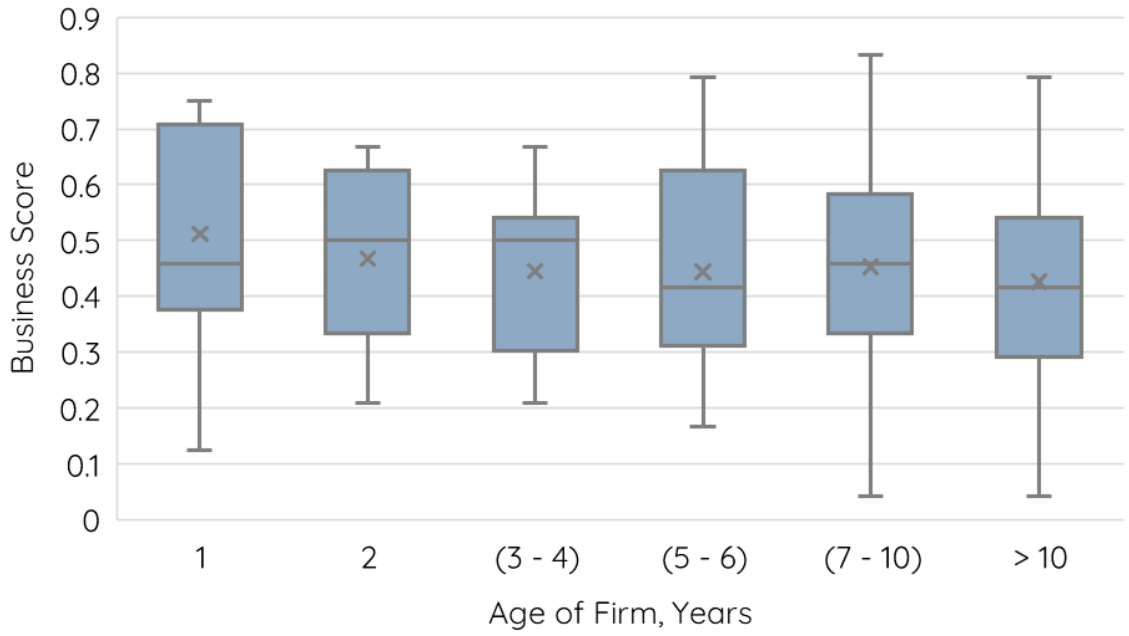
When we analyze the relationship between revenue and the distribution of business scores in our sample, the median business score increases with increasing revenue levels. The median score of firms in our lowest income group (see Section 3 on firm finances) is 0.37, with half of the firms ranging between 0.29 and 0.5. Medium-income firms have a slightly higher median business score of 0.46 the same as high-income firms. Our outlier firms (those with significantly higher revenues than most firms) show the highest median business score of 0.48 (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 relatively similar median scores for growers and non-growers, 0.46 and 0.42 respectively. 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 SCORE INDEX DISTRIBUTION BY AGE OF FIRM



A DEEPER LOOK AT SPECIFIC BUSINESS PRACTICES

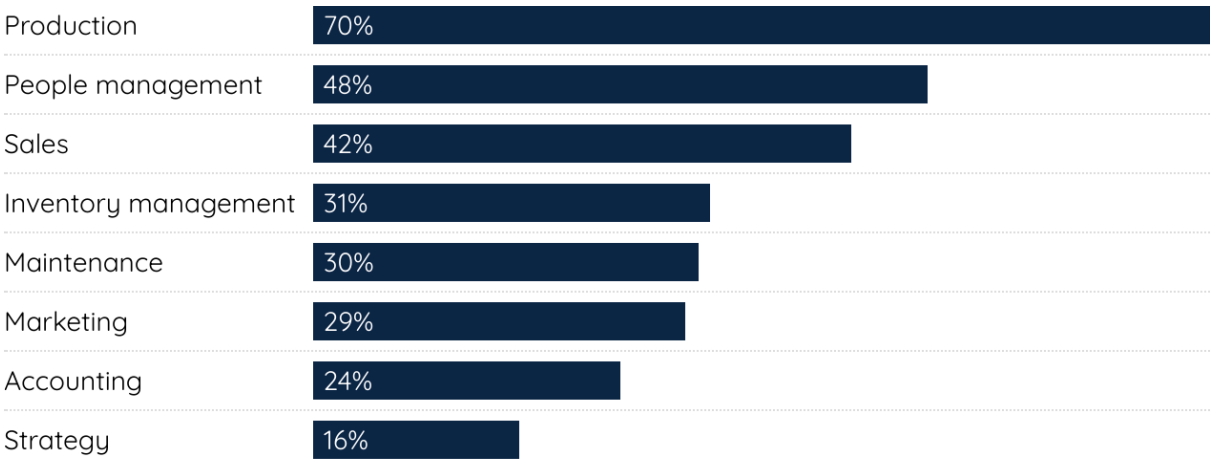
The 26 business practices that McKenzie and Woodruff track are divided into four categories: marketing, stock control, record keeping and financial planning.[25] They find that stock control is the most common set of practices and financial planning is the least common.

Among our firms, stock control was the most common set of practices. For example, 81% of firms reported negotiating prices with suppliers, with women being more likely to report it (89%) than men (78%). Tracking which products were most profitable was the single most common specific practice, reported by 86% of respondents.

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. That owners are spending time on these tasks suggests they may be unable to trust these tasks to workers without supervision; indeed people management is the second most common use of time. Given the 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.

[25] McKenzie & Woodruff, 2017

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 microenterprises 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 (e.g. "I want to be my own boss"), 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 98% of the firms in the study told us they aspired to grow on at least one of several measures of growth aspirations. Perhaps the most important finding about aspirations however, was not about growth but about the aspiration to achieve stability.

About 53% 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 50% 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.

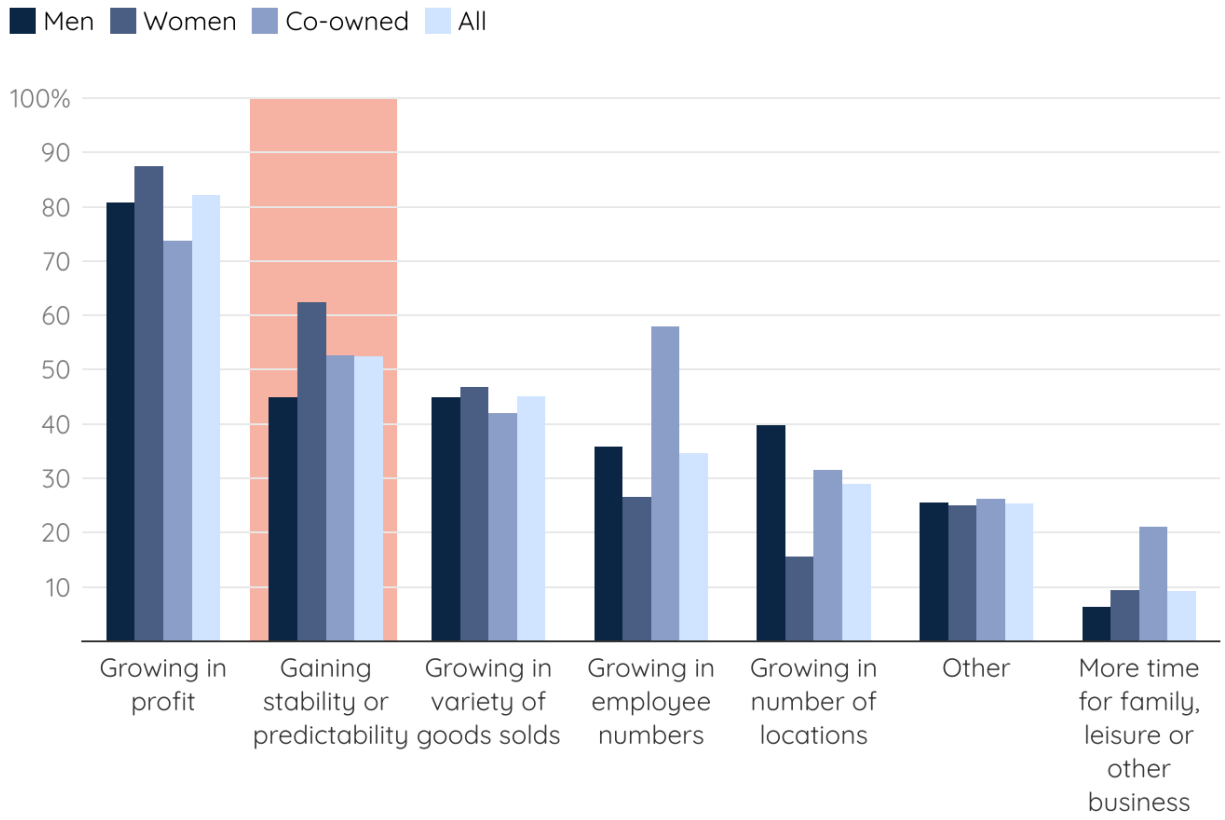
Reviewing our quantitative data, on most measures we do not find significant differences between firms that grew and firms that did not grow over the course of the study. Growers and non-growers cite similar barriers and challenges. All firms' primary strategy for dealing with challenges is by attempting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

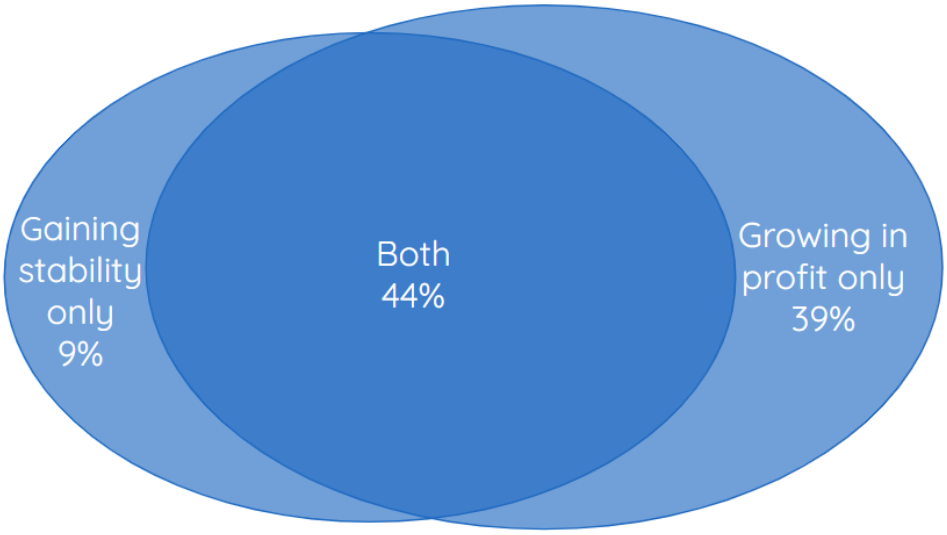


Of the firms that aspire to stability or profit growth, 44% of firms aspire to both, demonstrating that these aspirations are not only not mutually exclusive, but aspiring to both is the more common aspiration.

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.[26] By that definition, our firms qualify as entrepreneurs—they take on risk in a volatile environment to create their businesses and aspire to grow them in the short- and long-term. However, they also have a significant desire to achieve greater stability at the same time rather than taking on additional risk to that which they already face. This category of Stability Entrepreneurs is the largest group of firms in the Small Firm Diaries in Nigeria.

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

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

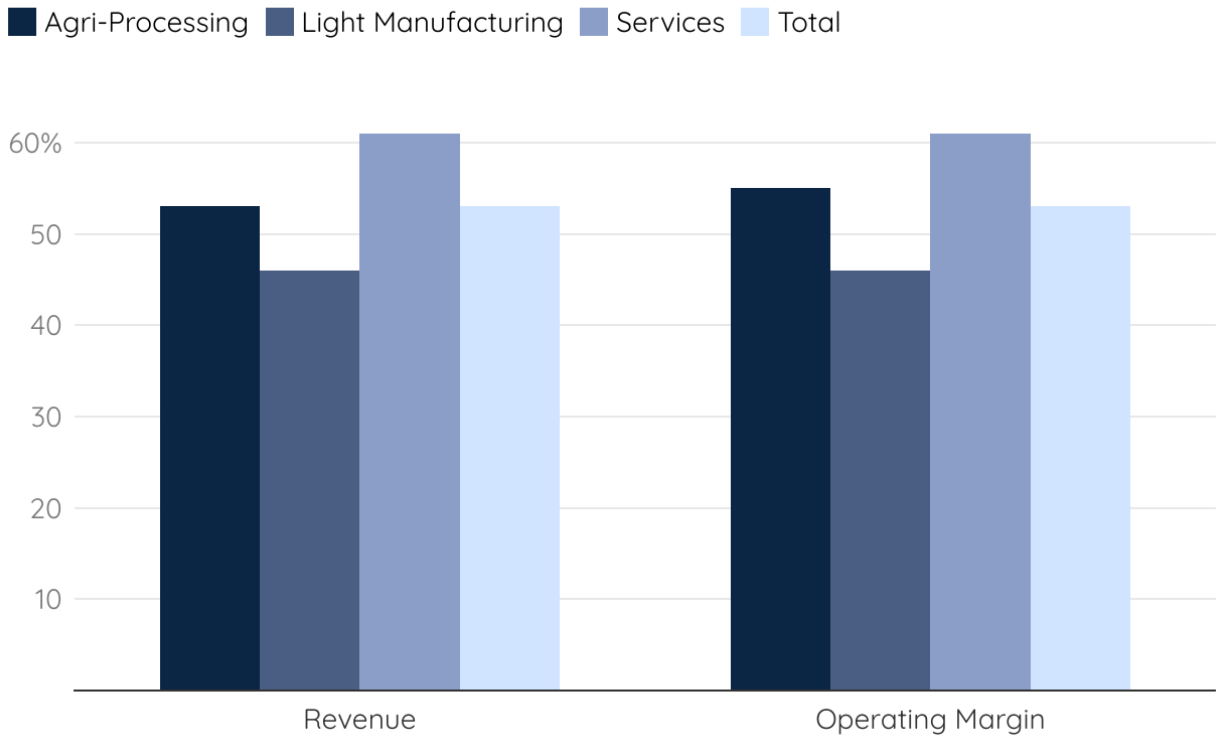


PERFORMANCE VS ASPIRATIONS

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 60% of the firms were able to actually do so. The proportion of firms that grew revenue and profit was largely the same across owner gender (56% of men-owned firms grew in revenue vs 50% of women-owned, while 54% of women-owned firms grew in profit vs 50% of men-owned firms). A significantly smaller percentage of light manufacturing 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.

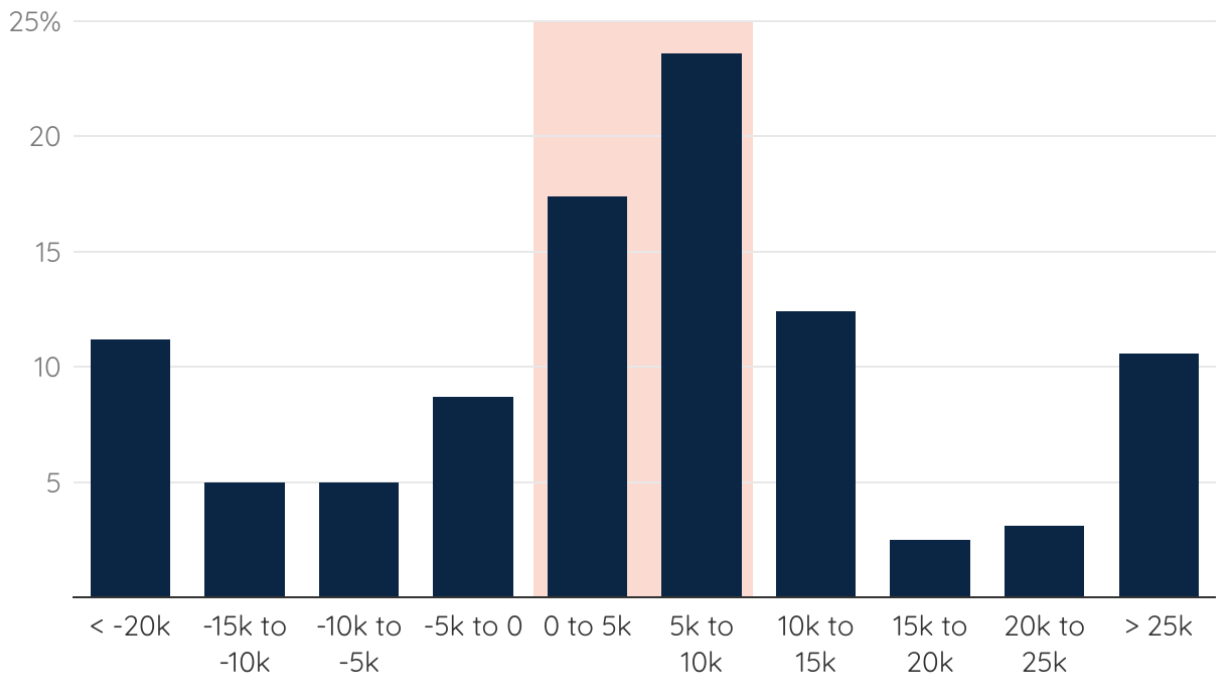
[26] Schumpeter, 1962.

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 NGN -5,000 to NGN 10,000 (PPP 32.77 to PPP 65.47) monthly change in operating margin—these firms, given the volatility that we see, are neither achieving their aspirations for growth nor stability.

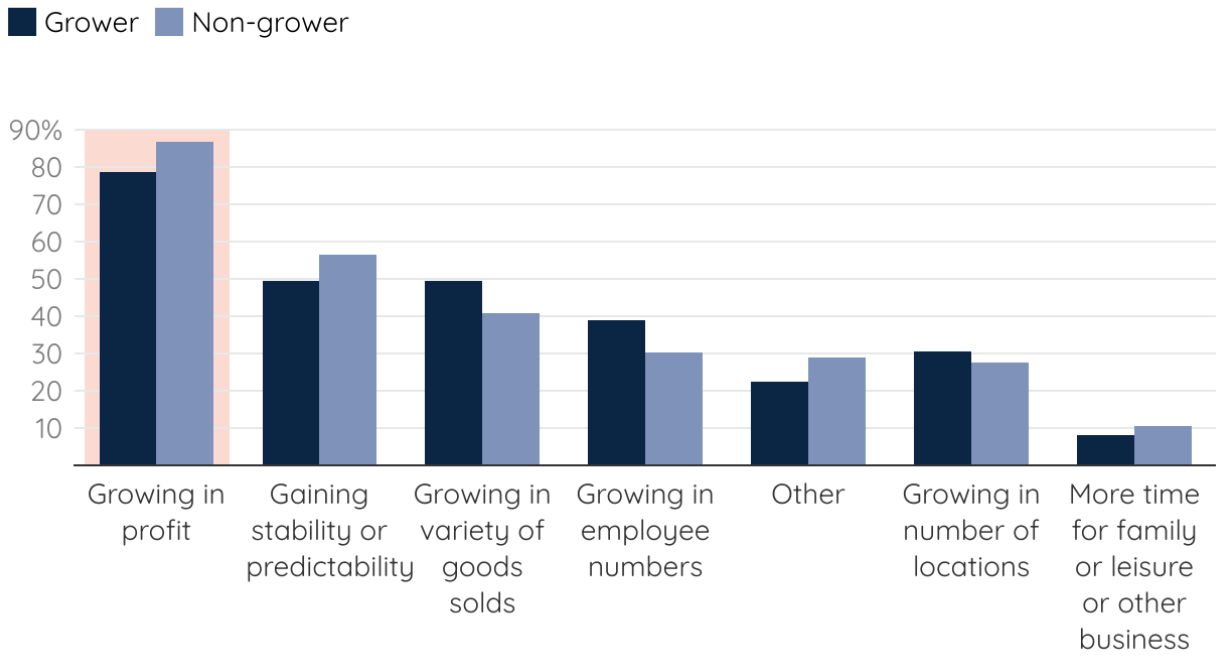
FIGURE 8.4: DISTRIBUTION OF SLOPE OF MONTHLY OPERATING MARGIN, NGN



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

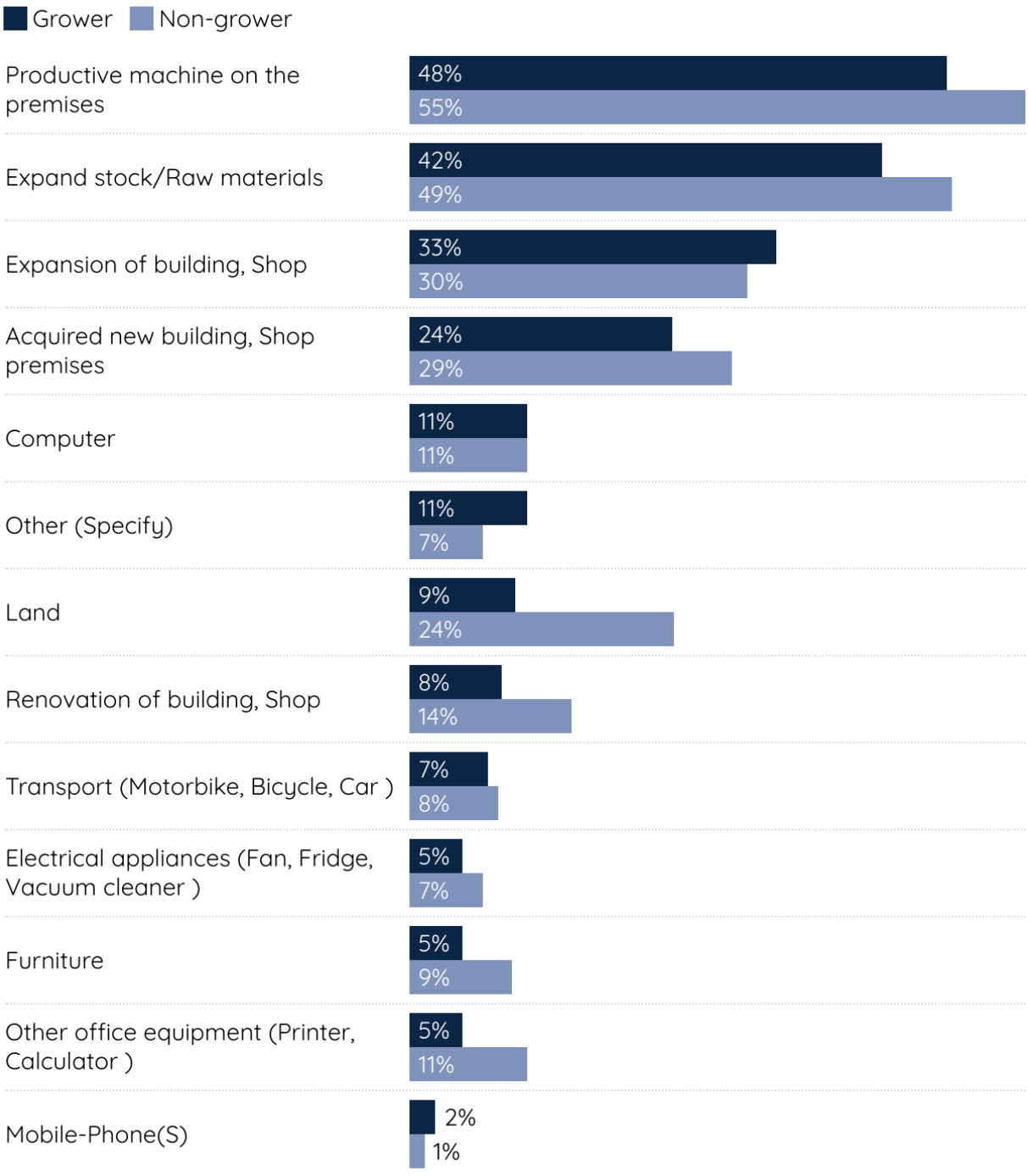


BUSINESS PRACTICES, INVESTMENTS, AND BARRIERS TO GROWTH

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. When we ask firms about investments that they would like to make, about half of them report that they would like to invest in a productive machine (Figure 8.6). The other investments that a significant portion of firms aspired to were raw materials, expansion of building, acquisition of buildings, and land (for non-growers), though raw materials would not qualify as an investment in most small business credit programs.

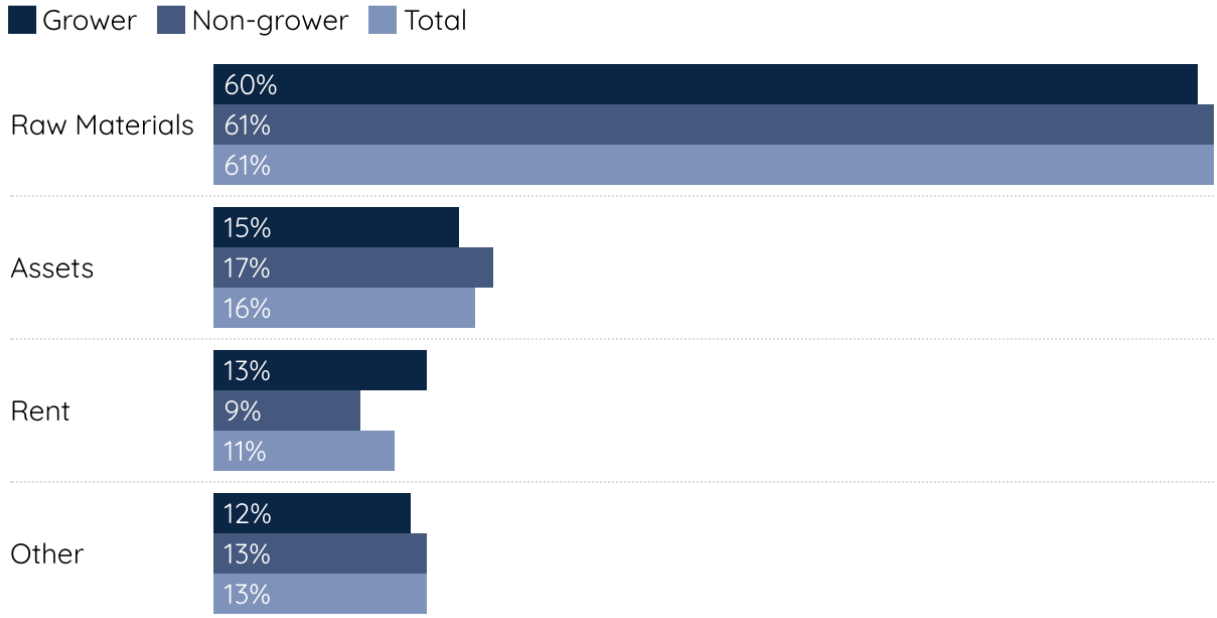
FIGURE 8.6: DESIRED INVESTMENTS, PERCENT OF FIRMS



To explore what 'investments' firms actually made during the study, 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." Almost all firms (93%)—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

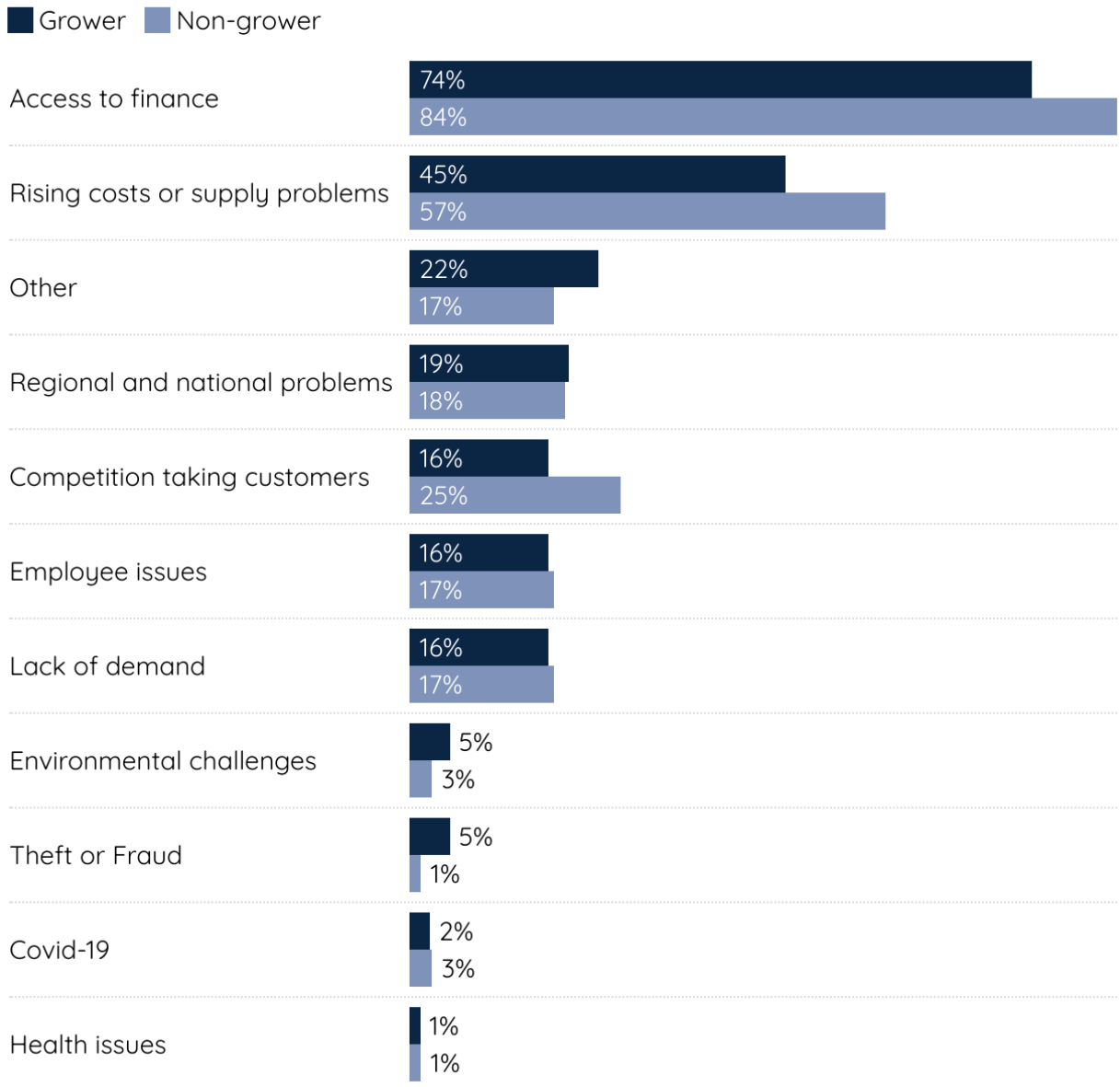
overwhelmingly focused on raw materials, not capital assets; there were not differences between growers and non-growers in these terms.

FIGURE 8.7: PURPOSE OF LARGE TRANSACTIONS, PERCENT OF TRANSACTIONS



Consistent with the value of large purchases being focused on raw materials, half of firms in Nigeria report that the biggest barrier to achieving their aspirations is access to and rising costs of raw materials. However, around 80% 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, 80% 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, 60% of firms report having "a lot of competitors". Of firms that have "a lot of competitors," 26% report their competitors are typically the same size as they are, compared to only 21% 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 a fourth 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 service, and about 40% on prices. There were no significant differences in the way men owned business and women owned businesses differentiated themselves, however we did see differences across industries. Quality is important for 80% of light manufacturing firms to differentiate from competition, compared to only 50% for the other two industries. On the other hand, 65% of services firms report better service to be a differentiating factor, compared to only half of the firms for light manufacturing and agri-processing.

Given the high level of competition, it is perhaps surprising that 52% 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 giving training and socializing (64% and 57% of responses), with fewer being used for negotiation (44% of associations negotiate subsidies and 44% set standards for products or services), or cooperation (31% organize events and 25% lend inputs).

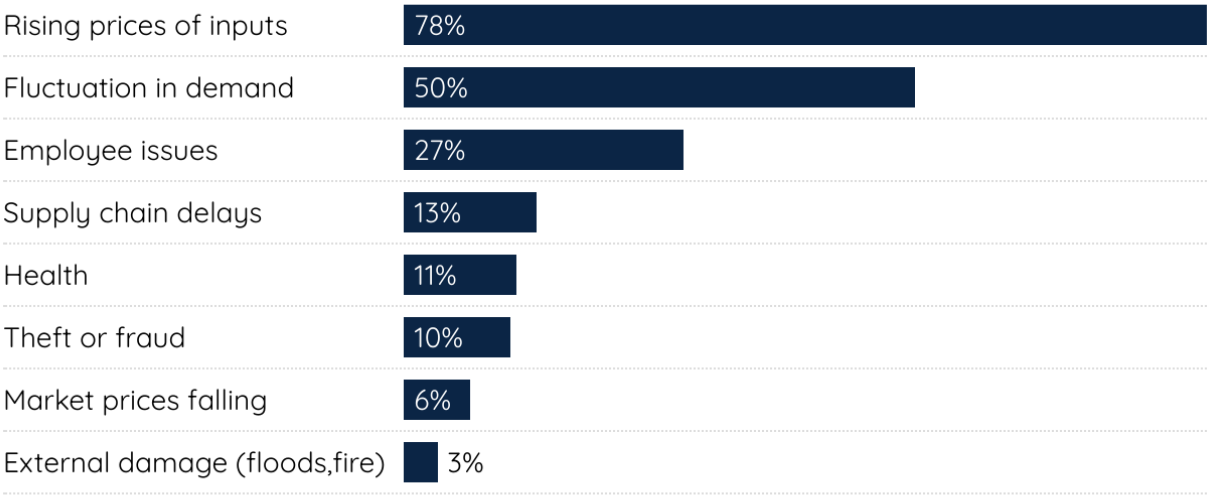
Looking further into the responses to the barriers question, if we segment the firms by levels of formal and regulated financial systems integration based on usage of bank accounts and mobile money, there are two notable differences between the more integrated firms and the unbanked and marginally integrated (Figure 8.9). The more integrated firms are more concerned about lack of demand.

FIGURE 8.9: MAIN BARRIERS TO GOALS BY LEVEL OF BANKING INTEGRATION

	Total	High	Partial	Marginal	Unbanked
Access to finance	79%	79%	81%	77%	73%
Rising costs or supply problems	50%	48%	51%	60%	20%
Competition taking customers	21%	15%	23%	21%	20%
Employee issues	17%	6%	21%	16%	20%
Regional and national problems	19%	18%	21%	19%	7%
Lack of demand	17%	21%	17%	14%	13%
Other	20%	27%	17%	19%	20%
Environmental challenges	4%	0%	4%	7%	0%
Theft or Fraud	3%	0%	3%	7%	0%
Covid-19	3%	3%	1%	5%	0%
Health	1%	0%	1%	0%	7%

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 75% of firms were affected by rising cost of inputs, while half of them 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—48% compared to just 3% 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 YEAR



9. Conclusions and Recommendations

As this report is published, the Small Firm Diaries team is continuing analysis on data from Nigeria and other countries in the study. This report provides an overview of the data we gathered in Nigeria; it is not intended to be a "final" report. Instead, we publish this data in order to enable others interested in Nigeria and especially small firms in Nigeria 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 Nigeria.

While analysis continues, there are patterns and trends arising in the Nigeria 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 Nigeria 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.

Nigerian 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.

"Rising costs and supply problems" and "access to finance" are the main barriers to achieving their vision of growth and stability for Nigerian firms.

Despite access to finance being a major barrier to firm owners' vision for success, a large percent of firm owners say they rarely or never need a loan. This is true for the global sample and in the Nigerian 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 Nigeria report relatively low desire for credit, saying they never or rarely need a loan. A large portion of firms would like to use loans for what could be categorized as working capital, in addition to 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 more common than 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 Nigeria 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 Nigerian 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 authors of this country data overview are Michelle Kempis and Timothy Ogden.

The principal investigators for the Small Firm Diaries global project are Timothy Ogden and Jonathan Morduch.

The authors acknowledge the research and editorial contributions of Rachael Eplee, Laura Freschi, Zachary Ginsberg, Laura Macready, and David Pinedo De La Hoz in creating this report.

In Nigeria, the research team partnered with the Nigerian National Bureau of Statistics (NBS) and the Lagos Business School (LBS). These partners contributed to Nigeria-specific elements of the research design, supported the data collection process, and collaborated in creating research outputs, including this report.

In addition, NBS led Abuja-based stakeholder engagement, bringing together representatives from the Small & Medium Enterprises Development Agency of Nigeria (SMEDAN), the Federal Ministry of Industry Trade and Investment (FMITI), The Fate Foundation, the Tony Elumelu Foundation (TEF), the National Association of Small and Medium Enterprises (NASME), the Federal Ministry of Agriculture and Rural Development (FMARD), the Central Bank of Nigeria (CBN) - Financial Inclusion Secretariat, and others. LBS led Lagos-based stakeholder engagement, convening a group of business and industry leaders including Bank of Industry, Enugu SME Centre, Kaduna Market Development & Management Company Ltd, Lagos Chamber of Commerce & Industry, Lagos State Employment Trust Fund, Nigerian Economic Summit Group (NESG), PwC, Women in Management, Business and Public Service (WIMBIZ).

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About the Study

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

Visit smallfirmdiaries.org for more information and additional publications.

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Appendix

Summary Data by Industry

The table below summarizes data on the firms by industry. For example, we find large differences in revenue; agri-processing firms' median monthly revenue is twice as high as other industries. while operating margins are similar across industries

We find that a smaller proportion of agri-processing firms grew in revenue, compared to the other two industries. All industries are highly banked but rarely use bank loans, while agri-processing firms borrow from MFIs at much higher rates than other industries.. Finally, employee turnover is highest in services firms.

	Agri-Processing	Light Manufacturing	Services
Median Monthly Revenue	NGN 422,930	NGN 177,225	NGN 199,293
Median Monthly Expenses	NGN 257,621	NGN 79,248	NGN 70,300
Median Monthly Operating Margin	NGN 105,296	NGN 72,690	NGN 75,155
CV Monthly Revenue	0.55	0.47	0.37
CV Monthly Expenses	0.61	0.73	0.61
CV Monthly Operating Margin	0.74	0.87	0.84
Percentage of firms with positive revenue growth	32%	76%	57%
Percentage of firms with Bank Accounts	91%	88%	96%
Percentage of firms with Bank loans	8%	4%	4%
Percentage of firms with MFI loans	41%	6%	11%
Percentage of employees paid for less than 3 months of the study	34%	49%	53%

Summary Data by City

The following table summarizes several key metrics by city. Of note, monthly revenues, expenses, and operating margin are higher in Lagos than Kaduna or Enugu. Fewer firms in Kaduna reported owning bank accounts than in Lagos and Enugu, while a higher proportion of firms in Lagos taking loans from MFIs for their businesses. Fewer firms in Lagos paid their employees for 8-10 months of the year.

	Enugu	Kaduna	Lagos
Median Monthly Revenue	NGN 186,700	NGN 137,125	230,550
Median Monthly Expenses	NGN 76,875	NGN 86,750	NGN 103,488
Median Monthly Operating Margin	NGN 55,920	NGN 61,502	NGN 110,546
CV Monthly Revenue	0.56	0.46	0.40
CV Monthly Expenses	0.65	0.60	0.70
CV Monthly Operating Margin	0.89	0.86	0.74
Median Business Practices Index Score	0.38	0.46	0.46
Percent of firms with Bank Accounts	91%	80%	97%
Percentage of firms with bank loans	2%	7%	6%
Percentage of firms with MFI loans	4%	2%	17%
Percentage of employees paid for 8-10 months of the study	26%	31%	12%