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INDONESIA

small firm
DIARIES

Country Data Overview

DATA FROM THE SMALL FIRM DIARIES

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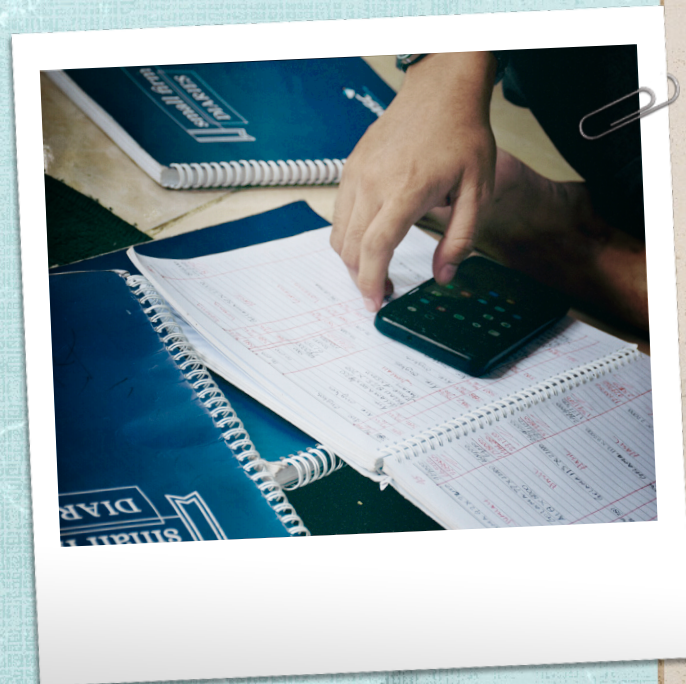


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1. Introduction

STUDY GOALS AND METHODOLOGY

The Small Firm Diaries is a global research initiative to understand the role of low-income small firms in poverty reduction, and the barriers to growth and productivity of those firms that limit their contribution to local economies. The project focuses on firms that employ between 1 and 20 non-family member employees. These “small firms” are larger than those that have been central to the global microfinance movement, and they are more formal, earn higher incomes, and are 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 daily 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.

MSMEs play an important role in driving Indonesia’s national economic growth. According to data from the Coordinating Ministry of Economic Affairs, there are 64.2 million MSMEs, accounting for 61% of Indonesia’s GDP.¹ These MSMEs employ 97% of the country’s total workforce, equivalent to 119.6 million people. 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 surveys², and the focused data of individual business case studies. Our goal in this study is to inform policy and practice by a wide variety of actors: financial services providers, business support organizations, government policy makers, funders and other researchers can all use the data and findings of the Small Firm Diaries project to deeply understand and address challenges of small firms in low- and middle-income countries.

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

¹ Coordinating Ministry for Economic Affairs of the Republic of Indonesia, Press Release

² In Indonesia, the Central Bureau of Statistics (*Badan Pusat Statistik* or BPS) is responsible for managing national surveys and data. A few notable nationally-representative surveys are National Socio-Economic Survey (*Survei Sosial Ekonomi Nasional* or SUSENAS), National Labor Force Survey (*Survei Tenaga Kerja Nasional* or SAKERNAS), and Village Potential Survey (*Survei Potensi Desa* or PODES).

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

PURPOSE OF THIS REPORT

The Indonesia 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 four research sites studied.

This report provides an overview of the extensive quantitative data gathered during the study, and helps frame future analyses of our quantitative and qualitative data. We will publish more detailed analysis on specific topics relevant to firms in Indonesia, and individual firm profiles of Indonesian businesses in the sample. The current version of this report and any additional reports using data from the Indonesia sample will be published at smallfirmdiaries.org/indonesia and at diaries.microsave.net.

GOVERNMENT EFFORTS TO SUPPORT MSMES

The Government of Indonesia has implemented a variety of policies and initiatives to support MSME development and growth. These include programs targeted to improve access to financial services, support MSME digitization and formalization, increase digital literacy among firm owners, and improve digital infrastructure; as well as programs targeted to help specific populations, like female business owners, and those in underdeveloped regions. For instance:

- Government-subsidized low-interest loans *Kredit Usaha Rakyat*, or People's Business Credit, known widely as KUR loans, and newer Ultra Micro Financing (UMi) provide gmcredit to small and businesses.
- With the launch of QR code-based payments (QRIS), the government has stepped up its efforts to provide a low-cost payments channel for micro and small enterprises.
- Efforts are also underway to help micro and small businesses integrate into the digital economy, with programs like *UMKM Go-Digital* and *UMKM Naik Kelas*.
- Other initiatives, by the Ministry of Villages, Development of Disadvantaged Regions, and Transmigration, and the Coordinating Ministry of Economic Affairs (CMEA), and the Ministry of Cooperatives and SMEs focus on helping businesses in underdeveloped and other priority regions digitalize and formalize. These include *Go-Digital*, *GoLegal*, and *Integrated Business Service Center (Pusat Layanan Usaha Terpadu or PLUT)*.
- Simplified regulations and business facilitation measures have been introduced to reduce bureaucratic burdens on MSMEs for example through *Online Single Submission (OSS)*.

2. Sample Overview

INTRODUCTION

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

In Indonesia, data collection began in November 2021 and was completed in November 2022. The study was conducted in four sites: Bandung, Makassar, Medan, and Yogyakarta. 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 177 firms to participate in the study from four research sites; our final sample contains 162 firms, roughly evenly spread across the research sites. The study protocol set a floor of 30% of firms with a female owner, and in Indonesia we achieved this and more: 40% of the firms are owned by women, and 7% are co-owned by a man and a woman; the remaining firms are owned by men. The study was limited to firms in three industries: light manufacturing, agri-processing and services. In the Indonesian sample, 47% of the firms are engaged in services (e.g. printing, car and bike repair and maintenance); 30% in small-scale manufacturing (e.g. carpentry, metal works, and construction materials); and 23% in agri-processing (e.g. meat and fish preservation and food preparation).

SAMPLING METHODOLOGY

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

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

MSME CLASSIFICATION IN INDONESIA

The terms "micro, small, and medium enterprises" vary considerably in their definitions across different countries and contexts—one reason why we used a different term, "small firm," for the present study. In Indonesia, Law No. 20/2008 on Micro, Small and Medium Enterprises classifies firms based on asset values and annual sales, and the newer Government Regulation No. 7/2021

on Facility, Protection, and Empowerment of Cooperatives and MSMEs classifies firms based on their working capital and annual sales. According to the 2008 definition, there are more than 63 million MSMEs in Indonesia. However, a large majority are what the Small Firm Diaries terms micro enterprises, meaning that they have no employees other than the self-employed owners.

Even within the same country, definitions can vary. Statistics Indonesia (*Badan Pusat Statistik* or BPS), responsible for collecting and managing MSME data, classifies MSMEs as we do in the Small Firm Diaries, based the number of employees, though the thresholds differ: BPS distinguishes between “micro industry” which employs 1-4 workers and “small industry” which employs 5 to 19 workers. According to BPS’ *Profil Industri Mikro dan Kecil* (Profile of Micro and Small Industry), there are 4.16 million enterprises which fall into their micro and small categories, which employed more than 9.11 million workers in 2021, a slight decline from 2020.

The sites for the study—Bandung, Makassar, Medan, and Yogyakarta—were selected in conversation with local partners and advisors to provide a reasonably representative look into the varied regional economies of Indonesia. Each of the chosen locations is a major industrial center, known for a high concentration of MSEs, and alignment with government geographical and sectoral priorities for MSE growth and development. Bandung, in West Java, is known for processing and agri-processing, textiles, handicrafts, and furniture. Makassar, the largest city in eastern Indonesia, thrives in trade and is home to a variety of MSEs in agri-processing, services, trade, and manufacturing. Medan, a prominent coastal economic center on Sumatra Island, has a high concentration of agri-processing (especially fisheries-related) and automotive sectors-related MSMEs. Yogyakarta, an educational hub in Central Java, houses a high concentration of MSEs, particularly in the processing industry.

Within each research site, we 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, given likely available resources. 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. 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. 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, distribution across the three

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.

chosen industries and proportion of female-led firms. Given the difficulty of landing on a consistent and objective definition of firm ownership in this context, the study allowed participants to self-define the owner or owners of the firm.

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

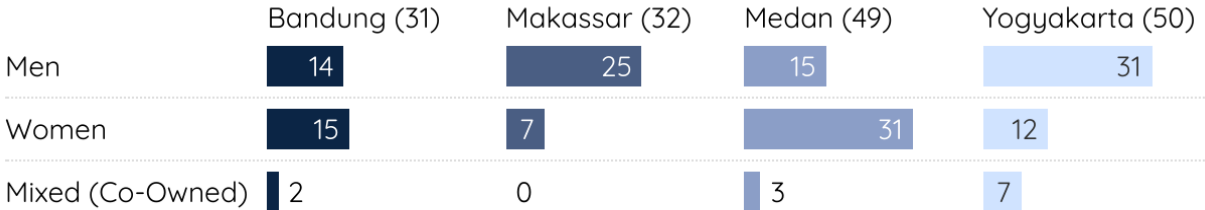
SAMPLING RESULTS

We began the study with 177 firms. Fifteen firms dropped out over the course of the study, resulting in 162 active firms included in the present analysis (92% of the original sample.)

Gender and Location

The location distribution of the firms in the final sample is shown in Figure 2.1. In Makassar and Yogyakarta, there are more men-owned than women-owned firms, while in Medan there are more women-owned firms. Bandung firms have a roughly equal gender distribution.

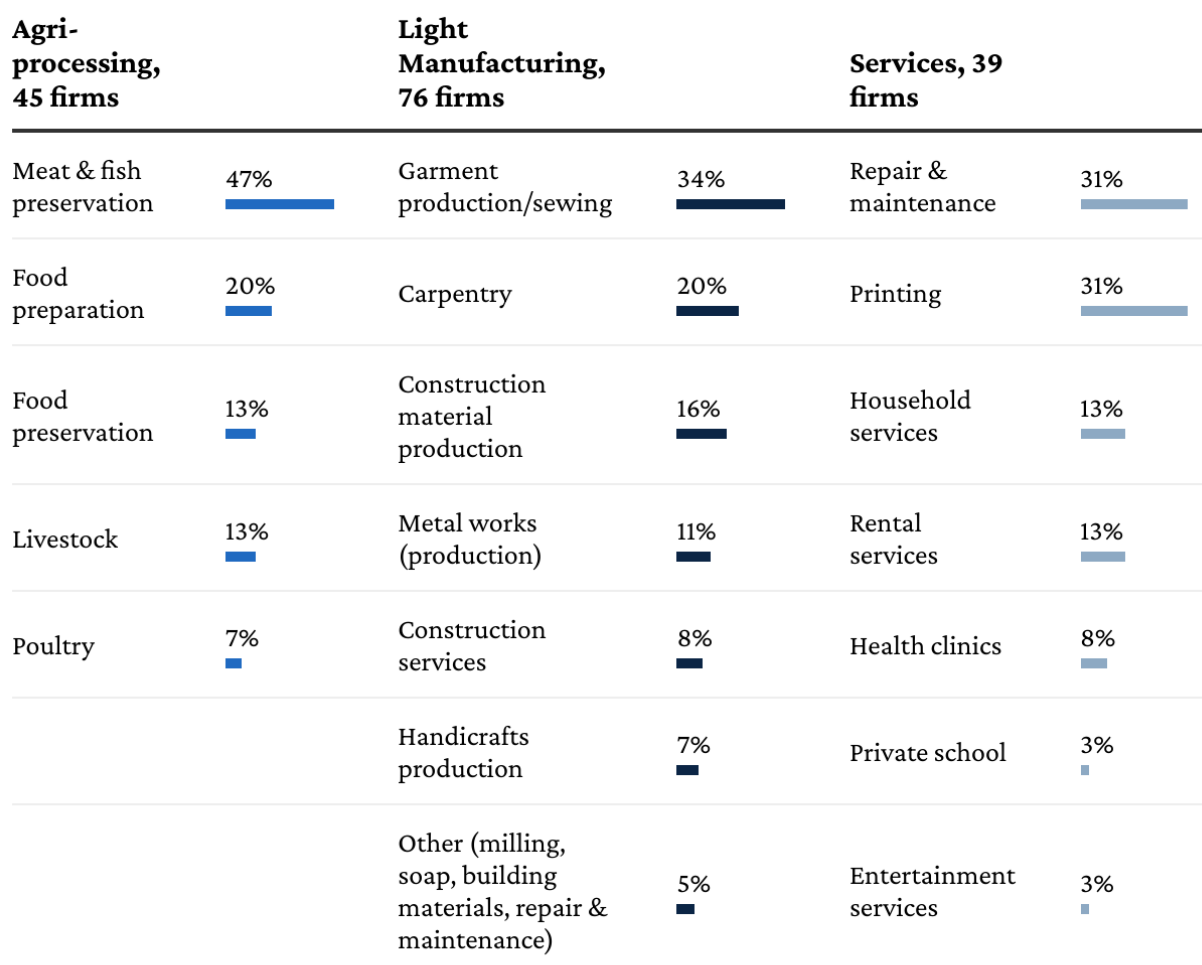
FIGURE 2.1: SAMPLE DISTRIBUTION BY GENDER AND FIRM LOCATION



Industry

We selected firms from three sectors: agri-processing, light manufacturing, and services (Figure 2.2). Forty-seven percent of the firms are in the services sector, and are engaged in activities such as printing, repair and maintenance, health clinics, and private school. Light manufacturing (including carpentry, metal works, and construction materials) constitutes 30% of the firms. The remaining 23% of firms are in the agri-processing sector (food preparation, food preservation, meat and fish preservation, agricultural input products, and dairy/farm production).

FIGURE 2.2: TYPES OF FIRMS IN THE INDONESIAN SAMPLE



Cash Flows

The Small Firm Diaries is explicitly focused on the role of small firms in the economies of low-income countries. However, using revenue or profit measures to define a sample ex-ante is fraught. What research has uncovered about the micro-firms⁴ that are a notch below the firms in this 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 was unlikely to be reliable. We also were unsure whether owners' estimates of their firms annual revenues or profits would be accurate. Nevertheless, these are important measures for understanding the firms in the study. Here we present the sample distribution on revenues, expenses and operating margins (see box) based on the data gathered during the study.

⁴ Within the Small Firm Diaries, "micro" always means firms with 0 non-household paid workers.

OPERATING MARGIN AS AN APPROXIMATION OF PROFIT

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

Median annual revenue and median annual operating margin for participating firms is IDR 165.6 million (approximately USD 33,332) and IDR 66.1 million (approximately USD 13,304) respectively.⁵ Given the month-to-month variability in these figures (see Section 3 on firm finances), however, we think it is much more instructive to focus on monthly measures.

The monthly median revenue of all firms in the final sample is IDR 15.8 million (approximately USD 3,181). This of course obscures the differences between firms and the distribution of revenues. More than half (56%) of our sample has a median monthly income lower than IDR 20 million (approximately USD 4,025) and 43% of our sample has a median monthly income lower than IDR 10 million (approximately USD 2,012).

TABLE 2.3: MEDIAN MONTHLY CASH FLOW

	Revenue	Expenses	Operating margin
IDR	15,809,000	8,497,000	5,971,150
PPP	3,381	1,817	1,277

Firms’ monthly median operating margin is IDR 6 million (approximately USD 1,207). Of all firms, 96% (156) have positive monthly median margins. While most firms have positive operating margins, their margins are slim. Three-quarters of the firms with positive median monthly margin (152) have a median monthly operating margin below IDR 13 million (approximately USD 2,616). Only 14% of those firms have a monthly operating margin above IDR 20 million (approximately USD 4,025). Of the 6 firms from our sample who have a negative median monthly operating margin, they range from IDR 2,500 (approximately USD 0.5) to IDR 27 million (approximately USD 5,434) in losses. Financial performance is outlined in further detail in Section 3 of this report on firm finances.

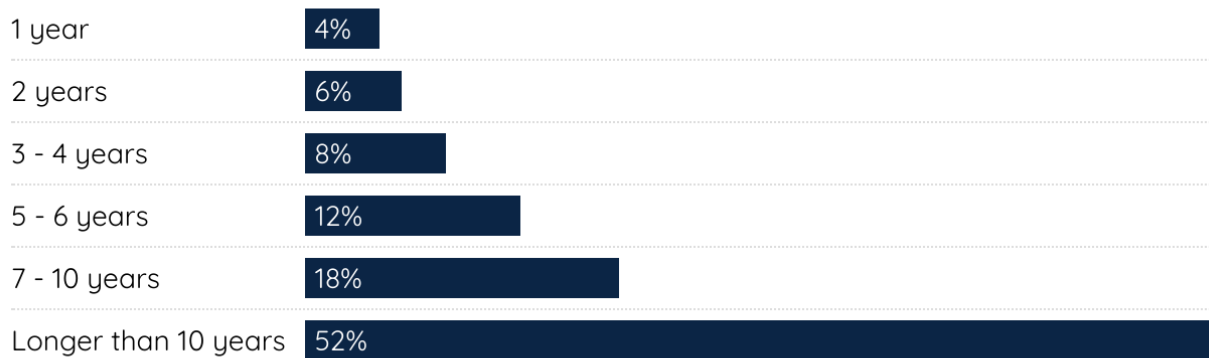
⁵ Throughout the report, we have converted Indonesian rupiah to US dollars for the convenience of international audiences. We used a rough adjustment for currency conversion and inflation, based on purchasing power parity (PPP) values. In future cross-country comparisons, figures will be fully adjusted for differences in inflation and PPP based on the dates of fieldwork in each country, and will not exactly match the figures presented here.

Firm Age

A key question about small firms around the world is how long they survive. A well-known problem of naive measures of small businesses is that they imply that small businesses account for the vast majority of firm and job creation. However, they also account for the vast majority of firm and job destruction—most small businesses globally appear to last for only a handful of years.⁶ We were interested in whether the kinds of small firms we were studying were short-lived or persisted for longer periods. Overall, firms are mostly mature, about 50% of firms had operated for more than 10 years, while 18% of firms were less than 5 years old.

It's important to note that it is possible that our sample misses firms that grow rapidly from starting to being larger than our 20 employee cut-off. In other words, our data may have some bias based on not including the most rapidly growing and successful small firms.

FIGURE 2.4: FIRM AGE, PERCENTAGE OF FIRMS



⁶ Shane, 2008

3. Firm Finances Overview

INTRODUCTION

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

In this section we describe our firms' monthly cash flows in more detail and explore whether there are meaningful demographic differences in the patterns of cash flows. We also introduce our preferred growth metric: linear slope of monthly revenue. The majority of our sample shows little change over the year on this measure (neither exhibiting rapid growth or large declines), which is in itself significant given the context of the study in the midst of the global pandemic. Little in the cash flows of small firms is linear, so we explore volatility of cash flows extensively. To measure volatility in firms, we use the coefficient of variation or CV.⁷ Our firms experience significant volatility in revenue and expenses, and extremely high levels of variability in operating margins. 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

The median monthly revenue of our sample firms ranges from IDR 480,000 (approximately USD 96) to IDR 687.3 million (approximately USD 138,343). Half have a median monthly revenue of IDR 15.8 million or less (approximately USD 3,180), and around 75% of them IDR 36.3 million or less (approximately USD 7,306).

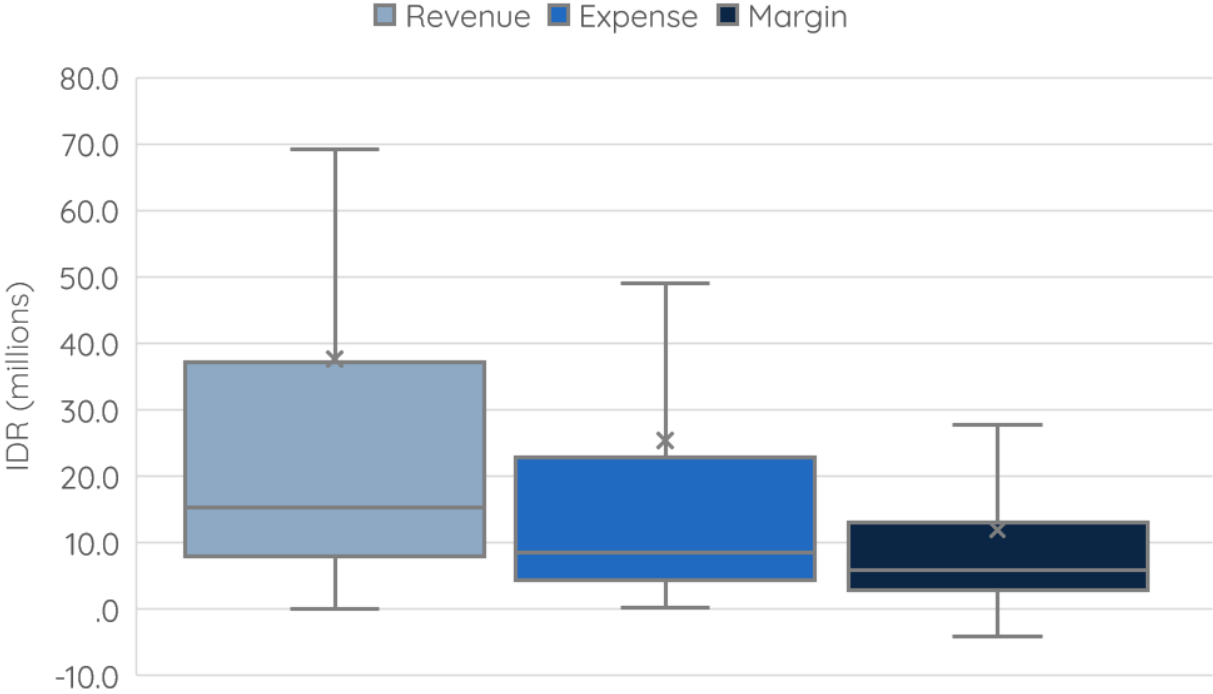
The range of the median monthly expense distribution across our sample firms is as wide as that of the revenue: from IDR 175,000 (approximately USD 35) to IDR 439.7 million (approximately USD 88,504). Half of the firms have a median monthly expense of IDR 8.5 million (approximately USD 1,710) or less, and around 75% have a median monthly expense of IDR 22.7 million or less (approximately USD 4,569).

With respect to operating margin, half of our firms have a median monthly margin between IDR 2.9 million (approximately USD 583) and IDR 12.9 million (approximately USD 2,596). Most of our

⁷ The coefficient of variation (CV) is a statistical measure defined as the ratio of the standard deviation to the mean. It is used here as a useful way of comparing variation between months given the dispersion in sizes of cash flows.

firms have operating margins of less than 13 million a month (approximately USD 2,616). Six firms show a negative median monthly margin, going as low as IDR 27.4 million (approximately USD 5, of negative median monthly margin.

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



While medians are useful for understanding the size of the small firms, they obscure one of the key findings of the study: the very large amount of volatility the firms experience from month to month. The coefficient of variation (CV) is a measure used to understand the spread of data, especially when comparing subjects with different ranges of values. The median CV of monthly revenue for the full sample is 0.39. To better understand CV, consider the case of a particular firm as seen in Figure 3.2.

FIGURE 3.2: CASH FLOW (IDR) FOR FOOD PREPARATION FIRM

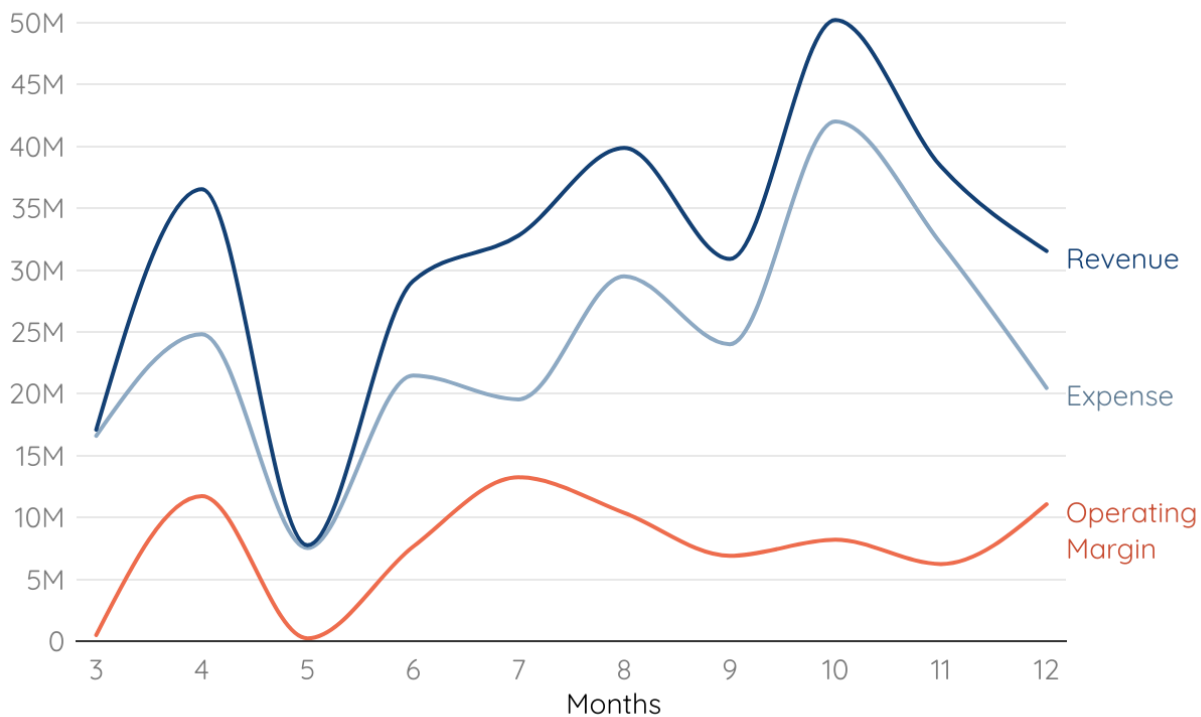


FIGURE 3.3: DESCRIPTIVE STATISTICS FOR FOOD PREPARATION FIRM

	Monthly Average	Monthly St. Dev.	Monthly CV
Operating Margin	IDR 7,608,910	IDR 4,425,388	0.58
Revenue	IDR 31,423,000	IDR 11,980,633	0.38
Expenses	IDR 23,814,890	IDR 9,346,683	0.39

This firm’s monthly average revenue is about IDR 31.4 million (approximately USD 7,528), but rarely is the actual monthly figure within IDR 5.0 million (approximately USD 1,006) of that average; specifically the standard deviation tells us that monthly income tends to be about IDR 11.9 million (approximately USD 2,395) from the average. Standard deviations are hard to compare across firms that may be very different in terms of monthly revenue.

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

For example, this food preparation firm has a monthly revenue CV of 0.38. That means that on average, the monthly revenues are about 38% greater or lesser than the average monthly revenue. This reflects the high volatility of that firm's monthly revenues, which in fact are quite characteristic of the sample. The median CV of monthly revenue for all the firms in the study is 0.39, meaning that, on average, the monthly revenue of all the firms tends to be 39% greater or lesser than their average monthly revenue.

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

There are several ways that a firm could manage revenue volatility. A firm that has reserves of working capital or ready access to credit could essentially ignore revenue volatility and make choices about expenditures to optimize the long-term success of the company, by drawing on working capital or credit when revenues were low and topping up those accounts when revenues were high. In this case, a firm's expenses could vary but would do so mostly independent of short-term revenue fluctuations. Alternatively, a firm could fix its expenses at a level below its "low" revenue months. 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, similar to what we see in the example firm's cash flows shown above in Figure 3.2. 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."

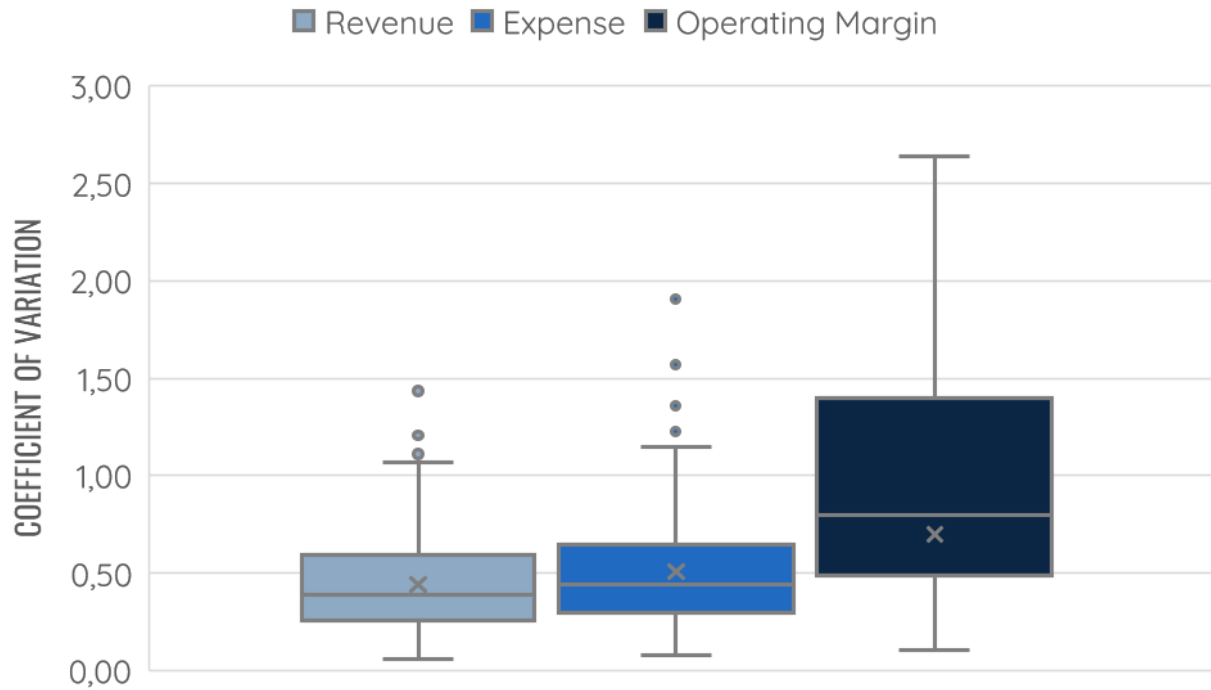
This last scenario is what we most commonly see among the small firms. In our data we see that the variability of expenses is higher than that of revenue, with a median CV of monthly expense of 0.44 (compared to .39 for revenue as noted above).

Firms are not able to perfectly match the volatility of revenue by managing expenses up and down. Operating margin volatility is double that of revenue—the median CV of monthly margin is 0.80—and also has a higher range—indicating that the capacity to match expenses and revenues varies a great deal between firms.⁸

The fact that firms do not frequently run negative operating margins indicates that they do not have adequate access to credit or working capital reserves to manage expenses independently of revenue. While we cannot say definitively that expenses follow revenues or revenues follow expenses, for the most part the two are closely linked.

⁸ No measure of volatility is perfect, CV included. The higher volatility of operating margin is in part driven by operating margins being necessarily smaller than revenue, making the mean lower.

FIGURE 3.4: COEFFICIENT OF VARIATION FOR 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).⁹ The majority of our firms typically have revenue less than IDR 30 million per month (approximately USD 6,038).^{10 11} We then use these revenue threshold to investigate whether gender or industry relate to higher revenues.

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

¹⁰ Exchange rate USD/IDR 14,695 (May 8th 2023)

¹¹ For context, GDP per capita in Indonesia is 4,783.9 USD in 2022 but minimum monthly wages are 183.27 USD on average (Statista).

FIGURE 3.5: REVENUE CATEGORY THRESHOLDS

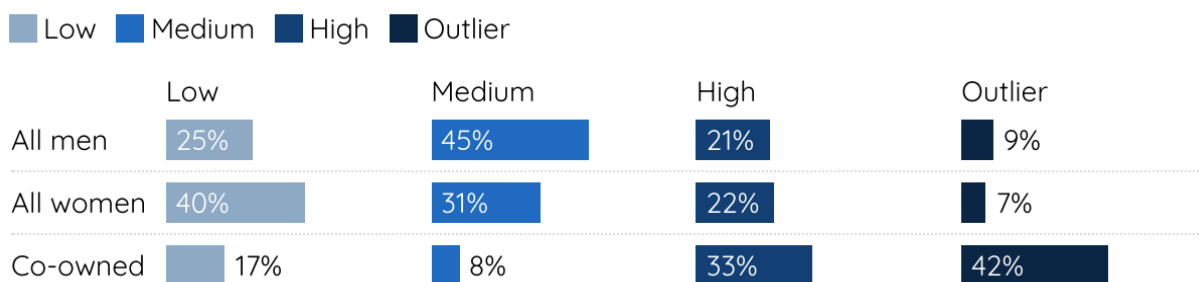
Bucket	Count of Firms	Median Monthly Income (IDR)
Low	49	Less than 10 million
Medium	59	10 million to 30 million
High	36	30 million to 80 million
Outlier	18	80 million and above

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 women-led small firms in Indonesia (more detail in the following section on women-led firms). We did find significant gender gaps in some quantitative metrics of financial performance, but also found some areas where women were on a par with male owners. This is discussed in more detail in the section that focuses on women-led firms. Here we'll describe the basic measures of firm size and operations.

As seen in Figure 3.6, the co-owned category shows a different pattern though this may be due to the small sample size of only 12 firms. About 25% of men-owned firms are categorized as “low” earners whereas 40% women-owned firms are categorized as “low” earners, where around 22% of women typically earn high monthly revenue compared to 21% of men. There is a significant gap between women-owned firms and men-owned firms in terms of median monthly operating margin, but the total difference is driven by the top and bottom of the distributions: there are a small number of women-owned firms that have significantly negative operating margins, while there are some men-owned firms that have much higher positive operating margins than all other firms. When we compare only firms with positive operating margins, men-owned firms have IDR 6.4 million (approximately USD 1,288) median monthly operating margins compared to IDR 4.8 million (approximately USD 966) for women-owned firms. Of note, women-owned firms' median monthly number of employees is 3, while for men-owned the median monthly number of employees is only 2 which we discuss more in Section 7 on employment and in the Focus on women-led firms.

FIGURE 3.6: REVENUE CATEGORY DISTRIBUTION ACROSS GENDERS

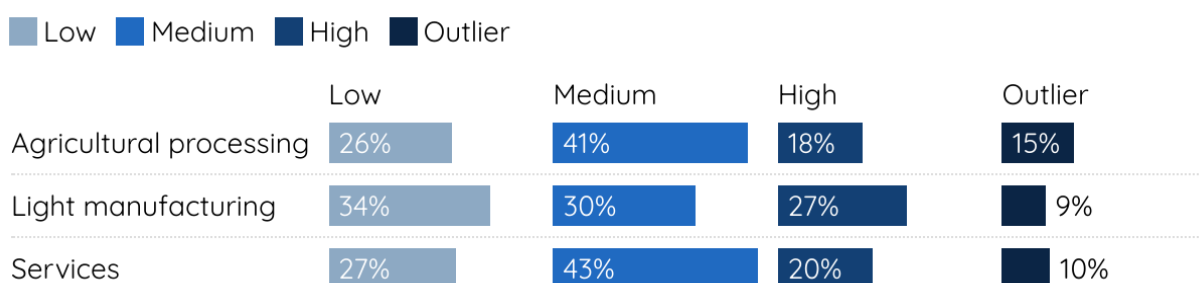


Revenue and Industry

There was less ex-ante expectation of an industry gap than a gender gap and we see that there are few meaningful differences between firms across the three industries that we study. The percentage of agri-processing firms that are classified as low income is 8% less than that of the light manufacturing industries (Figure 3.7). We do find differences in terms of operating margin.

Agri-processing is the industry with the lowest median monthly margin (IDR 4.7 million) (approximately USD 946), followed by light manufacturing with IDR 5.5 million (approximately USD 1,107) median monthly margin, while services with a median monthly margin of IDR 7.2 million (approximately USD 1,449) is the industry with the highest median monthly margin. Nonetheless, it’s important to note that agri-processing is the only industry without firms showing negative median monthly margins.

FIGURE 3.7: REVENUE CATEGORIES ACROSS INDUSTRIES

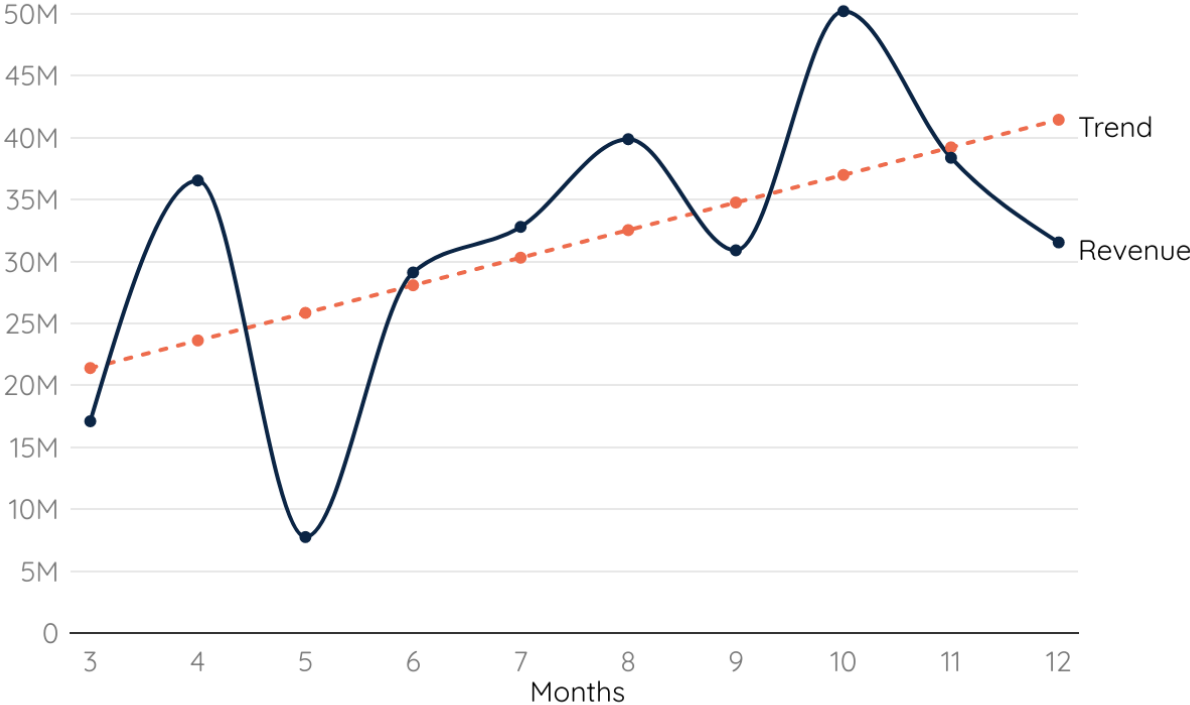


Revenue and Growth

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

We see an example firm in Figure 3.8 which shows the monthly revenue for months 3 through 12 (we disregard the first 2 months of data as part of the cleaning process). If we only compared the two data points of months 3 and 12, we would categorize this firm as a “grower” as the revenue in month 12 was 84% higher 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 peak in month 4, 8, and 10, and valleys in months 5 and 9. Taking the average of the monthly change (that is, how much this firm has grown between month 3 and month 4) would miscategorize the high volatility as growth. This firm’s average monthly change is 38%; in other words, on average, the firm’s revenue grows by 38% from one month to the next. Once again, looking at the graph, we can see that this is an overestimation of their sustained revenue growth. Because of the limitations of these simplistic measurements, we have chosen to look at the slope of the monthly revenue trend to (1) account for months without revenues (e.g., due to temporary firm closings) and (2) utilize our full 10 month’s worth of data rather than comparing two point-in-time data points such as month 3 and month 12. The line of best fit for this firm shows a positive slope of IDR 2.2 million (approximately USD 148), suggesting an average increase in monthly revenue of that amount. Using this positive slope, we categorize the firm as a “grower.”

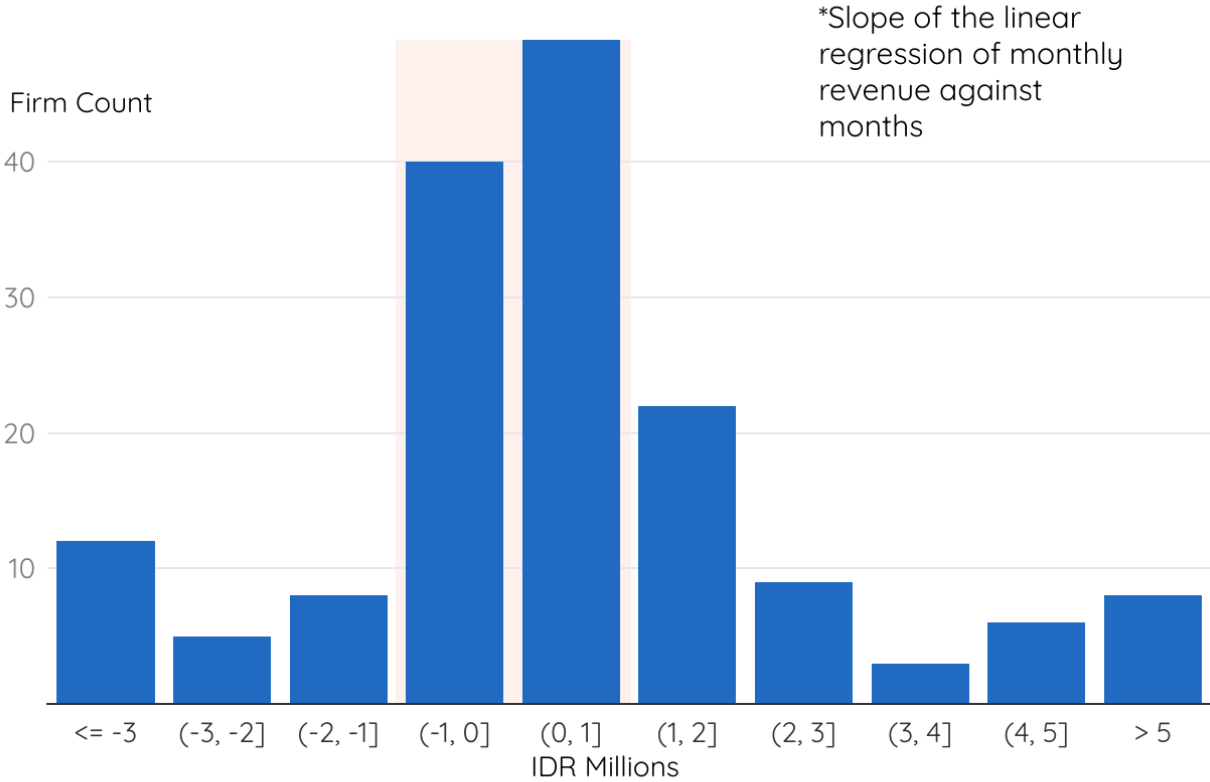
FIGURE 3.8: MONTHLY REVENUE (IDR) FOR EXAMPLE FIRM, MONTHS 3-12



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, 55% of our firms are either slightly declining (IDR -1 million (approximately USD -201) to IDR 0 (approximately USD 0) monthly revenue) or slightly increasing (IDR 0 (approximately USD 0) to IDR 1 million (approximately USD 201)). The remaining firms are spread

across the distribution with 8 outlier firms increasing more than IDR 5 million (approximately USD 1,006) a month.

FIGURE 3.9: DISTRIBUTION OF FIRMS BY MONTHLY REVENUE GROWTH*



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

FOCUS: Women-Led Firms

INTRODUCTION

Throughout the Indonesia Data Overview we discuss gender-disaggregated data. In this section we summarize those analyses of differences and similarities between men-owned and women-owned¹² firms in the study, 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, the global average of firms with female participation in ownership is 34%.¹³ In Indonesia, the average of small firms with female representation in ownership is 22.1%.¹⁴

Beyond these differences, World Bank research found that women in Indonesia, like women globally, suffered more from the Covid-19 pandemic. They remain excluded from male-dominated sectors such as agriculture, mining, energy, construction, transport, and finance, and tend to work in sectors characterized by greater informality and limited growth potential.¹⁵

As noted in Section 3 of the report, on basic measures of revenue, we see slight differences across genders, though we do find a large gap in median operating margin. Across a number of other dimensions we see gender gaps, but not always in the expected direction. When considering the gender gaps in the sample, it's important to note that the women who have started and are running firms with employees are likely distinct from the “average” situation of women in Indonesia; these firms have overcome some barriers that women commonly face to be running and managing firms of this size, although clearly some barriers remain. The differences are prevalent across metrics, for instance, women are unbanked at higher rates than men and less formal in terms of official registrations.

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

¹² 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.

¹³ World Bank, “Women Entrepreneurs Needed–Stat!”, 2020

¹⁴ World Bank Gender Data Portal, “Firms with female participation in ownership (% of firms)”

¹⁵ World Bank, The Indonesia Women in SMEs dashboard

OVERVIEW

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

Firm Finances

Using median monthly revenue to group our firms into earning categories, we find that 25% of men owned firms are low earners while 40% of women-owned firms are low earners (Figure 3.6). Women are equally represented among high earners, where around 22% of women typically earn “high” monthly revenue compared to 21% of men.

There is a large gap between all female-owned and all male-owned firms in terms of median monthly operating margin. When we compare only firms with positive operating margins, men-owned firms have median monthly operating margins of IDR 6.4 million (approximately USD 1288) compared to IDR 4.8 million (approximately USD 966) for women-owned firms.

Financial Services

Women-owned firms have the highest rates of being unbanked, at 59%, while 40% of men-owned firms are unbanked. Otherwise, women and men are similarly distributed across levels of formal financial integration. A higher percentage of male firm owners separate their finances than female firm owners (76% vs. 54%).

However, women owners use their bank accounts at a higher frequency—the median percentage of transaction value into or from a bank account is 32% for banked women, compared to 24% for banked men.

More men than women use smartphones for their businesses—84% compared to 68%. Also, a higher proportion of our male firm owners (60%) took loans than female firm owners (48%).

Formalization

Levels of perceived formalization are similar across genders. However, a slightly higher percentage of men-owned businesses reported Tax Registrations than women (37% vs. 33%), as well as Municipal Registrations (33% vs. 25%). Only a few firms reported having Trading Business Permits, but unlike the other types of registrations, there was a reversed gap between men and women reporting this level of registration (12% men vs. 17% women).

Employment

Women-owned firms have a higher median number of monthly employees (3) than men-owned firms do (2).

Business Practices

On the McKenzie and Woodruff Business Practices Index score, female firm owners in our sample typically score the same as male firm owners. Among our firms, record keeping was the most common set of practices: 80% of firms reported keeping written business records, one important practice in this domain, with women more likely to report doing so than men (86% of the women vs. 75% of the men). Practices in the stock control category were less common and reported more by women than by men (49% and 25% respectively).

Aspirations

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

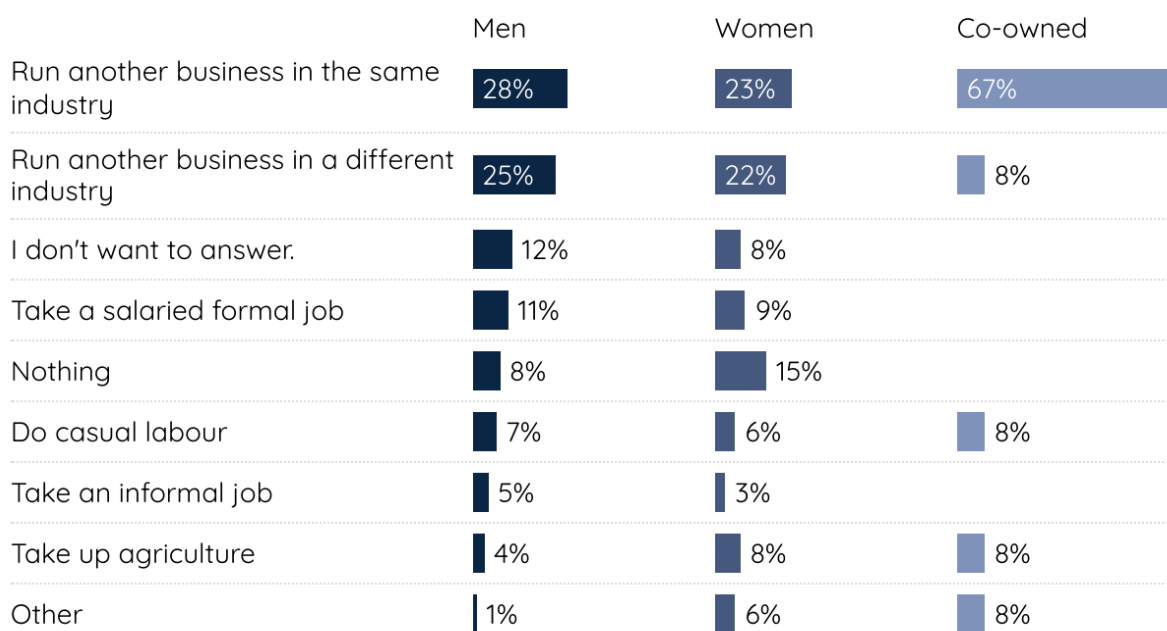
ENTREPRENEURIAL CONFIDENCE AND PERFORMANCE: A CLOSER LOOK

We wanted to understand if firm owners of different genders had differing motivations for starting a business that might affect their management practices and performance. Most of our sample opened their business due to the need to earn a living, usually driven by difficulties finding jobs. The second most common reason was the desire to be independent from an employer or own a business of any kind. Women were more likely to be driven by the former (32% open their businesses out of the need to earn a living, compared to 19% of men), whereas men were more likely to be motivated by entrepreneurial drive (38% vs. 19% of women).

Perhaps due to differing motivations for opening the business, when we asked firm owners what they would do for income if they were not running their current small firm (Figure W.1) we saw that women said they would run another business at only slightly lower rates than men, twice the percentage of women said they would do nothing.

FIGURE W.1 ALTERNATIVES TO SMALL FIRM OWNERSHIP

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

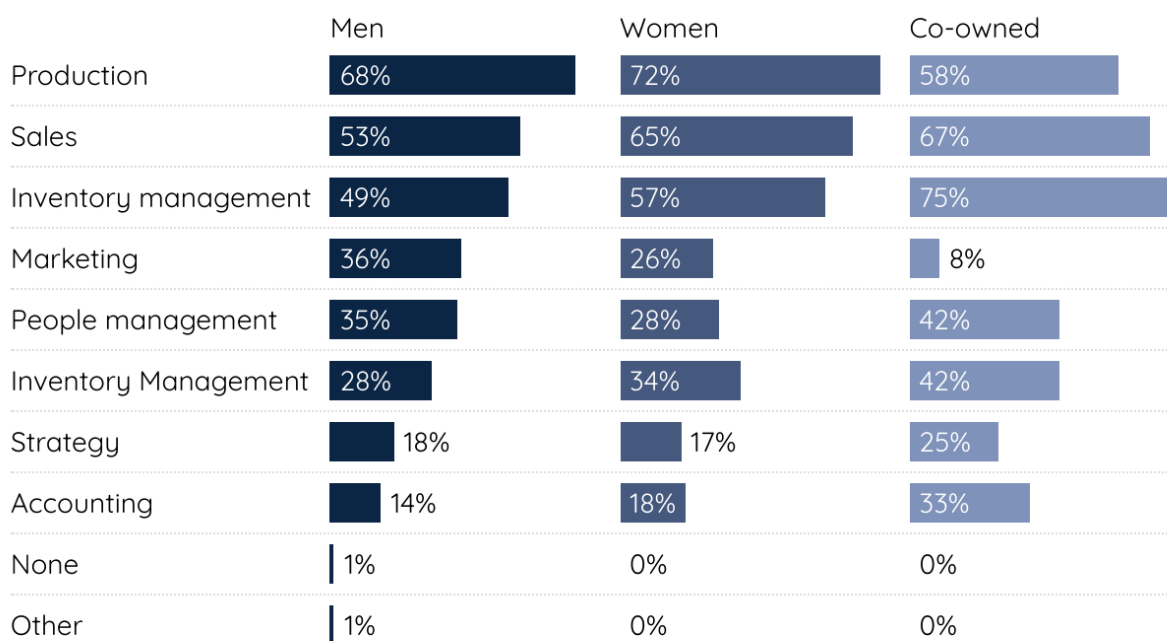


When asked about specific business practices, men were typically more confident than women. For example, 25% of men reported a “very strong ability” to obtain credit compared to 5% of women and 32% of men reported a “very strong ability” to manage employees compared to 11% of women. However, men and women were similarly confident in their ability to manage financial accounts (15% and 12% felt they had a “very strong ability” respectively).

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 time on in the past two weeks?

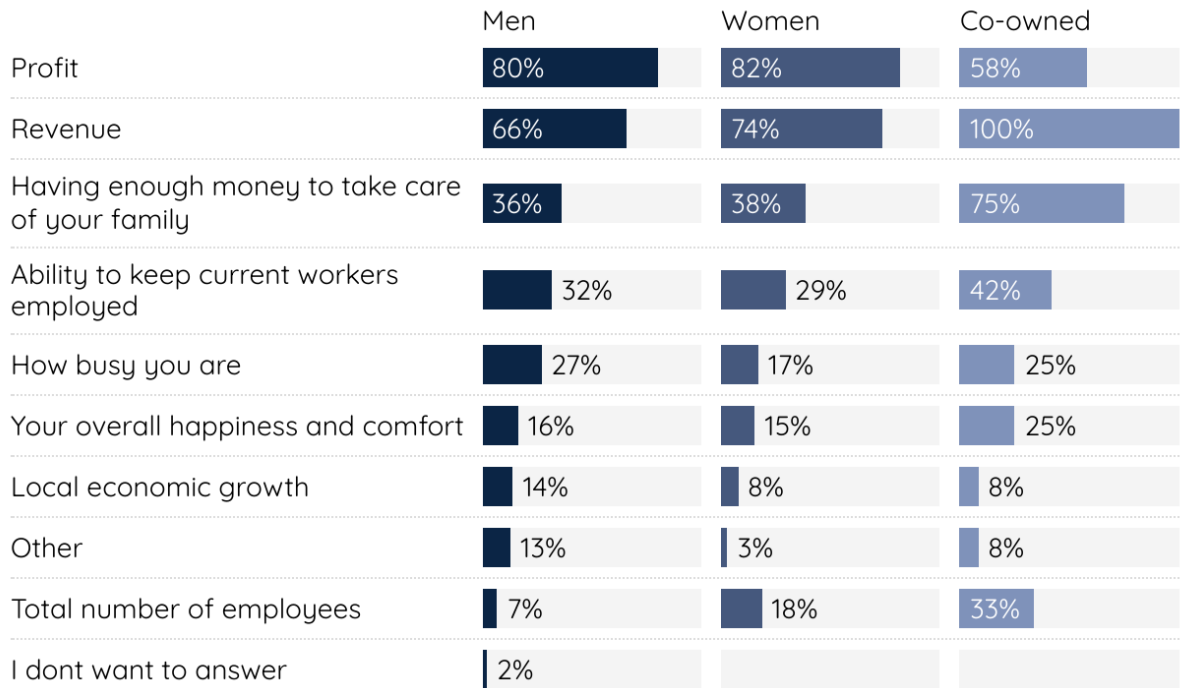


The alignment in reported time use continues into similarities in how the owners measure success. Profit was the most important metric for both men and women. On measures that could be expected to skew significantly towards women (“having enough money to take care of your family” and “overall happiness”) we saw no difference. The only measures where there were marked differences were in “How busy you are” with men reporting considering that metric at a rate 10 percentage points higher than women (Figure W.3).¹⁶

¹⁶ Given the segmentation of the total sample into subgroups for this type of analysis, one or two firms answering differently could move a response by 3 to 8%.

FIGURE W.3: METRICS OF BUSINESS SUCCESS

How do you measure how your business is doing?



4. Financial Access and Digitization

INTRODUCTION

A major policy focus for the last decade has been bringing more people into the formal financial sector, spurred on by findings that half the world was “unbanked.”¹⁷ In this section, we explore how “banked” our firms are in terms of account ownership and then dive deeper into how truly integrated firms are into the formal financial system by looking at account usage, separation of finances, and access to credit. The findings here are an abbreviated version of the Indonesia Report on Financial Access, *Financial Services: How small firms in Indonesia manage their finances*, available on smallfirmdiaries.org/indonesia.

While the percentage of banked individuals in Indonesia increased from 35% in 2014 to 52% in 2021,¹⁸ it still lags behind neighboring countries like Thailand (82%) and Malaysia (85%). The digitization of social assistance programs has improved access to bank accounts, reducing the wealth and gender gaps. However, progress in providing financial access to underserved segments has slowed down recently, particularly in rural areas where infrastructure deployment is challenging.

This is in line with findings from the Small Firm Diaries: we find that 50% of the firms in our sample own bank accounts *and* use them at least once. Using the percentage of value of transactions through a bank account to categorize a firm’s financial integration, we see that 50% of our sample is unbanked, 24% is marginally integrated (less than 25% of activity through a bank account), 9% are partially integrated and 17% highly integrated (more than 75% of activity) into the formal financial system. Half of employee payments remain in cash, even among banked firms, due to employee preferences. The exception is the most highly banked firms that use bank accounts for essentially all employee payments. In terms of separation of finances, just over 65% of our total sample (including firms that are unbanked) report keeping specific separate accounts for their business.

About half (54%) of our firms reported holding a loan of any kind during the study and government banks were the most common loan source, likely due to the government’s subsidized loan program (*Kredit Usaha Rakyat* or KUR), which allows MSMEs to borrow at an interest rate of 6% with no collateral for loan sizes under IDR 100 million (see call-out box for more on this program).

Use cases for loans varied across the sample, with the most popular needs being to make an investment or expand stock. Deeper dives on what firms consider an investment showed that most of the time an “investment” is a large purchase of raw materials and inventory. Thus, we believe that the vast majority of the expressed interest in borrowing is for working capital purposes.

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

¹⁷ Chaia et al., 2013

¹⁸ The Global Findex Database 2021, Data Dashboard

INDONESIAN GOVERNMENT LOAN PROGRAMS: KUR and UMI

The *Kredit Usaha Rakyat* (KUR) program in Indonesia is a government initiative aimed at providing microcredit or small business loans to MSMEs.

Under the KUR program, eligible MSMEs can access subsidized credit through partnering banks and microfinance institutions. The loans offered through the program are intended to meet various business needs, including working capital, investment in equipment or machinery, business expansion, and other productive purposes.

The government of Indonesia has consistently increased the overall target for KUR distribution in the last few years. In 2023, the government is targeting IDR 450 trillion of KUR disbursements. The micro-KUR (IDR 10-50 million) is the predominant category of loans and contributes more than 64% of the total KUR portfolio. The Government classifies five types of KUR: 1) KUR Super Mikro (up to IDR 10 million); 2) KUR Mikro (IDR 10-50 million); 3) KUR Kecil (IDR 50-500 million); 4) KUR Khusus (up to IDR 500 million); and 5) KUR Penempatan Tenaga Kerja Indonesia (up to IDR 25 million) for migrant workers in abroad. From 2014 to December 2022, the government of Indonesia has channeled KUR loans worth IDR 1,312.59 trillion (USD 87.5 billion). Over 40 financial institutions disburse KUR loans (covering government banks, private banks, MFIs, cooperatives, and finance companies), BRI dominates the disbursement with 68.5% share in the total disbursement of such loans.

The Ultra Micro (UMi) Financing Program on the other hand focuses on even smaller businesses (up to IDR 20 million loan size). From 2017 to February 2023 the Ministry of Finance disbursed loans worth IDR 26.69 trillion to 7.52 million people.¹⁹

BUSINESS ACCOUNT OWNERSHIP

Efforts to bring more people into the formal banking system have borne fruit in many parts of the world as shown in the 2021 Global Findex, with the number of unbanked people cut in half globally; in Indonesia the number of people over the age of 15 who do not have any account stands at 51.8%.²⁰

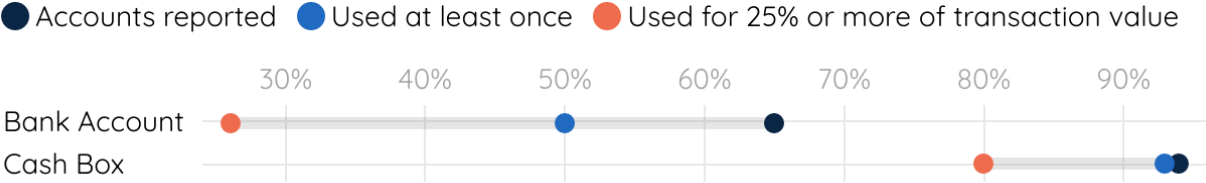
At the beginning of the Diaries, we asked each firm owner to list the accounts they used for the firm. Almost 65% of our firms say that they own a bank account they use for the business, while close to 95% report having a cash box for the business. Other account types, such as mobile money wallets and informal savings groups were much less common (6% and 2% respectively). Looking deeper not just at reported ownership, but those who reported using an account type at least once during the study, we see a gap: just 50% of all firms—12% less than firms that report owning an

¹⁹ Coordinating Ministry of Economic Affairs (2023), accessed at <https://kur.ekon.go.id/pihak-pihak-terlibat-kur>
CNBC Indonesia (2022), accessed at [https://www.cnbcindonesia.com/research/20221226115913-128-400096/sangat-dominan-ini-bank-penyalur-kur-terbesar-hingga-2022#:~:text=Melansir%20dari%20keterangan%20di%20situs,KSP\)%2C%20serta%20Perusahaan%20Pembinaan](https://www.cnbcindonesia.com/research/20221226115913-128-400096/sangat-dominan-ini-bank-penyalur-kur-terbesar-hingga-2022#:~:text=Melansir%20dari%20keterangan%20di%20situs,KSP)%2C%20serta%20Perusahaan%20Pembinaan).

²⁰ The Global Findex Database 2021, Data Dashboard

account—use their bank accounts at least once. Looking further at firms that used accounts for at least 25% of their total transaction value (inflows and outflows), cash boxes are the predominant tool (80% of firms used cash boxes for 25% or more of their transaction value), followed by bank accounts at just 26% of firms (Figure 4.1). In fact, 46% of firms run their businesses entirely in cash. Overall, while a moderately 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: ACCOUNTS REPORTED AND USED FOR BUSINESS PURPOSES

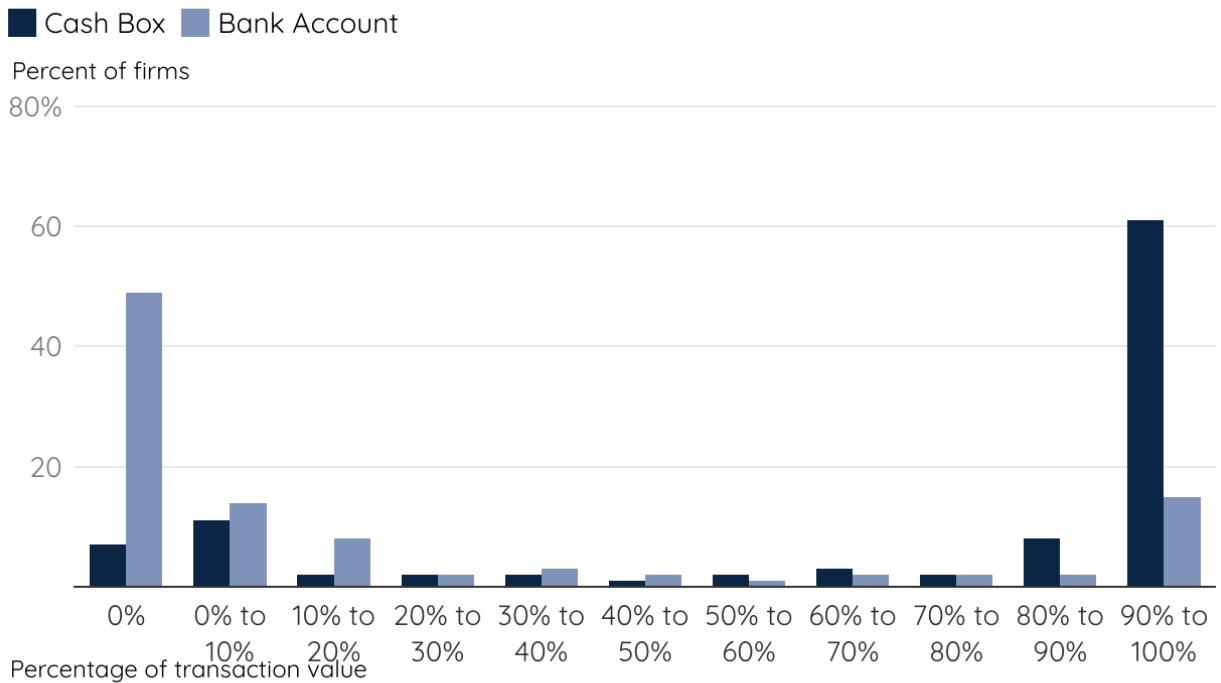


Of the firms that do use their accounts, we can use the high frequency data gathered to see how important a bank account or mobile money wallet is in each firm’s financial management. (As our methodology allows firms to bundle small transactions, and most small transactions happen in cash, we choose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

For each transaction recorded we ask the firm owner the value, the mechanism of the transfer (e.g. cash, bank transfer, mobile money), and the type of account used. When we ask what account was used, we record the firm owner’s perception of where the transaction originated (for an expense) or terminated (for income). For this reason it’s important to note that not all transactions reported as into or from a bank account are made by bank transfer or at a branch, but may have been cash transactions 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, 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: PERCENTAGE OF VALUE TRANSMITTED VIA ACCOUNT TYPE



Based on the recorded flows, there are two important dimensions for integrating small firms like those we studied more firmly into the formal system: 1) increasing the usage of formal financial services of the firms (about 33% of firms) that are using formal finance but for less than half of their financial activity, and 2) reducing the portion of the firms (about 35%) that are still operating entirely outside formal financial systems. It will likely be much easier to increase usage for firms that are already partially integrated than it will be to bring unbanked firms into the system. The former can likely be addressed through marketing and product design tweaks; the latter probably requires more significant interventions and potentially policy changes.

TRANSACTION MECHANISMS

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

For bank accounts, the median firm makes bank transfers when using her bank account for 66% of her total transaction value into or out of a bank account, compared to 34% of transactions from the bank account occurring in cash. Figure 4.3 outlines the relationship between “account used” and “transaction mechanism” and shows the distribution of transaction value against transaction mechanism for each respective account type for a sample firm. While this firm runs the majority of her business through a bank account, 23% of her “bank account” transactions are in cash. For this reason, the percentage of transaction value we see reported as into or from a bank account should

not be directly interpreted as a reliance on bank transfers or branches, but rather as bank accounts or mobile money wallets providing an important storage mechanism and interoperable tool that our firms use in combination with cash. In particular, any discrepancies between account used and transaction type, especially for bank accounts, illustrate that firms are moving funds between account types and interoperability between these modes is crucial.

FIGURE 4.3 FIRM TRANSACTION MECHANISM VS ACCOUNT USED FOR SAMPLE FIRM, IDR



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

SEPARATION OF FINANCES

A second key metric for understanding the finances of small firms is the degree to which owners separate their finances from their household finances. This is a fundamental business practice that has been shown to be important to firm performance, and obviously is important for understanding administrative data about small firms’ accounts. The majority (65%) 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 the total sample: 74%. They do this both via maintaining a cash box and bank account—half of banked firms that report separating finances have both a business bank account and a business cash box. Size of firm (by revenue) is a better proxy: 74% of firms in our highest revenue segment separate finances compared to 64% of those in the lower two tiers of revenue segmentation.²¹ Men-owned firms are most likely to separate their finances, 76% of these firms have a separate business account compared to 54% of women-owned firms.

We did not ask owners to verify the legal status of the bank accounts they told us about. However, we did ask owners about their registrations and their perceptions of whether the firm is formal. While requirements to register a business bank account vary across banks, the most common requirement is a copy of the *Kartu Tanda Penduduk* (KTP) identification card and tax registration numbers (NPWP). In our sample, 30% of firms had a tax registration, while just 8% had a domicile

²¹ Per Figure 3.5, firms are categorized based on median monthly revenue. The cutoffs are: Low: less than IDR 10 million; medium: IDR 10 million to IDR 30 million; and high: IDR 30 million to IDR 80 million. Firms with revenue above IDR 80 million are considered outliers.

letter, 6% had a business license, and 3% had a deed of establishment. Given the low number of registrations, we surmise that the vast majority of the accounts are not legally registered to the business, but to the owner. There is an important interplay between separation of finances, integration into the financial system, and firms’ self-perceptions of formality: Firms that are highly integrated are more likely to perceive themselves as formal and are more likely to separate their finances. Firms that perceive themselves as formal or semi-formal are more likely to separate finances (82% vs. 67%), but firms with and without tax registrations do so at similar rates (approximately 70%).

BANKING INTEGRATION

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

FIGURE 4.4: LEVEL OF BANKING INTEGRATION

Level of banking integration	Definition	Percentage of firms
High	More than 75% of transaction value conducted into or from a bank account	17%
Partial	Between 25% and 74% of transaction value conducted into or from a bank account	9%
Marginal	Less than 25% of transaction value conducted into or from a bank account	24%
Unbanked	Do not report using a bank account	50%

In general, banked firms have higher revenues than unbanked firms. The relationship between levels of financial integration and revenues is not as clear cut—partially integrated firms have lower monthly revenues than marginally integrated firms and there is a large overlap in the distribution of median monthly revenues across all levels of financial integration (Figure 4.5). Clearly, then, there is

an opportunity to increase the banking integration of firms at all levels of the revenue distribution.

FIGURE 4.5: REVENUE PARAMETERS BY LEVELS OF BANKING INTEGRATION

Level of banking integration	Number of firms	Minimum (IDR)	Median (IDR)	Maximum (IDR)	Median coefficient of variation (CV)
High	28	4,790,000	29,250,000	344,511,193	0.38
Partial	14	1,285,000	12,276,000	243,474,050	0.41
Marginal	39	2,662,250	20,150,000	238,685,500	0.36
Unbanked	79	480,000	12,590,550	98,296,625	0.36

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— 54% of our highly integrated firms are “growers” (as defined in Section 3 as those firms with positively sloping monthly revenue trendlines), compared to 56% of unbanked firms.

FIGURE 4.6: LEVEL OF BANKING INTEGRATION AND FIRM GROWTH

Row Labels	Grower	Non-Grower
High	54%	46%
Marginal	49%	51%
Partial	50%	50%
Unbanked	56%	44%

As there is a global effort to increase adoption of digital financial tools by encouraging employee payments via digital means, 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 use cash to pay their employees (see Figure 4.7). We saw the same pattern for other expense categories—except for highly integrated firms, expenses were typically paid in cash. However, when we looked at revenue, we found that partially integrated firms typically split revenues between bank accounts and cash. In other words, partially integrated firms use their accounts to receive revenue for customers more than make payments.

FIGURE 4.7: ACCOUNTS USED TO PAY EMPLOYEES

Median percentage of transaction value by account type

Level of banking integration	Bank account	Cash box
High	100%	0%
Partial	19%	81%
Marginal	0%	100%
Unbanked	0%	100%

Women firm owners have the highest rates of being unbanked, at 59%, while 40% of men firm owners are unbanked. However, among banked firms, women led firms use their bank accounts at higher rates—looking only at the subsample of firm owners with bank accounts, the median woman-owned firm conducts 32% 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 24%.

Examining differences among firms in different industries, light manufacturing firms are banked at slightly higher rates than other industries (53% of light manufacturing firms are banked, compared to 47% and 48% of agri-processing and services firms respectively). The median percentage of value flowing through a bank account is also higher for banked light manufacturing firms, at 46% compared to 19% and 21% for agri-processing and light manufacturing firms. For detailed distributions across gender, industry, and formality, reference *Financial Services: How Small Firms in Indonesia Manage their Finances*, available on smallfirmdiaries.org/indonesia.

DIGITAL FINANCIAL SERVICES ADOPTION

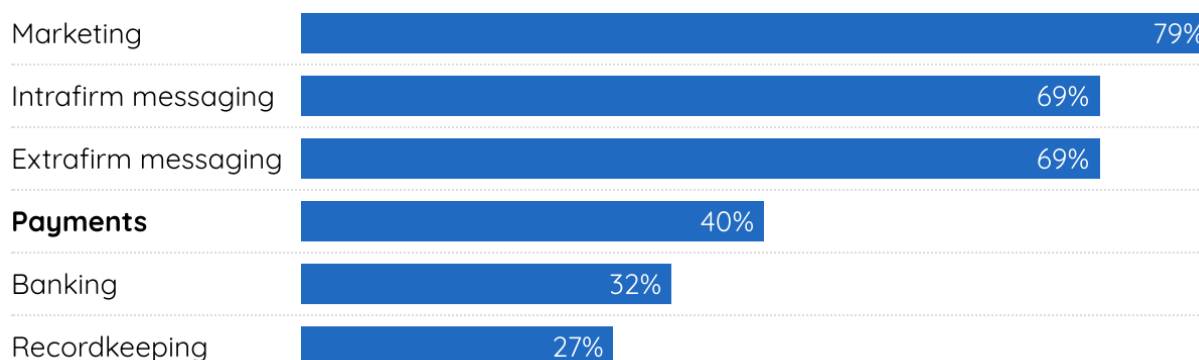
The Small Firm Diaries wanted to explore the drivers of adoption of digital financial services broadly. We use digital financial services (or DFS) as an umbrella term that includes banking and payments services delivered through the internet, banking apps accessed via a smartphone, and what might be 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 Indonesian sample. Close to 80% of our firms use either a smartphone or computer or both for their business (almost all firms that use a computer also use a smartphone). More men than women use smartphones for their businesses—84% compared to 68%. Additionally, a higher proportion of light manufacturing firms use smartphones for their businesses (92% vs. 52% and 67% for agri-processing firms and services firms). Of the close to 80% of firms that use a smartphone for business, only 40% use it to make payments. Marketing and messaging are much more popular uses (see Figure 4.8).

GOVERNMENT EFFORTS ON DIGITALIZATION AND DIGITAL ACCESS FOR MSMEs

Indonesian government efforts to promote digitalization and access to digital financial services span several government Ministries and include initiatives to help MSMEs set up online stores and promote their products online, and the creation of dedicated payment platforms to facilitate cashless transactions. The Central Bank (Bank Indonesia) launched programs to promote digital technology for the agriculture industry, a digital bookkeeping application, and a standardized digital QR Code payment standard (QRIS). Despite high dormancy, technical issues in registration/settlement and possibility of double counting of merchants, QRIS has been instrumental in providing low-cost access to low-value/high volume payments in Indonesia,²² and, according to Bank Indonesia's latest data, has attracted more than 19 million merchants who use QRIS for making and receiving digital payments.

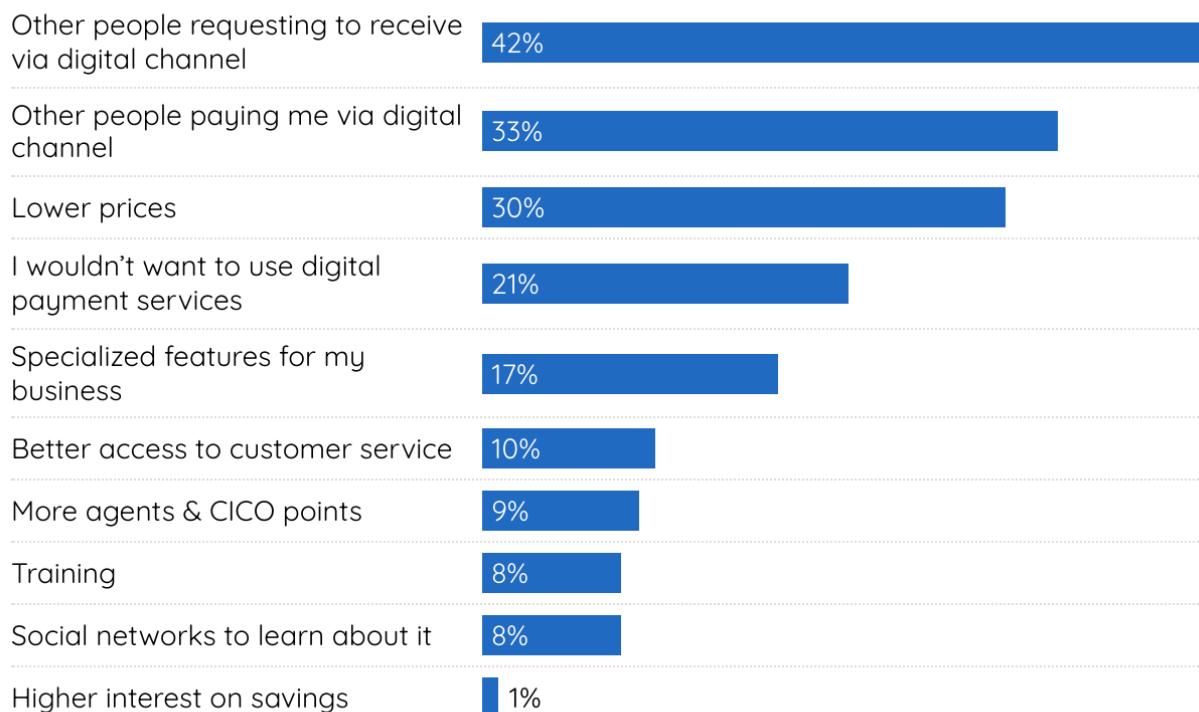
FIGURE 4.8: REASONS FOR USING A SMARTPHONE



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 4.9). The most common reasons were people requesting to send or receive digital payments, followed by lower prices.

²² Microsave Consulting, 2022

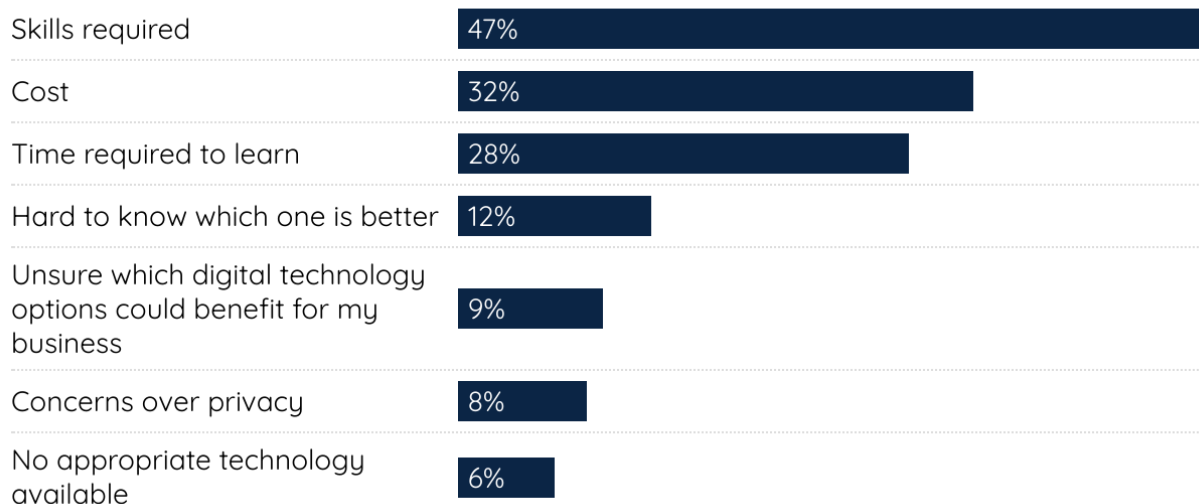
FIGURE 4.9: REASONS TO USE DIGITAL PAYMENTS SYSTEMS MORE



In the same survey on attitudes towards and adoption of technology, we asked firms what prevents them from using technology broadly (Figure 4.10). The largest group— almost half of respondents— reported skills as a barrier to adoption, a finding supported by a survey conducted by the National Financial Inclusion Council, which found that three-quarters of adults in Indonesia report little or no ability to perform a financial transaction on their phone.²³ In our sample only a third viewed cost as a barrier, and less than 10% of firms reported concerns over privacy and fraud.

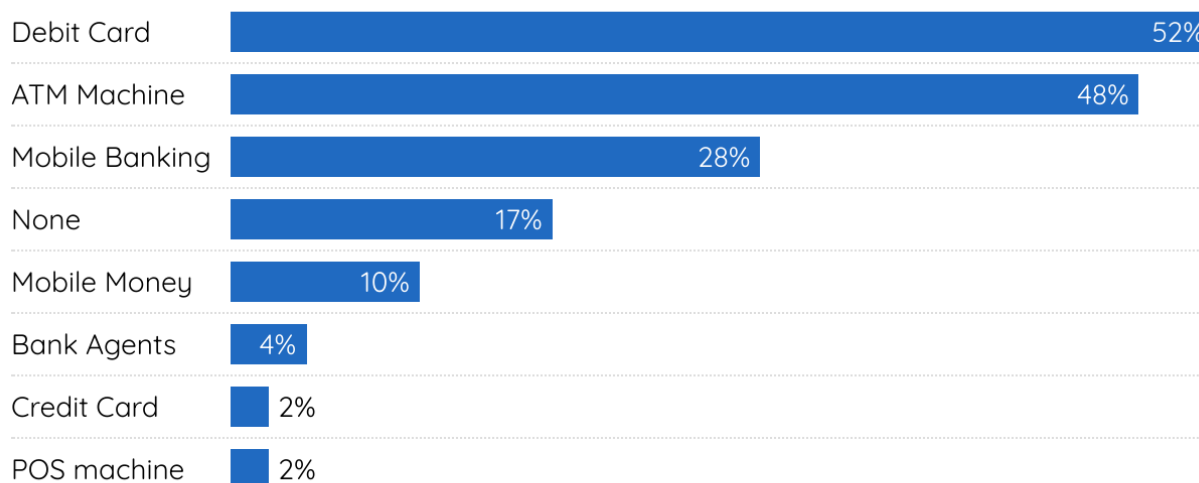
²³ National Council for Inclusive Finance of the Republic of Indonesia, Financial Inclusion 2020

4.10: BARRIERS TO TECHNOLOGY ADOPTION



In addition to general technology usage for the business, 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. Debit cards and ATMs are the leading tools—also staples of the move away from cash in high income countries—followed by mobile (28% of firms). However, 17% of firm owners still have no use of digital financial services (Figure 4.11).

FIGURE 4.11: REPORTED DIGITAL FINANCIAL SERVICES, PERCENTAGE OF FIRMS



Of the 80% of firms that reported using any form of digital financial services, 12% (15 firms) reported experiencing issues with the services. The most common issue—reported by 30% or 5 firms, was “money arriving late,” followed by loss of access to the services (20%).

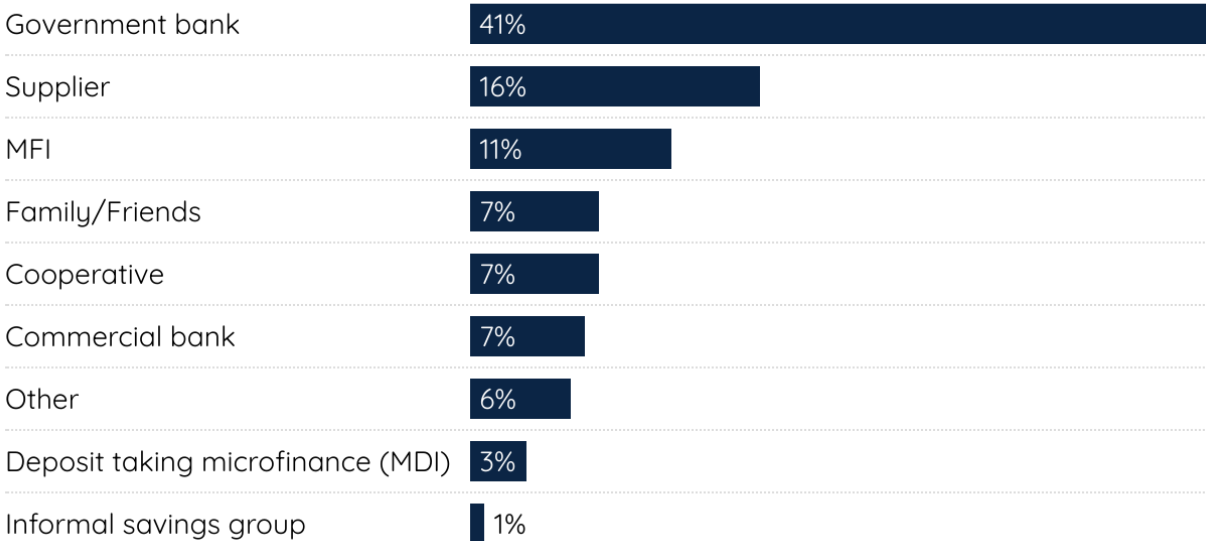
CREDIT ACCESS AND USAGE

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?

About half (54%) of our firms reported holding a loan of any kind during the study (including loans that were active at the start of the study and new loans taken during the study). A higher proportion of our male firm owners (60%) took loans than female firm owners (48%). Men business owners, on the median, also took higher value loans than women—IDR 30 million (approximately USD 6,038) compared to IDR 7.5 million (approximately USD 1,509). There were some slight differences across industries: agri-processing were most likely to take a loan (58%), compared to 56% of light manufacturing firms. While only 45% of services firms took loans. Light manufacturing firms took higher value loans than services or agri-processing firms, on the median, at IDR 14 million (approximately USD 2,817) compared to IDR 11 million (approximately USD 2,214) and IDR 10 million (approximately USD 2,012) respectively.²⁴

Government banks, suppliers, and MFIs are the most common loan sources in Indonesia (see Figure 4.12). Most firms rely on one source of credit, but there are overlaps between categories—20% of firms with a government bank loan also have a loan from a supplier; while 11% have a loan from a MFI.

FIGURE 4.12: BUSINESS LOAN SOURCES



During the study, we asked firm owners what they use or would want to use a loan for, with a variety of options (Figure 4.13). The answer choices were not mutually exclusive: firm owners could

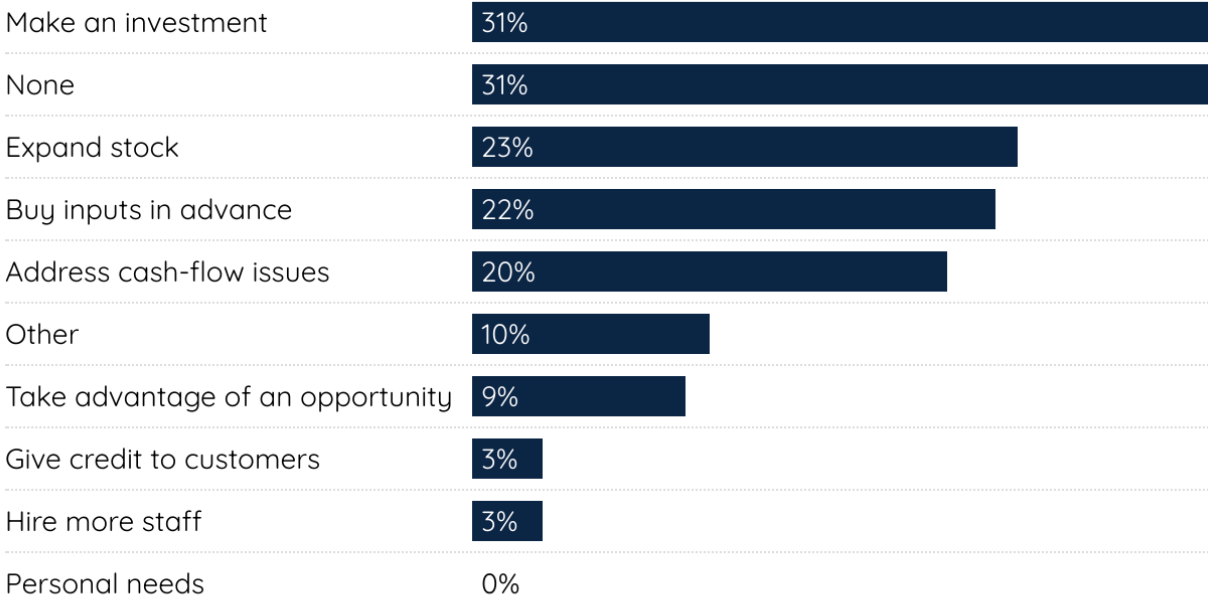
²⁴ For a more complete comparison of differences between industries, see the Appendix.

choose multiple responses. The most common responses were “make an investment” or “none” (indicating no desire to use loans), followed by “expand stock” and “buy inputs in advance” (only 12 firms chose both).

To better understand what firms considered investments, we looked at the “assets” and the large purchases they reported during the study. During the study, 40% of firms reported buying new “assets.” Of these firms, 52% reported buying new tools for their business (the most common type of asset purchase). Essentially the same percentage (20% vs 18%) reported the assets purchased were new machines as reported new assets of raw materials or stock. 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 (86% of large purchases and 87% of firms). For context, only 9% of firms that made large purchases reported these as purchases of an asset. Given that some firms view stock purchases as an “asset” and 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 predominantly for what could be categorized as working capital, rather than for capital investments.

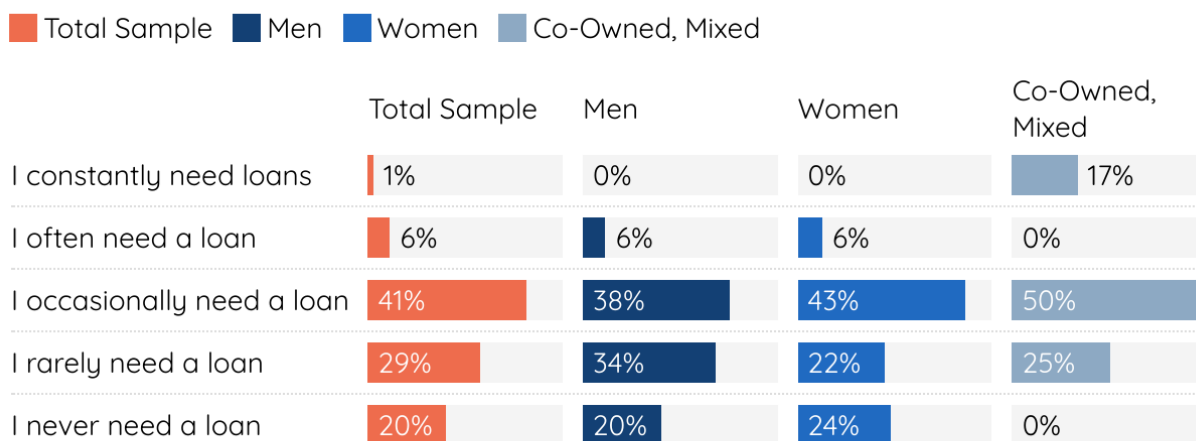
FIGURE 4.13: DESIRED USE FOR LOANS

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



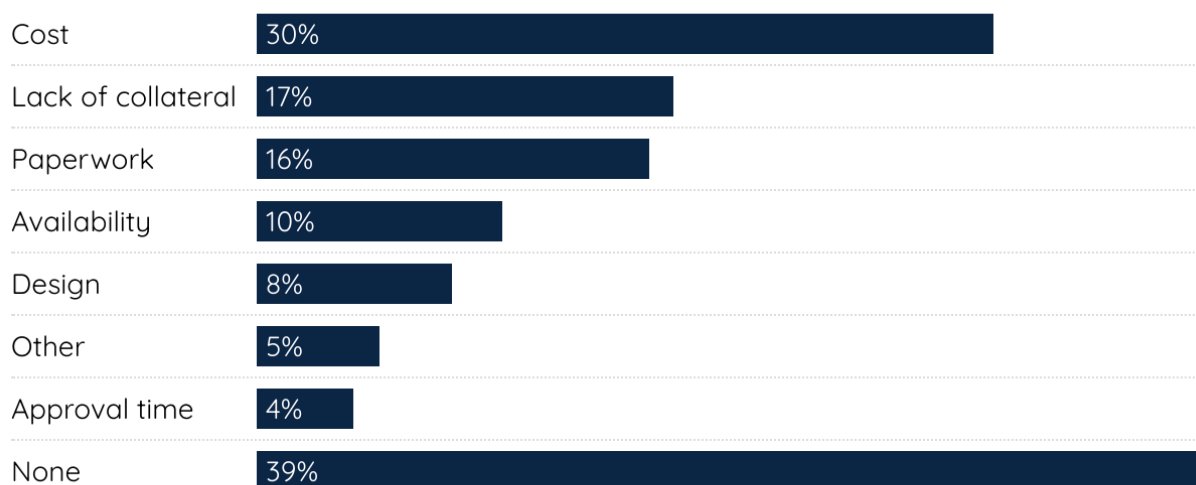
Despite high rates of credit usage across the sample, when we surveyed firms on how often they need a loan, only 7% said they often or constantly needed a loan. This was consistent across genders; 6% of both men and women firm owners said they often need a loan. Reported need for credit generally aligned with credit usage during the study: 36% of firms without a loan of any kind said they never need loans compared to just 7% of firms that reported any loan. (Figure 4.14)

FIGURE 4.14: REPORTED DESIRE FOR CREDIT BY GENDER



We also asked firms about the barriers that prevented them from accessing credit. Cost was the most frequently cited barrier, reported by close to a third of firms. Notably, issues at the forefront of policy design, such as lack of collateral, availability, and design were reported about half as often (17%, 10%, and 8% respectively) (see Figure 4.15). Regardless of firm owner gender, or industry, cost was the main barrier cited. Of the firms that reported “none,” 40% had reported no desired use of loans so we perceive this response as being split between firms with no desire for credit and those who perceive no barriers to accessing credit. It is notable that firms in Indonesia reported fewer barriers to credit access than firms in other countries in the global study.

FIGURE 4.15: PERCEIVED BARRIERS TO ACCESSING CREDIT



In addition to looking at firms’ perceptions of barriers to credit, we examined other firm characteristics to see which firms were less likely to use credit. Based on a firm’s perceived level of formality, 34% of informal firms have a loan from a government bank, compared to 15% of formal firms, and 33% of semi formal firms. On the other hand, 15% of *formal* firms have a loan from a

supplier or family/friends (what could be thought of as informal sources), as do 18% and 20% of informal and semi-formal firms respectively. This suggests that formal firms that may have access to institutional sources of credit still rely on informal credit due to issues with credit product design, cost or other barriers noted above. Of note, follow-up work among small firms in Colombia after the study there had ended corroborates the credit product design hypothesis: firms report using formal credit for asset purchases while relying on informal credit for liquidity and working capital.

SUPPLY CHAIN FINANCE

Understanding the opaque domain of supply chain finance for small firms is particularly interesting, given the apparent need for working capital. We attempt to get a complete picture of supply chain finance as it illuminates the tools, challenges and opportunities around working capital and liquidity management for small firms. We define supply chain finance broadly to include both financial flows and tacit or in-kind transfers, and find that about half 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 credit and giving credit. There are differences across industries in the patterns of giving or getting credit—100% of services firms that use supply chain finance get credit, while only 40% give it. In contrast, agri-processing firms are equally likely to give or receive credit (about 75% of agri-processing firms that use supply chain finance give and receive credit), while light manufacturing firms are slightly more likely to get credit than give it. Differences between industries aside, a perhaps surprisingly large proportion of the firms that use supply chain finance do so to give 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. On further thought however, it is likely true that the firms are serving low-income customers who have even greater liquidity challenges than the firms themselves. Thus, while these firms are liquidity constrained, they are providing liquidity to their customers and play a large role in the financial lives of low-income households and neighborhoods (Figure 4.17).

FIGURE 4.16: USE OF SUPPLY CHAIN FINANCE

Does your firm use supply chain finance?

■ No ■ Yes

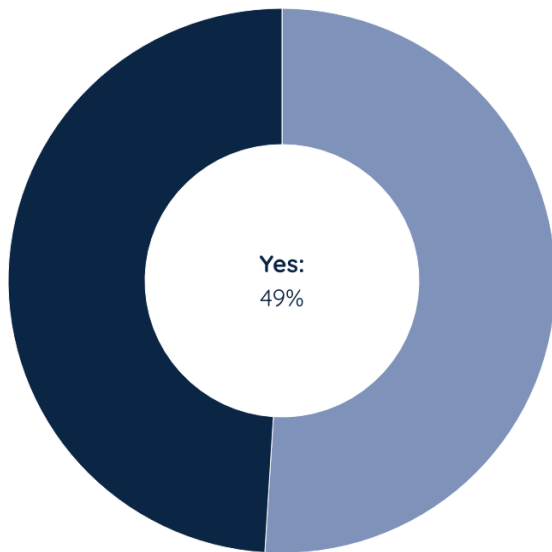
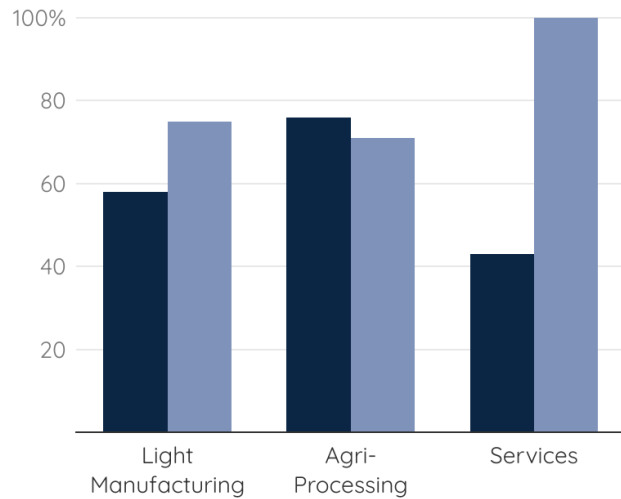


FIGURE 4.17: TYPE OF SUPPLY CHAIN FINANCE

What type of supply chain finance do you use?*

■ Giving credit ■ Getting Credit



*of firms that say they use supply chain finance

Firms see a variety of advantages of supply chain finance compared to other sources of credit (see Figure 4.18) but both users and non-users of supply chain finance most frequently mention that it strengthens business relationships. Unsurprisingly, users of supply chain finance are much more likely to perceive that it can strengthen relationships than non-users. Of course there are risks as well as advantages (Figure 4.19). Non-users and users of supply chain finance alike believe that it poses a risk to their relationships with suppliers and customers.

FIGURE 4.18: ADVANTAGES OF SUPPLY CHAIN FINANCE

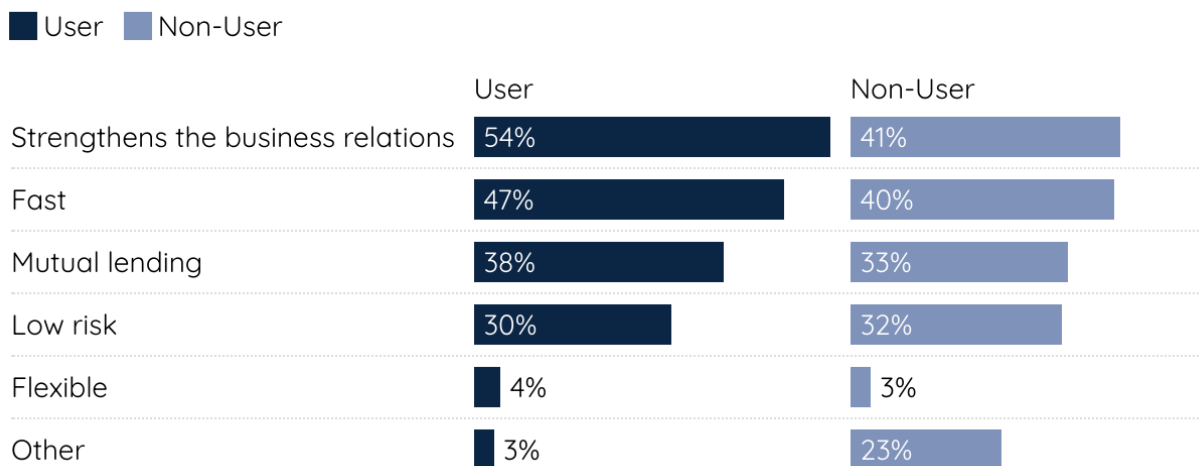
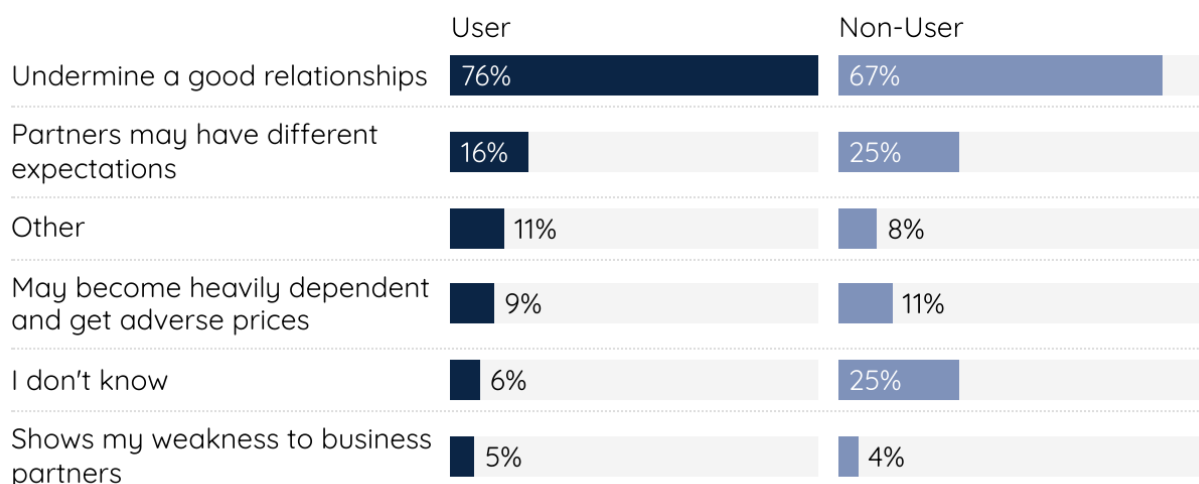


FIGURE 4.19: DISADVANTAGES OF SUPPLY CHAIN FINANCE



Overall, supply chain finance seems to be an underexploited opportunity for supporting small firms and their customers. Using the knowledge of suppliers can solve one of the major challenges of business lending—understanding credit risk in the context of limited and incomplete information. Providing liquidity to suppliers to enhance their provision of credit or gathering information from suppliers in order to underwrite working capital loans to the firms themselves would also likely trickle-down to the firms’ customers by allowing the firms to offer more credit than they already do.

5. Formalization

INTRODUCTION

For many years, policies and programs for microenterprises and small firms emphasized formalization. Formalization was imagined to be a key step toward growth and access to finance. However, few programs that emphasized formalization seemed to have a discernible effect on the number of firms that pursued formalization;²⁵ 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.

In Indonesia, the OECD estimates that 70% of all employment is informal, and that informality is higher among women, youth, and people over 55, and in certain sectors including agriculture and construction.²⁶

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

LEVEL OF FORMALIZATION

In Indonesia, firms must register with their domicile and file for a business registration to legally operate and own a *Nomor Induk Berusaha* (NIB) or business identification number. According to the Ministry of Cooperatives and SMEs, only about 6% (3.73 million out of 64.19 million) of all Indonesian MSMEs have met this requirement.²⁷ The Ministry of Cooperatives and SMEs has set a target of registering 10 million MSMEs by 2023, through programs like *Gerakan Legalitas Usaha* (Business Legality Movement) which employs business registration facilitators throughout the country.²⁸

In the study, we did not independently verify any registrations—we simply asked firms to report their registrations and perceptions of formalization. We asked firms whether they considered themselves formal, semi-formal or informal and the vast majority of firms self-reported as informal (Figure 5.1).

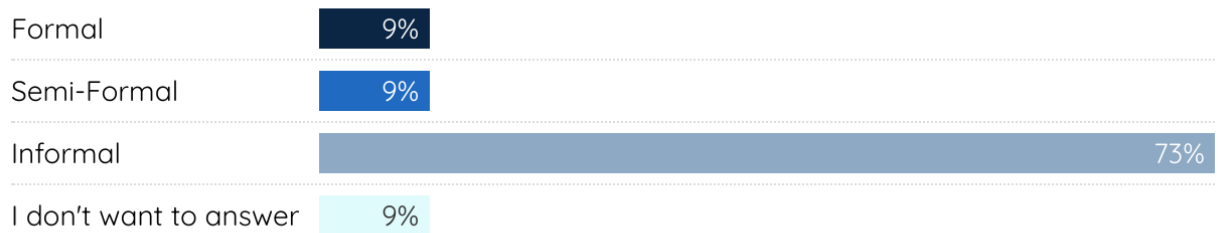
²⁵ Bruhn and McKenzie, 2014

²⁶ OECD, 2018

²⁷ Based on data from the Ministry of Cooperatives and SMEs as of 23 January 2023

²⁸ Koperasi, 2023

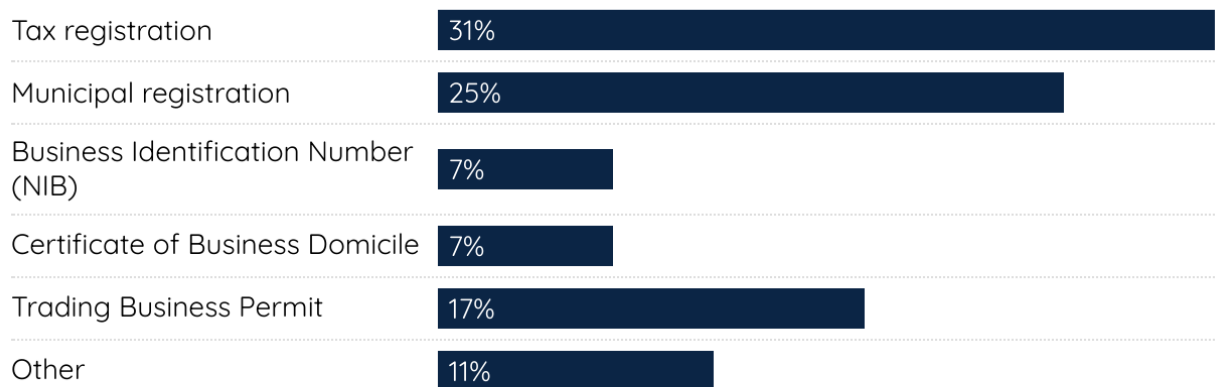
FIGURE 5.1: SELF-REPORTED LEVELS OF FORMALIZATION, PERCENT OF FIRMS



PERCEPTIONS COMPARED TO OFFICIAL FORMALIZATION

A significant majority of our firms are also unregistered. Less than a third have a tax registration and only a quarter have a municipal registration of any kind.

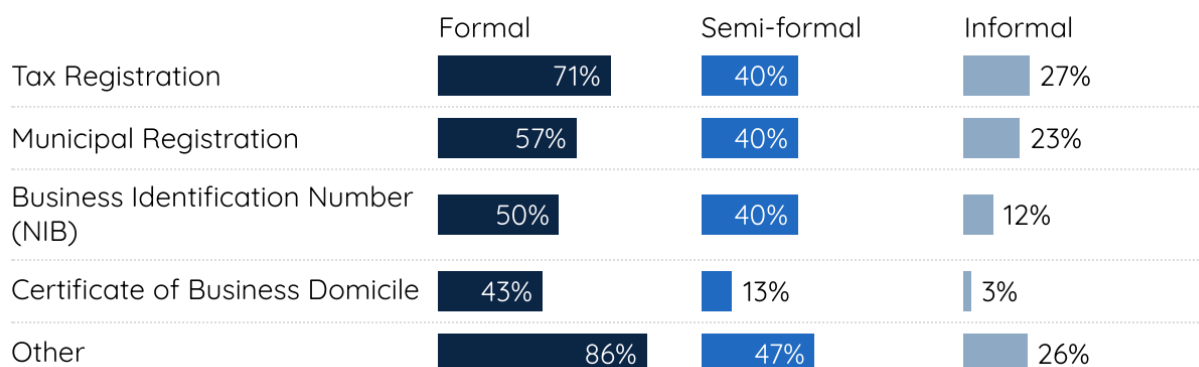
FIGURE 5.2: FORMS OF REGISTRATION, PERCENT OF FIRMS



The majority of self-perceived formal firms report having a tax registration, however some firms do not think a tax registration is sufficient to be “formal”—27% of informal firms have a tax registration (Figure 5.3).

CHART 5.3: FORMS OF REGISTRATION BY SELF-REPORTED LEVELS OF FORMALITY, % OF FIRMS

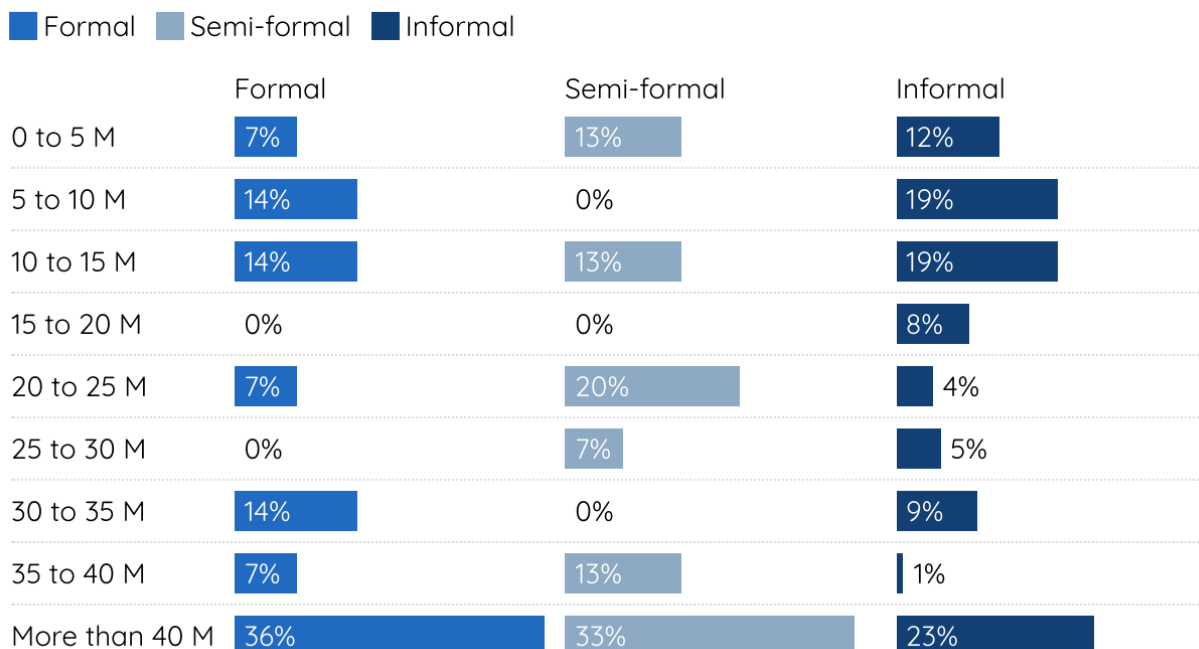
Many firms have more than one type of registration



Unsurprisingly, firms that considered themselves informal were usually the lowest earning: over half of them earned less than IDR 15 million (approximately USD 3,019) in monthly revenue (Figure 5.4). Services firms were also more likely to report they were formal, while levels of perceived formalization were similar across genders.

FIGURE 5.4: FORMALIZATION AND REVENUE

Median monthly revenue in IDR based on level of formality



REASONS FOR FORMALIZING

In our module on formalization, we asked firms about their motivations for taking steps toward formalization. The primary reason firms reported registering is because of benefits. This was closely followed by “A government or local authority told [them] it was required”. Other incentives such as prestige do not seem to be a significant driver (Figure 5.5). Meanwhile, the reasons for not registering were largely expected: the administrative burden and lack of knowledge on how to apply. Interestingly, the tax liability which is often cited as a barrier to formalization in literature, was only reported by 14% of respondents. (Figure 5.5A)

FIGURE 5.5: REASONS FOR OBTAINING EXISTING REGISTRATIONS

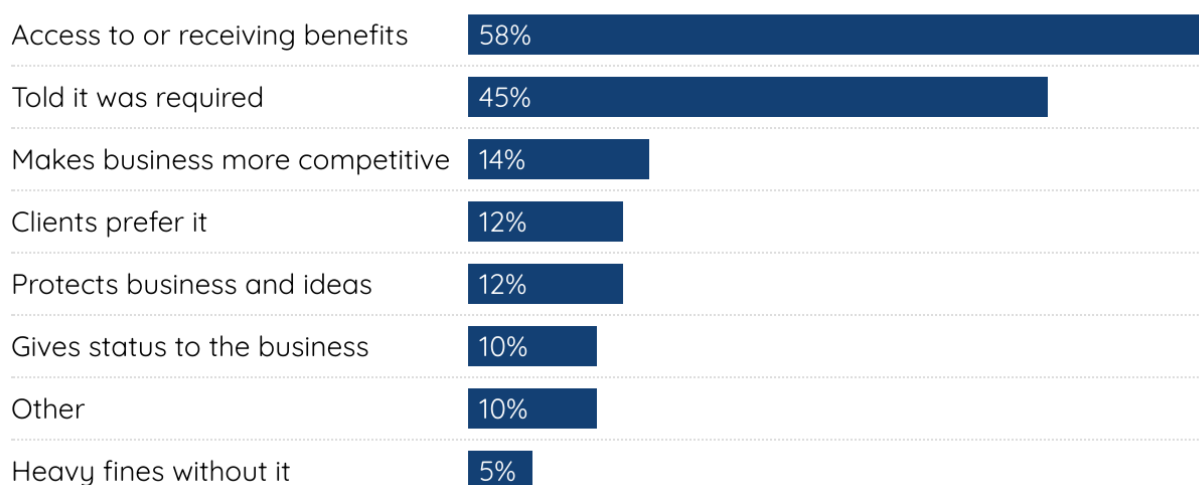
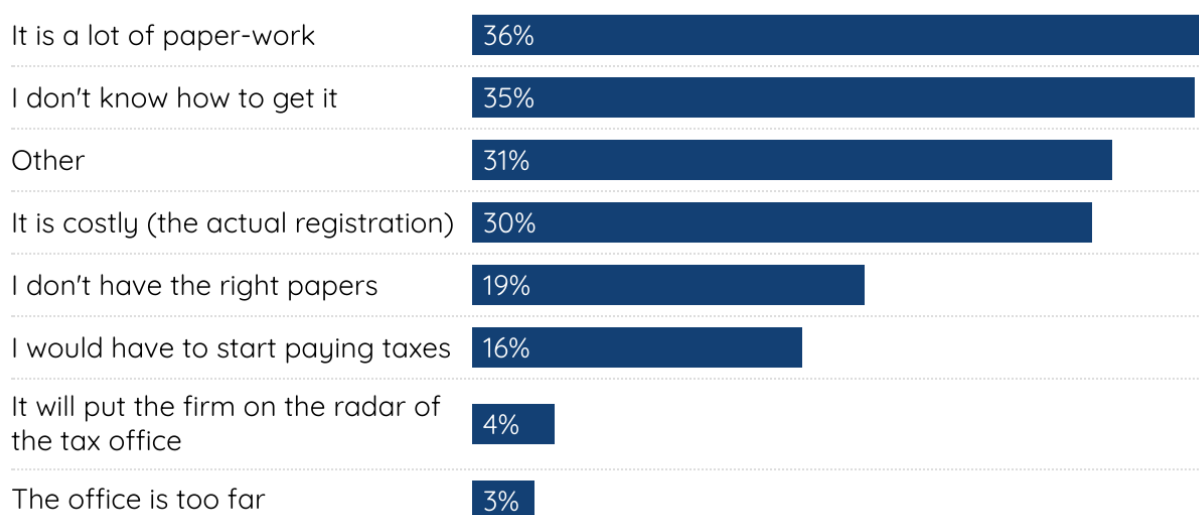


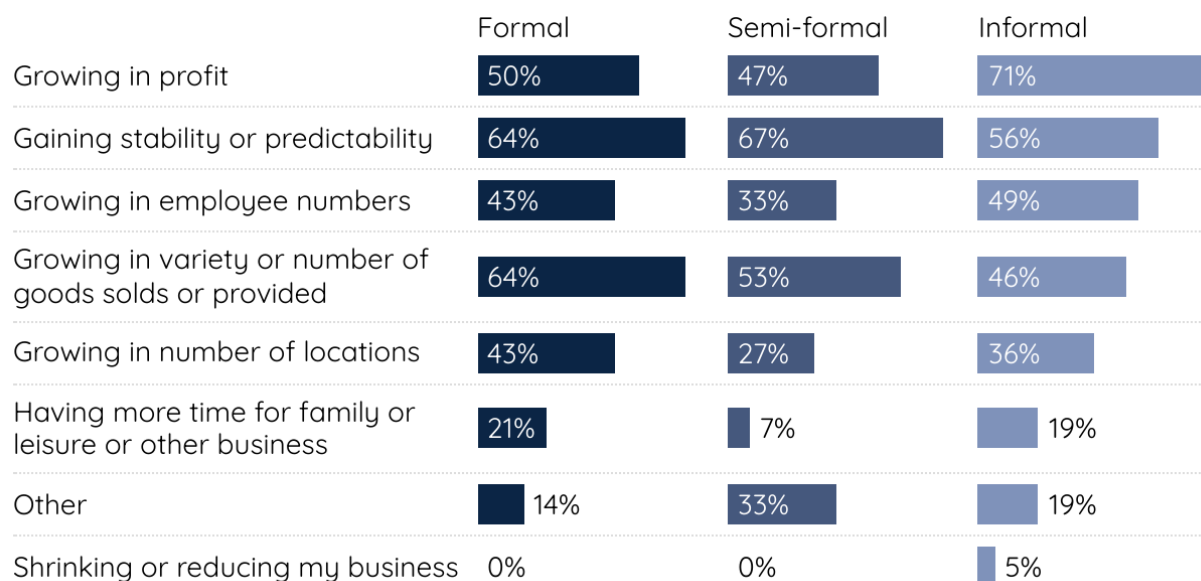
FIGURE 5.5A: REASONS FOR NOT OBTAINING OTHER REGISTRATIONS



Formalization also does not appear to be influenced by aspirations (Figure 5.6). Formal and informal firms reported growth aspirations at similar levels (for all forms of growth; see Section 9 for more on firm aspirations). However, gaining stability was the most common aspiration for formal and semi-formal firms (tied with diversifying the business for formal firms), while the largest percentage of informal firms wanted to grow in profit.

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: :

- Reducing liquidity barriers:
 - “Facilitates credit application at banks and able to accept large orders” (A semi-formal light manufacturing firm in Yogyakarta)
 - “Possible to obtain funding from banks and considered by investors to invest in this business” (A semi-formal agri-processing firm in Makassar)
- Consumer confidence: “Earns trust from the community, obtains legal certainty and SME assistance, and facilitates access to the banking sector” (A formal agri-processing firm in Yogyakarta)
- Access to opportunities:
 - “Can receive assistance from government programs” (A semi-formal agri-processing firm in Medan)

- “Maintains business sustainability by paying taxes and having business permits at various government levels and receiving support from associations” (A formal services firm in Makassar)

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

- Time and cost: “Must legalize the business logo and name, requires high cost and long time.”(A semi-formal agri-processing firm in Makassar)
- Recurrency: “Must be constantly renewed because the expiry period is 6 months” (A semi-formal light manufacturing firm in Bandung)
- Administrative and tax burden:
 - “Non-tender projects with a value below IDR 100 million (approximately USD 20,128) cannot be obtained because they lose to businesses that are in the form of “CV” and “PT” which have more complete procedural/legal aspects” (A semi-formal light manufacturing firm in Yogyakarta)
 - “Decrease in business profit due to having to pay taxes”(A semi-formal light manufacturing firm in Yogyakarta)
 - “A lot of administration that needs to be prepared and very vulnerable to taxes” (A formal light manufacturing firm in Makassar)

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, financing opportunities, business opportunities, and encourages potential employees when hiring, but is costly—too costly to justify taking the step.

Firms' level of actual or perceived formalization, however, did not change their perceptions of barriers to the success of their business, except in a few instances. For both formal and informal firms, rising costs and supply chain issues were the biggest challenge. Meanwhile, semi-formal and informal firms reported access to finance as a barrier at similar rates, 47% and 45% respectively, while 29% of formal firms reported access to finance as a barrier to success. 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. Additionally, a higher proportion of informal firms reported the Covid-19 as a barrier to their success, compared to formal and semi-formal firms.

6. Employment

INTRODUCTION

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 with 0 to 250 employees) generate more than 50% of the jobs in most countries, and up to 90% of the jobs in some.²⁹ As noted in the introduction, in Indonesia, MSMEs make up 99% of all business units, employ 97% of the national workforce, and contribute 61% to the Gross Domestic Product, according to the Coordinating Ministry for Economic Affairs.³⁰

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, or an expectation of microenterprise as an alternative in the future, or in larger firms when not employed at the small firm).
- Employee pay varies considerably even during the months they are working at a small firm.

²⁹ ILO, “The power of small: How SMEs are driving job creation and inclusive growth”

³⁰ Portal Informasi Indonesia, 2022

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

NUMBER OF EMPLOYEES

Determining who qualifies as an employee is a challenge to measuring employment in countries where many firms are not fully formal; it's increasingly a problem in high-income countries, as contractor workers and platform work (e.g. delivery apps) proliferate. Given that 71% of the firms in the sample perceive themselves to be informal (and indeed most do not have the registrations required for the government to consider them formal), as well as the varying definitions of an "employee" in Indonesia (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 asked them to exclude people hired on a one-off basis to, for instance, deliver a product to a customer, and to exclude people working at the firm who lived in the firm owner's household). Then, at each Diaries visit, we asked them to list the "employees" working at the firm at that time.

THE INDONESIAN LABOR MARKET

The labor laws in Indonesia stipulate 4 different of types of workers:

1. Employees: These individuals can work on a part- of full-time basis and can serve the company on a permanent, temporary, or fixed-term basis. Companies must set a fixed number of working hours, a guaranteed monthly salary, and benefits.
2. Independent contractors: Self-employed individuals who agreed upon working hours with enterprises in advance. No benefits or guarantee of employment.
3. Temporary workers: A contract for a maximum of five years. Temporary workers on fixed-term contracts receive the same benefits as employees.
4. Freelance or daily workers: Freelance, or daily work, contracts are considered temporary employment contracts (PKWT). The critical difference is that the employee cannot work for more than 21 days per calendar month.

In Indonesia, employees who have worked for an employer for more than three continuous months are entitled to benefits, including social security, health insurance, paid annual leave, sick leave, and maternity leave. This automatically excludes freelance/daily workers from receiving such benefits.

We used the responses to our census to select our sample of firms that stated they had 1 to 20 non-household workers. We then were able to compare this number to the weekly employee payment reports during the study. We find little consonance between the number of employees

initially reported and the number of people paid each month. Further, we found that both the number of jobs provided each month and the individuals who filled those jobs fluctuated.

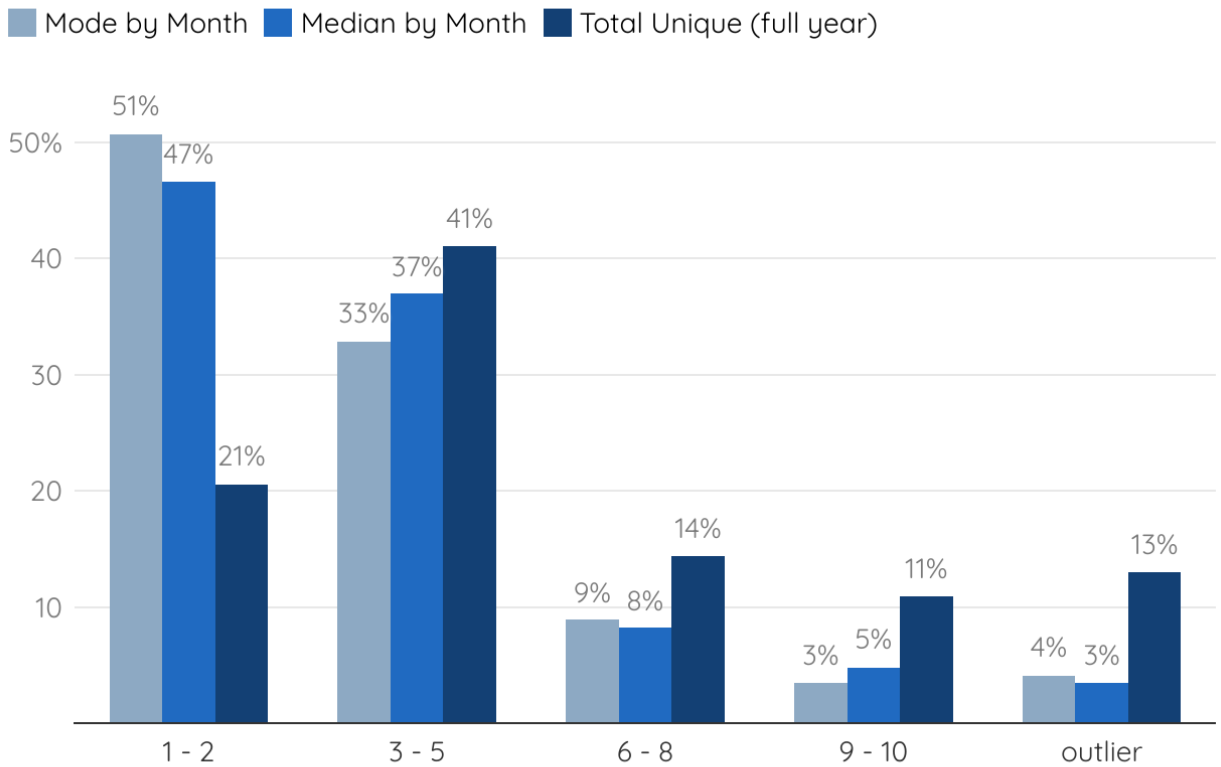
The distribution of reported employment from the baseline census is shown in Figure 6.1; 45% of firms reported 3 or more employees.

Based on employee payments, however, almost all firms are closer to the lower bound for participation in our study (including a few who reported employees at census, but never recorded a payment to an employee during the study). In any given month, firms paid on average three to four employees. While some firms had low turnover and also paid a total of two unique employees, 77% of our firms had employee turnover: they paid a higher number of total unique employees (most commonly two 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 four categories of employee headcount based on the median number of employees in a month and the total number of unique individuals paid during the year. The slight rightward skew in the distribution of the total unique employee category illustrates that some firms have more employees than they are paying on a monthly basis, indicating employee turnover.

FIGURE 6.1: REPORTED NUMBER OF EMPLOYEES FROM BASELINE SURVEYS

Reported employees	Count of firms	% of firms
1 to 2	74	46%
3 to 5	44	27%
6 to 20	27	17%

FIGURE 6.2: FLUCTUATIONS IN EMPLOYEE COUNT



That some firms have high employee turnover is further confirmed when analyzing the data from the employee's perspective. Overall, only 43% of the employees get paid 8 months or more in a 10-month period; a quarter of employees work at the same firm for fewer than 5 months. Turnover was the highest in light manufacturing, perhaps unsurprisingly, where 36% of employees work for 3 months or less in a 10-month period compared to 29% and 21% in services and agri-processing industries. It's important to note that this turnover is *not* due to “seasonality”—the firms *do not* show significant spikes in total employment in specific months.

FIGURE 6.3: NUMBER OF MONTHS PAID TO A SINGLE EMPLOYEE

Number of months paid to a single employee	Count of employees	% of employees
1 month	89	11%
2 to 4 months	196	25%
5 to 7 months	164	21%
8 to 10 months	343	43%

While roughly half of the 792 employees are short-lived, two-thirds of the firms in our study have at least one "core" employee, defined as an employee who gets paid for 8 months or more in a 10-month period.

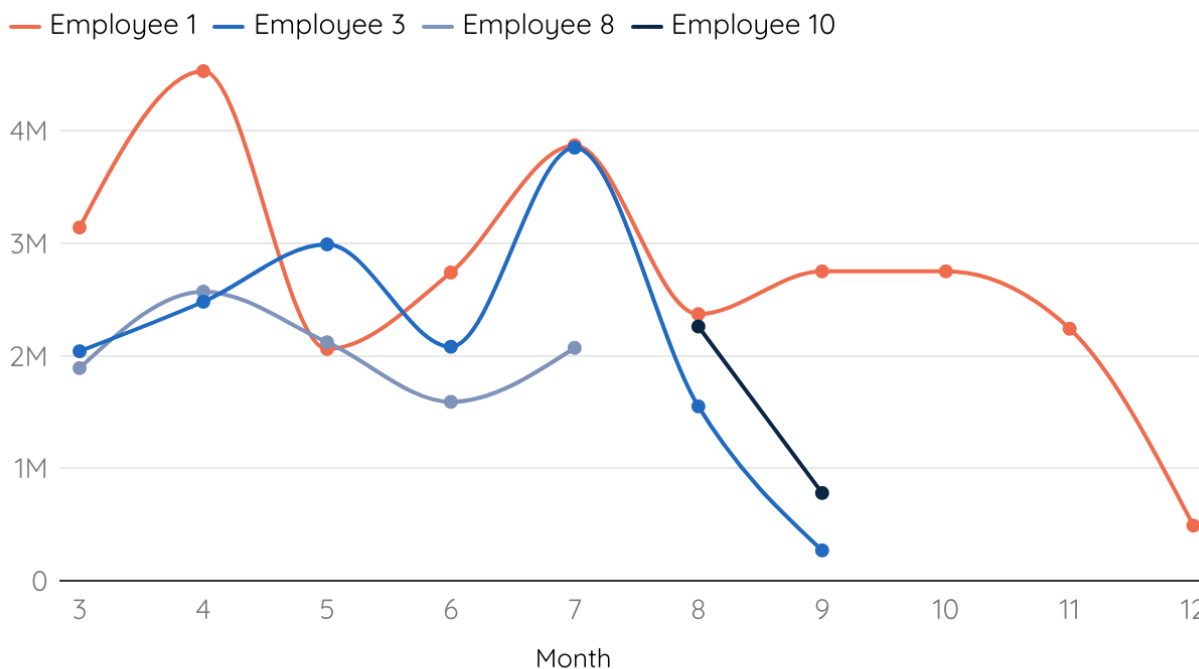
FIGURE 6.4: MAXIMUM MONTHS PAID TO A SINGLE EMPLOYEE

Maximum months paid to a single employee	Count of firms	% of firms
0 months*	16	10
1 month	2	1
2 to 4 months	14	9
5 to 7 months	24	15
8 to 10 months	106	65

* Firms in this category reported employees at baseline but subsequently did not report or pay employees

To better understand the shape of employment, Figure 6.5 gives an example from a single firm. During seven of the months of the study (months 3, 4, 5, 6, 7, 8, and 9) the firm pays three workers (but they are not consistently the same three people from month to month). During three months of the study (months 10, 11, and 12) the firm pays just 1 worker. The orange line shows the firm's single "core" employee, who was paid during all ten months, while the other employees have shorter spells of employment—of seven months, five months, and two months.

FIGURE 6.5: PAYMENTS (IDR) PER EMPLOYEE AT ONE AGRI-PROCESSING FIRM IN BANDUNG



EMPLOYEE PAYMENT

The most common payment arrangements are informal salaries (48% of employees) and piece-rate pay (28% of employees), with the remaining employees receiving formal or casual labor salaries. In terms of how these payments are made, 51% of total payment value and 74% of individual employee payments are made in cash.

The most important feature of employee payment we uncovered is how much what employees earn changes from month to month, even while they remain in a job. Regardless of how many months they were paid, employees face similar levels of payment volatility—employees who are paid in more than 7 months are no less likely to see large swings in their monthly pay than employees who are only paid in 3 months. Figure 6.6 shows the range of coefficient of variation (CV)³¹ 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.

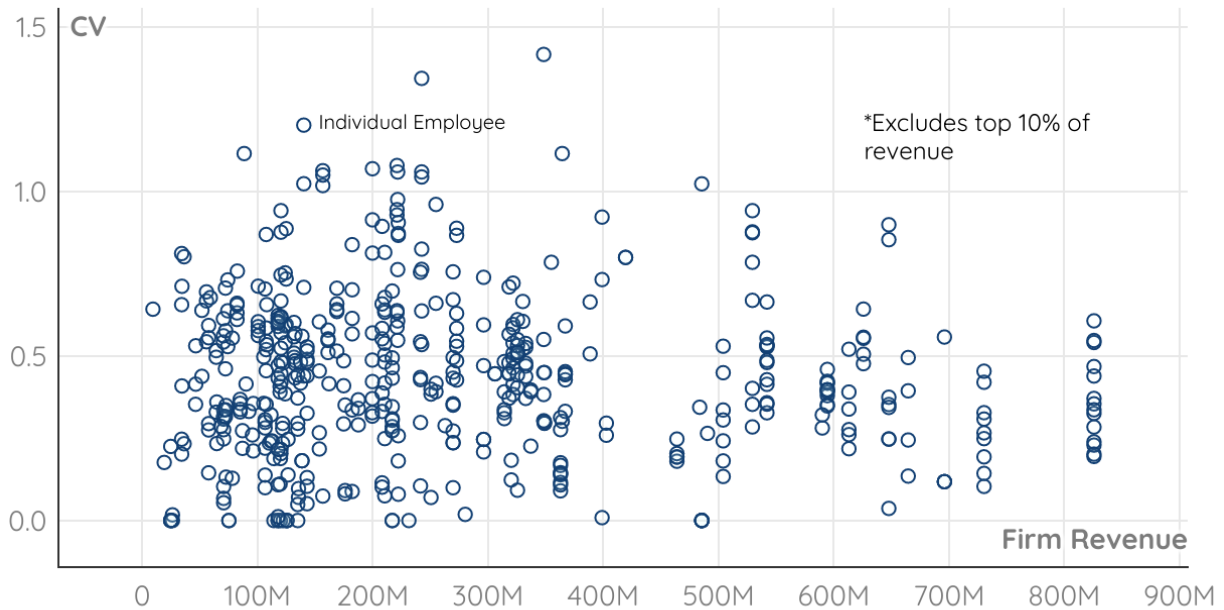
³¹ The coefficient of variation is a statistical measure of variability in a dataset. It is used here to compare variation between how much employees are paid.

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



It's easy to imagine reasons why employee payment volatility would be higher for smaller firms. Larger, more established firms likely have better systems in place and can weather fluctuating demand with less disruption; it's possible that larger firms have more marginal workers who are brought in (or laid off) to deal with demand spikes, or financial reserves to keep employment steady, whereas small firms with more precarious finances push the volatility onto their regular employees. For the firms in our sample, however, we do not see any relationship between firm size and employee payment volatility (Figure 6.7), implying that any stabilization of employee payments is occurring when firms reach a much greater size than is represented in our sample.

FIGURE 6.7: PAYMENT VOLATILITY FOR FIRMS BY REVENUE LEVEL



There are a number of factors that play into the volatility of employee payments. The first and most obvious is that, as reflected by the volatility of firm revenues, the firms have different levels of demand for labor month to month. This is obviously passed along to the 28% of workers who are paid piece-rates, but the data suggests that almost all workers' pay is subject to demand fluctuations. Indeed, preliminary analysis suggests that firms cut labor expenses immediately in response to negative demand shocks, with lower monthly employee payments matched directly with lower monthly revenues (as opposed to a one month 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

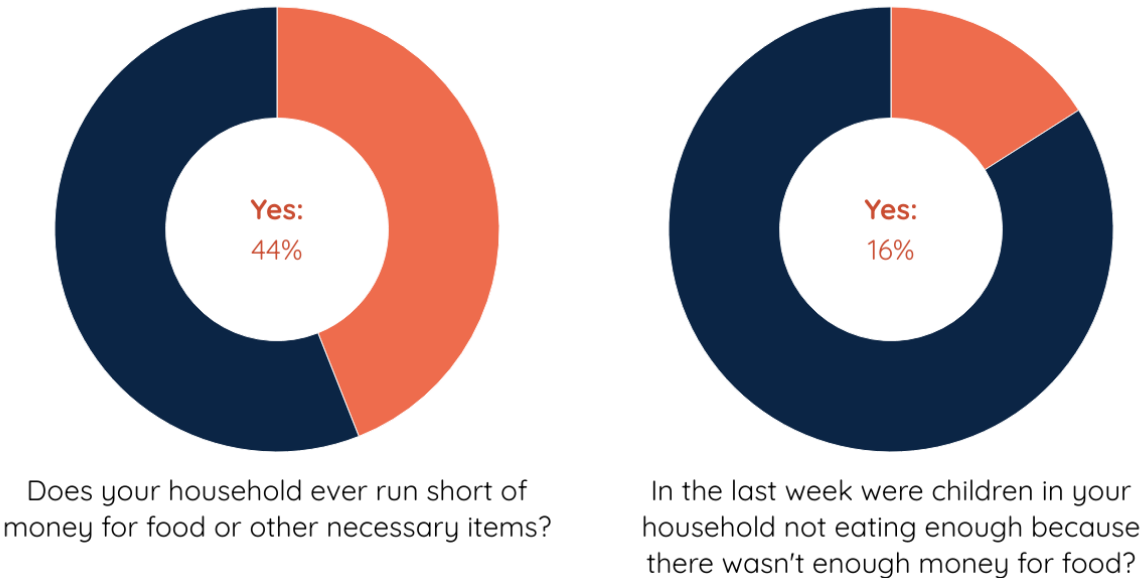
Who are the employees of small firms? Where do they sit in the income distribution? Did they formerly own microenterprises, or work in larger firms?

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 115 employees (15% of all paid employees in the study year, 77% 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 half (44%) of employees reported difficulties with finances indicative of low-income status, including 16% who reported that a child in their household had not eaten enough in the past week.³² There are significant differences between cities on these measures, with more than half of employees reporting they run short of money in Bandung and Medan; this is a topic we will explore further in future analysis.

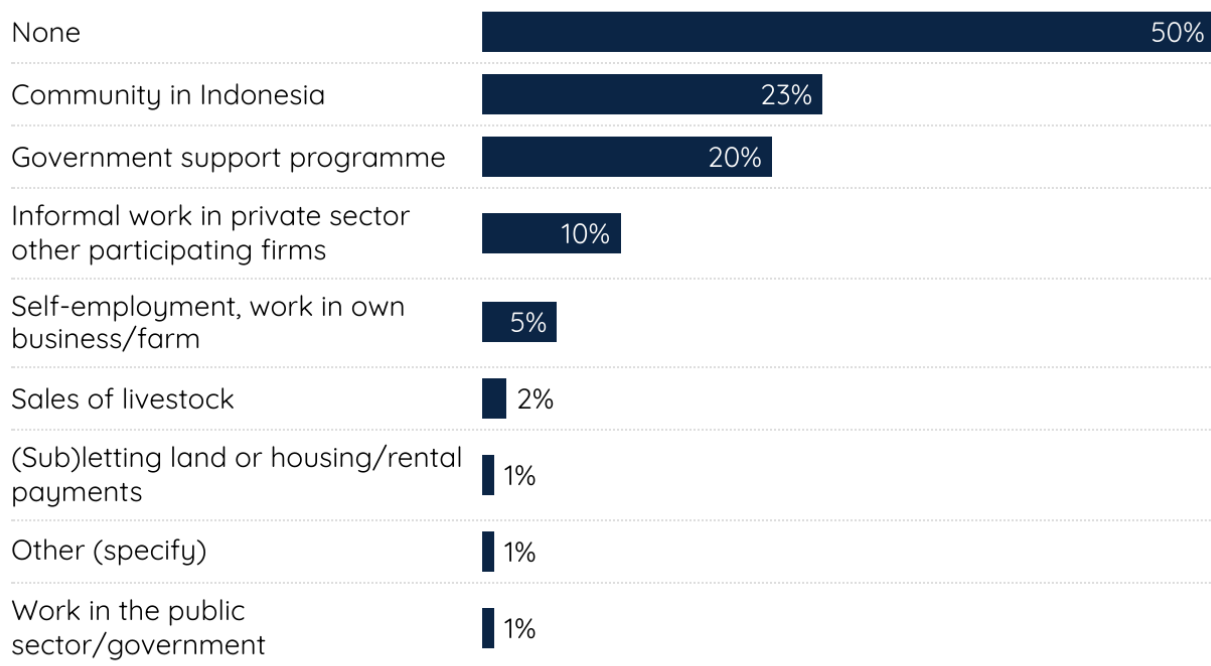
FIGURE 6.8: EMPLOYEE WELFARE INDICATORS



The volatility of employee income from the small firms appears to matter a great deal to the employees' households. As shown in Figure 6.9, 50% of surveyed employees report having no other source of income.

³² While we expected that firm owners would be more likely to nominate higher paid, longer tenured employees to participate in our surveys, those who participated in the surveys were not meaningfully different in terms of payments received from the firm than other employees in our data.

FIGURE 6.9: OTHER SOURCES OF INCOME FOR SMALL FIRM EMPLOYEES

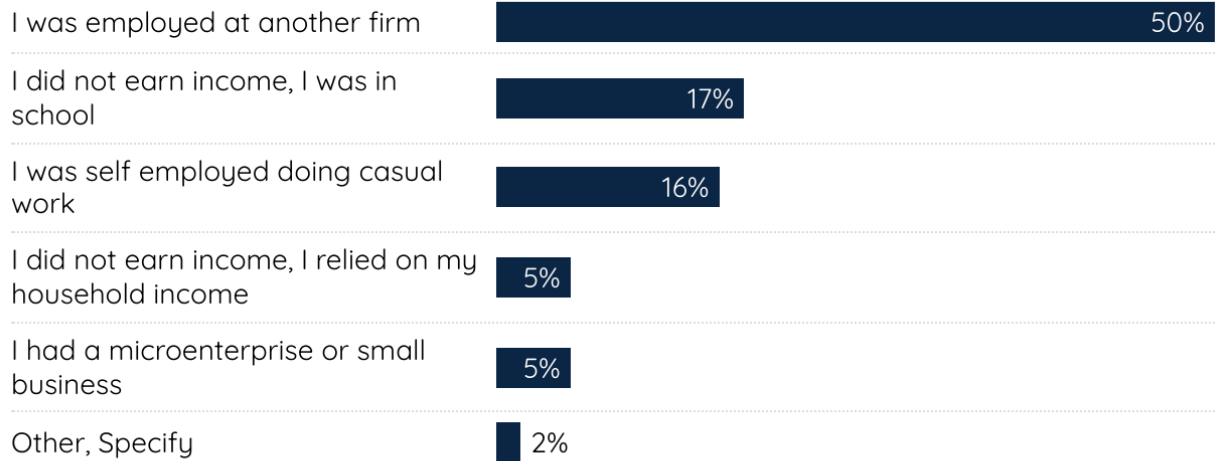


*No reported income from "community outside of Indonesia", "Interest on savings", "government programs, jobs, pensions or transfers", or "working in private sector different from participating small firm".

To the extent that we can see in our data, employees of the small firms are drawn from a distinct labor pool who work in small firms (Figure 6.10). When a job at one firm ends, the employees move to another small firm—over 50% 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 (5%) report formerly owning a microenterprise—suggesting that the labor pool for small firms is not drawn from the population that is the target of microfinance. While some employees told us they had contemplated opening a business, particularly those in industries like carpentry or leatherwork, they also shared that they were concerned about the risk that running a business of their own would entail.

FIGURE 6.10: PREVIOUS SOURCES OF INCOME FOR SMALL FIRM EMPLOYEES

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



7. Business Practices

INTRODUCTION

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.³³ 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, recordkeeping, 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.³⁴

Given the evidence on the importance of business practices, the policy focus on business training programs, and the relative dearth of information specifically about this segment, we were very interested in better understanding the practices of small firms. To do so, we used the inventory of business practices created by McKenzie and Woodruff based on the ILO's *Improve Your Business* training curriculum. Here we follow their calculations for an index score based on practices in use. The score is the percentage of the 26 total business practices that a business engages in (e.g. a business that engages in 3 of the practices would have an index score of .12). The average score across the seven countries from which McKenzie and Woodruff drew their data was .39.

As noted in Section 3 on firm finances, the most basic business practice is the separation of business finances from household finances. When we asked at the start of the study, 65% 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 0.79, with most firms clustered between 0.29 and 0.66, and half of them between 0.29 and 0.54. Consistent with the McKenzie and Woodruff findings, higher scores are correlated with higher monthly revenues.

Looking at specific practices, the most commonly used practices are related to record keeping; stock control practices are also employed by about 35% of the firms. Marketing and planning practices

³³Bloom & Van Reenen, 2007; Bloom, Nicholas, and John Van Reenen. 2010; Bloom, et al. 2011

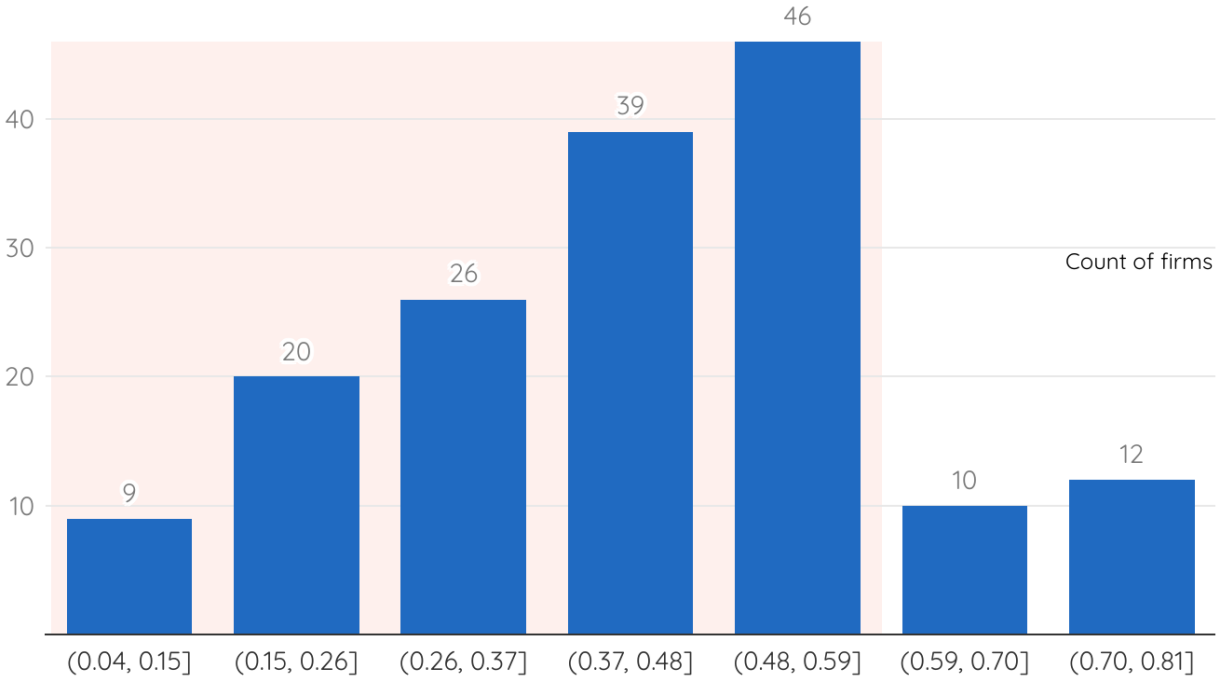
³⁴ McKenzie & Woodruff, 2017

were far less common. We find that less than a third (31%) of the firms in our sample have used any of the marketing practices.

BUSINESS PRACTICE INDEX

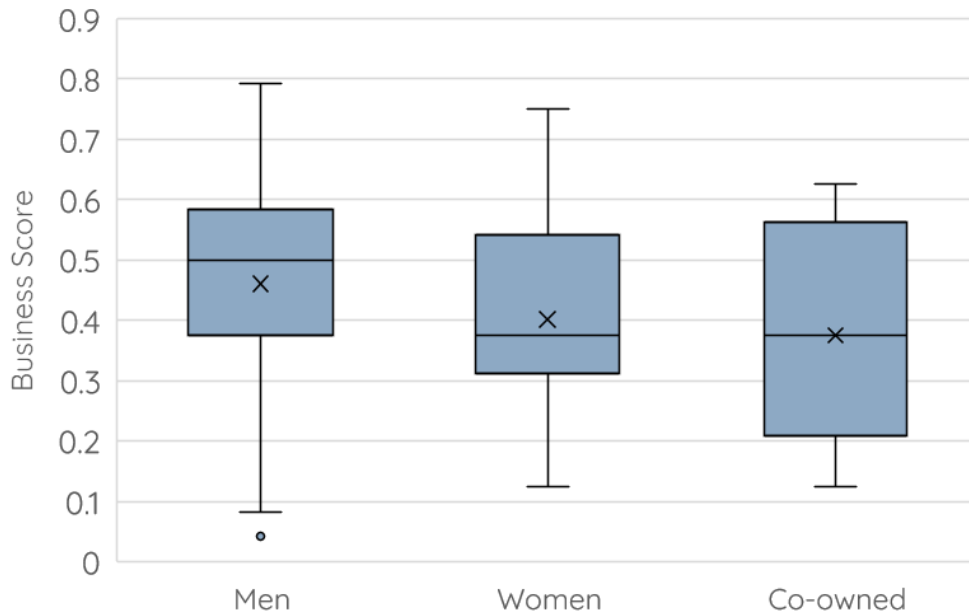
On the McKenzie and Woodruff Business Practices Index Score our sample ranges from 0.04 to 0.79, with a median score of 0.42 and a majority of firms (75%) having a score below 0.54 (Figure 7.1). McKenzie and Woodruff include a survey from Sri Lanka in their review—the Sri Lankan survey has a mix of firm sizes and firm owner genders—and finds a mean score of 0.32.

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



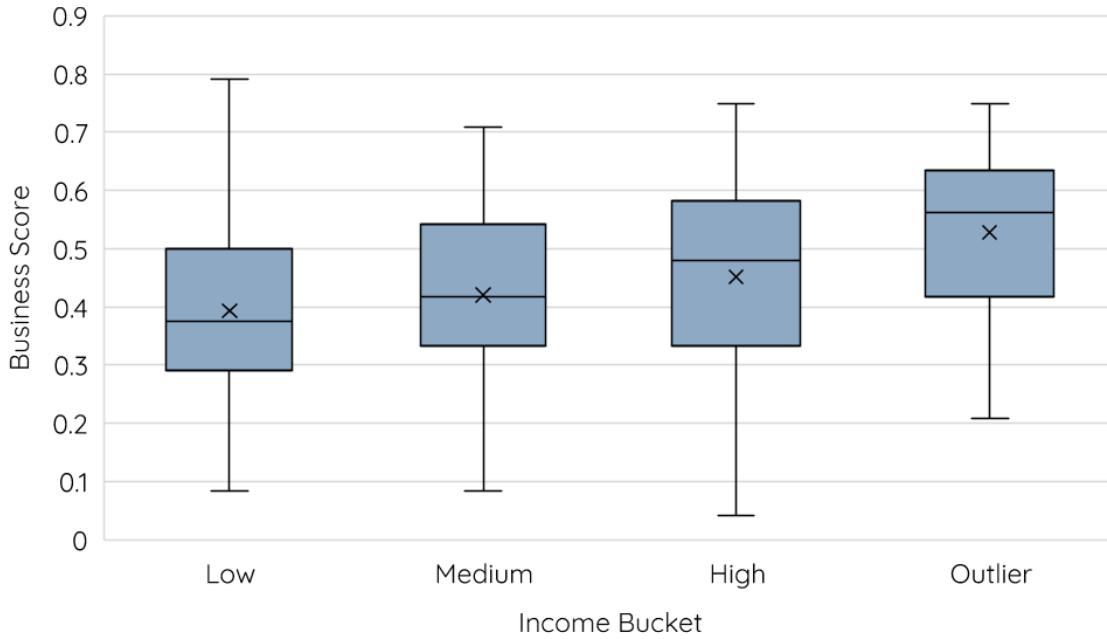
When analyzing the score distribution by gender (Figure 7.2), men-owned firms have a median score of 0.50, with half of the firms ranging between 0.38 and 0.58. Women-owned firms have a median score of 0.38, with half of the firms ranging from 0.33 to 0.54. Co-owned firms (a total of 12 firms) have a median score of 0.38. For comparison, in the McKenzie and Woodruff study, comprising surveys from 7 countries (though different from the countries in the Small Firm Diaries) the median score is .39, while in the Small Firm Diaries sample the median score in Colombia was .54 and the median score in Kenya was .5.

FIGURE 7.2: BUSINESS PRACTICES INDEX SCORE DISTRIBUTION BY GENDER



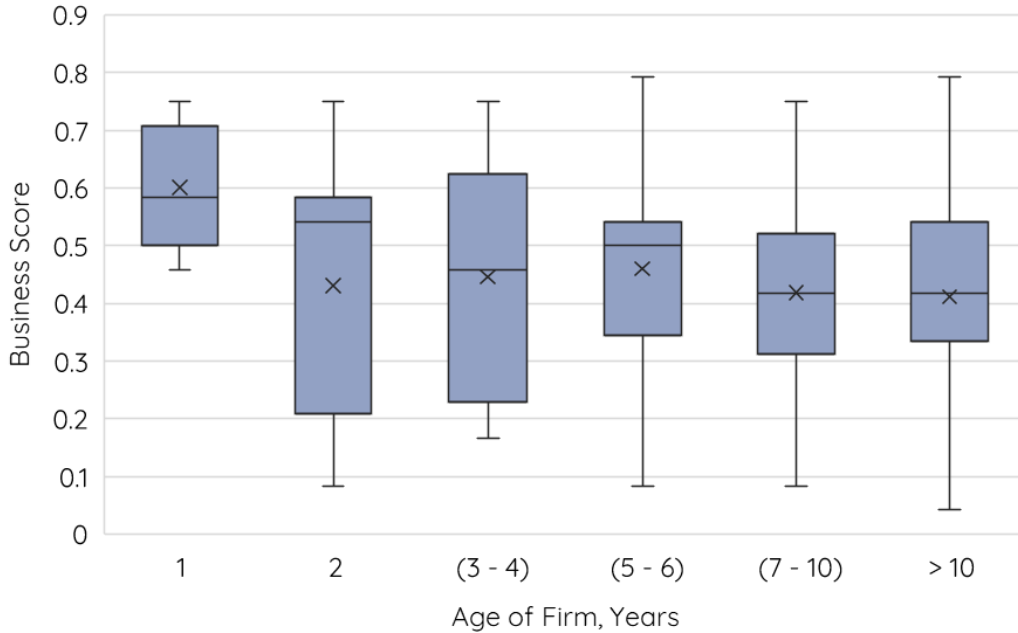
When we analyze the relationship between revenue and the distribution of business scores in our sample, the median business score increases with increasing revenue levels. The median score of firms in our lowest income group (see Section 3 on firm finances) is 0.35, with half of the firms ranging between 0.29 and 0.50. Medium-income firms have a higher median business score of 0.42, while high-income firms have a slightly higher median business score of 0.48. Our outlier firms (those with significantly higher revenues than most firms) show the highest median business score of 0.56 (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 DISTRIBUTION BY INCOME BUCKET



Using our growth metric, we find similar median scores for growers and non-growers. Figure 8.4 shows that there is no meaningful learning effect: older firms have slightly lower scores compared to younger firms.

FIGURE 7.4: BUSINESS SCORE INDEX DISTRIBUTION BY AGE OF FIRM



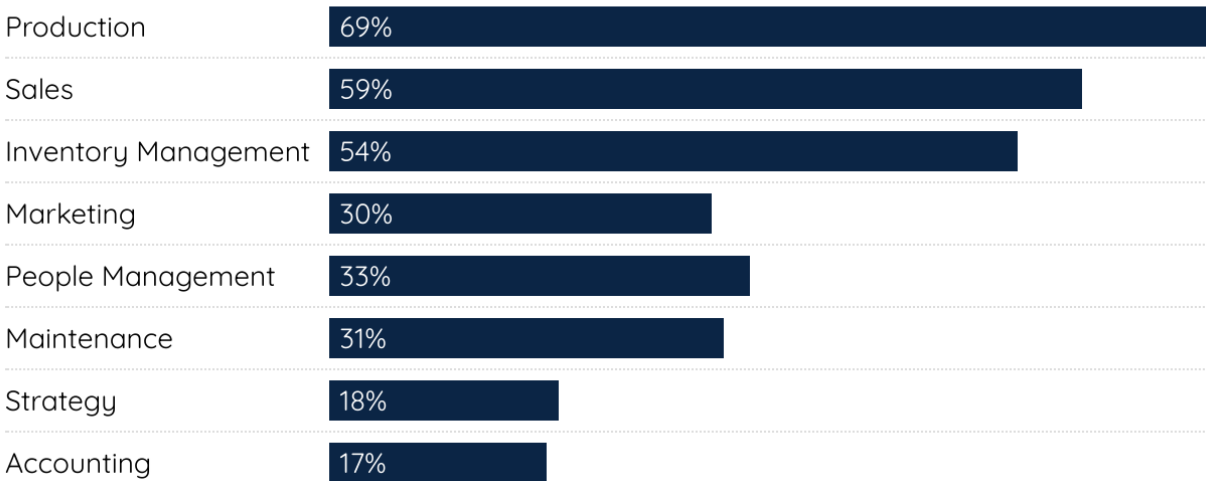
DETAILED BUSINESS PRACTICES

The 26 business practices that McKenzie and Woodruff track are divided into four categories: marketing, stock control, record keeping and financial planning.³⁵ They find that stock control is the most common set of practices and financial planning is the least common.

Among our firms, record keeping was the most common set of practices. For example, 80% of firms reported keeping written business records (compared to less than half in some surveys reviewed by McKenzie and Woodruff), with women being more likely than men to keep written reports (86% of women vs 75% of men). Tracking every purchase and sale made by the business (also in the record keeping category) was the single most common specific practice, reported by 85% of respondents. Knowing which products were most profitable was also quite common (73%) and reported more by slightly more men (78%) than women (72%). Marketing and financial planning practices were far less common. Only 6% of firms, for instance, reported that they had ever engaged a former customer to learn why they had stopped purchasing; less than 10% reported having a budget forecast for the following year (though our findings on volatility suggest that this may be a futile gesture).

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

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



³⁵ McKenzie & Woodruff, 2017

8. Aspirations and Growth

INTRODUCTION

Much of the discussion in development and poverty literature about MSMEs has focused on whether or not the firms grow, and if not, why not. Global work on microfinance and microenterprise has conclusively shown that the vast majority of microenterprises never grow enough to hire an employee; indeed, it appears that most do not aspire to grow and view a microenterprise as an alternative (and perhaps a second-best alternative) to wage employment. In high income countries there is a well-described class of small businesses which exist as an alternative to wage employment for owners, not because the business owners have classic entrepreneurial goals for growth. A central motivation for the Small Firm Diaries was uncovering more about the growth path and prospects for small firms, including their growth aspirations. To uncover firm aspirations, we ask firms specifically about their goals over the next year and next five years. We also ask about barriers to growth, desire to invest and other related questions. To measure growth, we use the slope for the best linear fit for monthly operating margin. We also look at our quantitative data on large purchases and investments, on negative operating margins (which could potentially be a precursor to growth if firms increase spending in the short term to enable future revenue flows) and more to try to shed light on firms' choices related to growth. Finally we look at the comparisons between firms that did and did not manage to grow during the study to look for any meaningful patterns.

The majority of firms in the Small Firm Diaries did not meaningfully grow (or shrink) based on our preferred measure of growth, though it is important to remember that the year of the study fell during a difficult and complicated time while the global economy was just starting to recover from pandemic shock but struggling to cope with supply disruptions, worker strikes, Russia's invasion of Ukraine, and rising inflation. Nonetheless we don't find the general lack of growth to be mirrored by an absence of aspirations to grow. Roughly 97% of the firms in the study told us they aspired to grow (on at least one of several measures of growth). Perhaps the most important finding about aspirations however, was not about growth but about the aspiration to achieve stability.

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

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

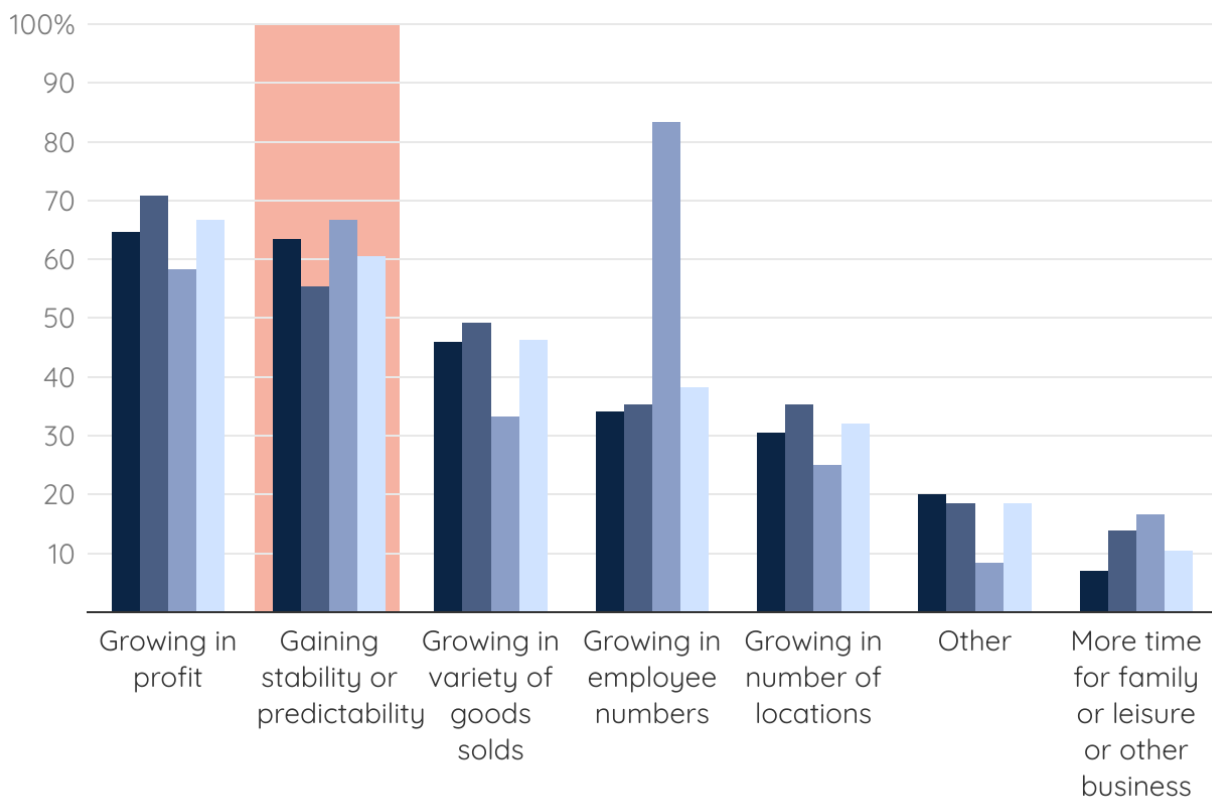
STABILITY ENTREPRENEURS

Near the middle of the study year, we asked firms about their vision for their firm over the next year and the next five years, giving them a variety of options related to growth, as well as some options to uncover if they did not aspire to grow: stability, closing the business, spending less time on the business. We designed the question expecting that “stability” and “growth” were opposing aspirations. However, the data shows that firm owners do not consider stability and growth to be in opposition but complements to each other. Growth in profit and stability were the two most common answers for every type of firm, without meaningful differences between firms based on gender of owners (see Figure 8.1) or on industry. We asked about aspirations over the next year and over the next 5 years because we thought it might be likely, given Covid-19 disruptions, that firms would aspire to stability in the short-term and growth in the long-term, or vice versa. Overall, desire for stability and profit improvements remain essentially unchanged, while desire for growth on other metrics (employees, locations, variety) increases in the 5-year horizon.

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

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

■ Men ■ Women ■ Co-owned ■ All



Of the firms that aspire to stability or profit growth, 32% of firms aspire to both, demonstrating that these aspirations are not mutually exclusive. Taking a longer time horizon of five years, the number of firms that aspire to both stability and growth remains the same, but the number of firms that aspired to stability and at least one other form of growth increased to 88%. This is driven by an increased desire to grow in the number of locations from 32% to 66%.

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.³⁶ 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 a significant group in all Small Firm Diaries countries studied (see Figure 8.2A), and makes up one-third of firms in the Indonesian sample.

FIGURE 8.2A: STABILITY ENTREPRENEURS, CROSS-COUNTRY COMPARISON

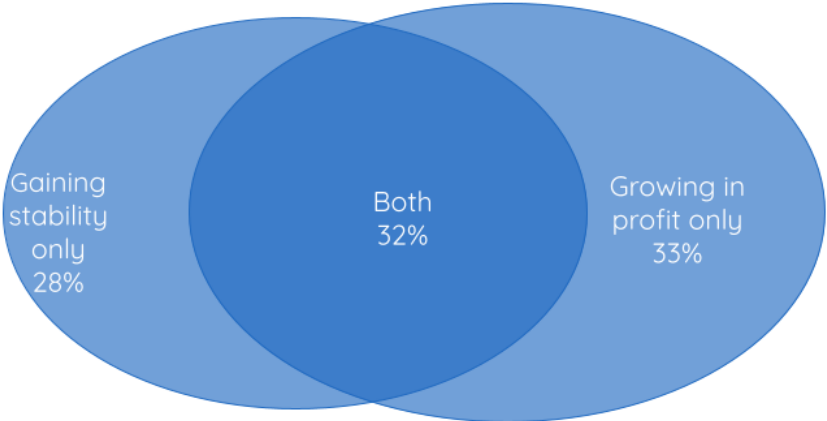
Firms that seek growth with stability are a significant group in all countries studied

Country	Stability Entrepreneurs
Ethiopia	25%
Indonesia	32%
Nigeria	45%
Colombia	50%
Kenya	61%

³⁶ Schumpeter, 1962

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

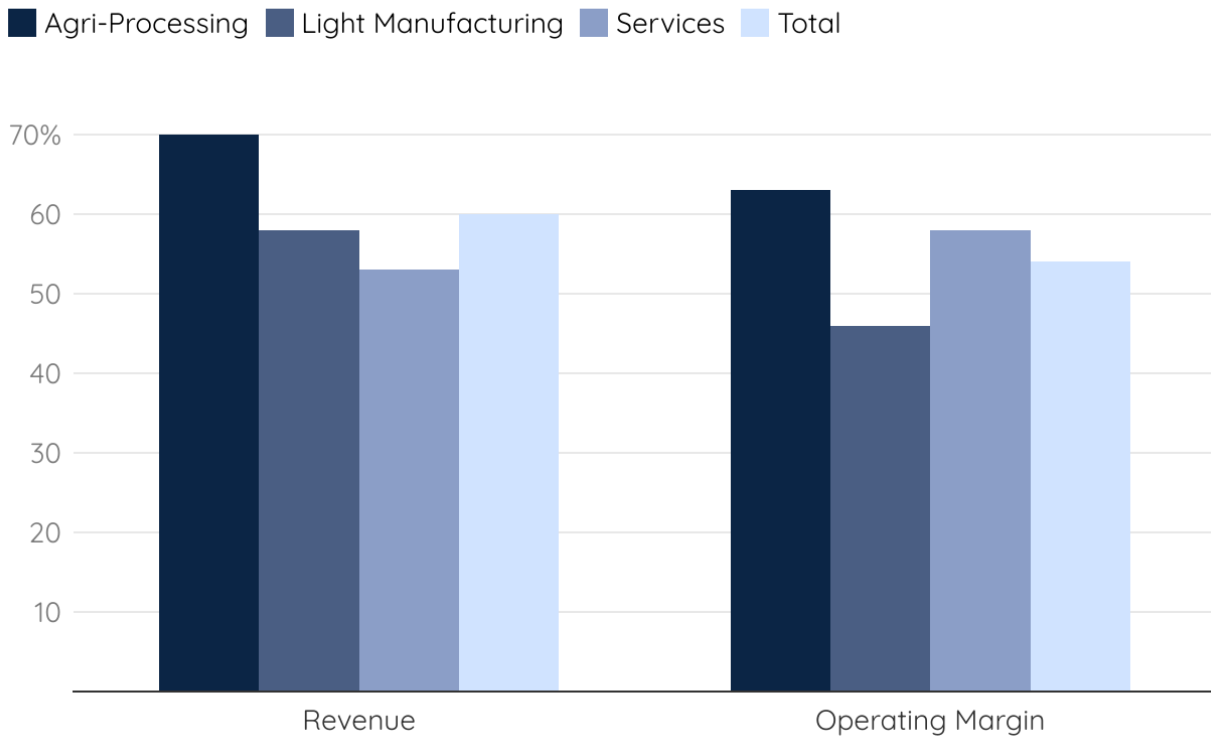
What is your vision for the business over the next year?



PERFORMANCE VS ASPIRATIONS

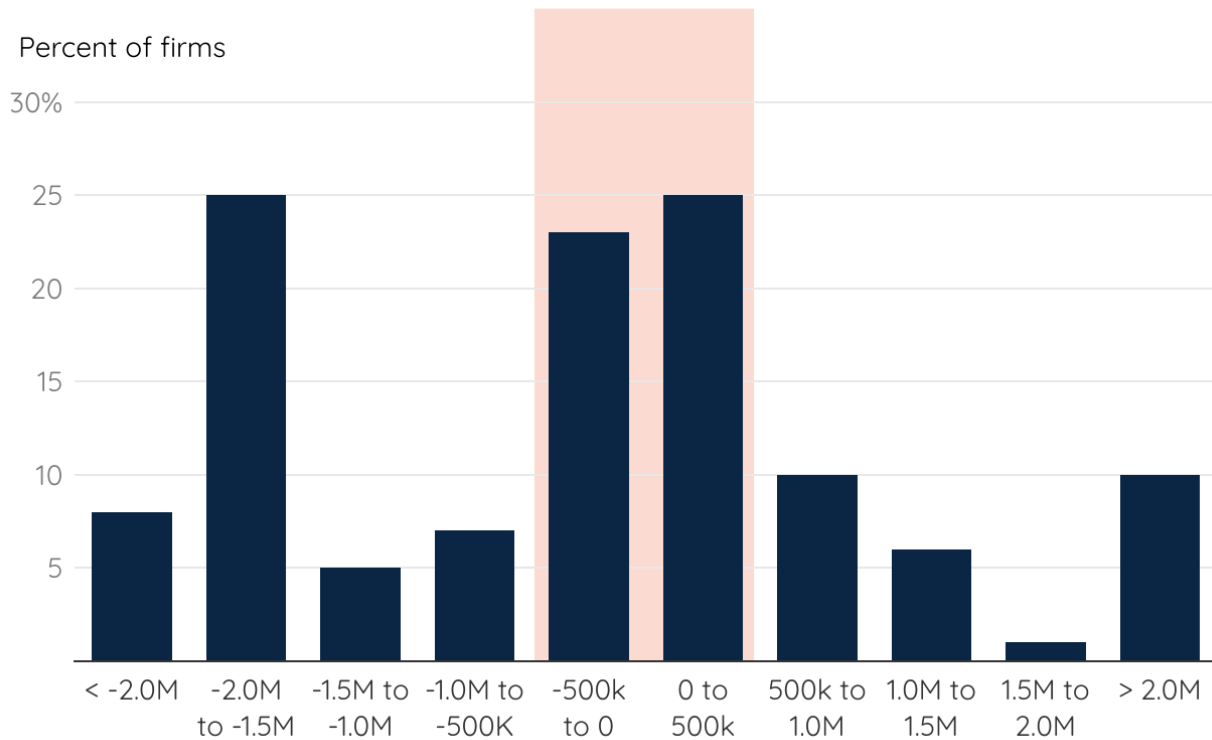
As discussed earlier, measuring whether firms “grew” in a year is difficult. By our preferred growth measurement, while 67% of the firms hoped to grow in profit over the course of the year, only 54% of the firms were able to actually do so. Both the proportion of firms that grew profit and the proportion that grew in revenue were smaller for male-owned firms (54%, 51%) than female-owned firms (66%, 55%). A significantly larger percentage of agri-processing firms grew compared to other industries (Figure 8.3). Given the overall economic environment, with inflation rising globally, we also checked for growth in revenue only, with similar results.

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



Our growth measure includes any firm with a positive slope, no matter how small. To better understand the amount of growth (or contraction) firms see over the course of the study, Figure 8.4 shows the distribution of firms based on the monetary amount of the change implied by the slope. About a third of the firms fall between IDR -500,000 to IDR 500,000 (USD -33 to USD 33) monthly change in operating margin—these firms, given the volatility that we see, are neither achieving their aspirations for growth nor stability. Of note, roughly 30% of the firms saw large implied monthly declines in their operating margin of IDR 1.5M (USD -99) or more. Better understanding these firms will be a focus of future data analysis.

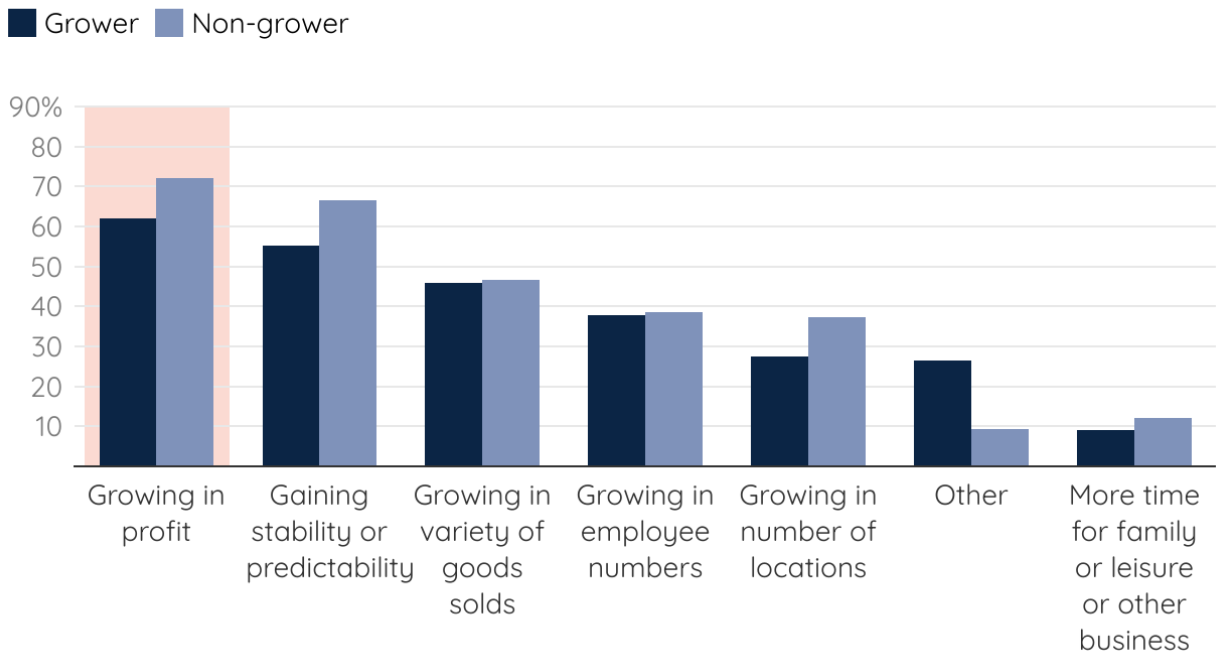
FIGURE 8.4: DISTRIBUTION OF SLOPE OF MONTHLY OPERATING MARGIN, IDR



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, we find no meaningful differences between growers and non-growers in gender, business practices, employment, diversification, or investment behaviors.

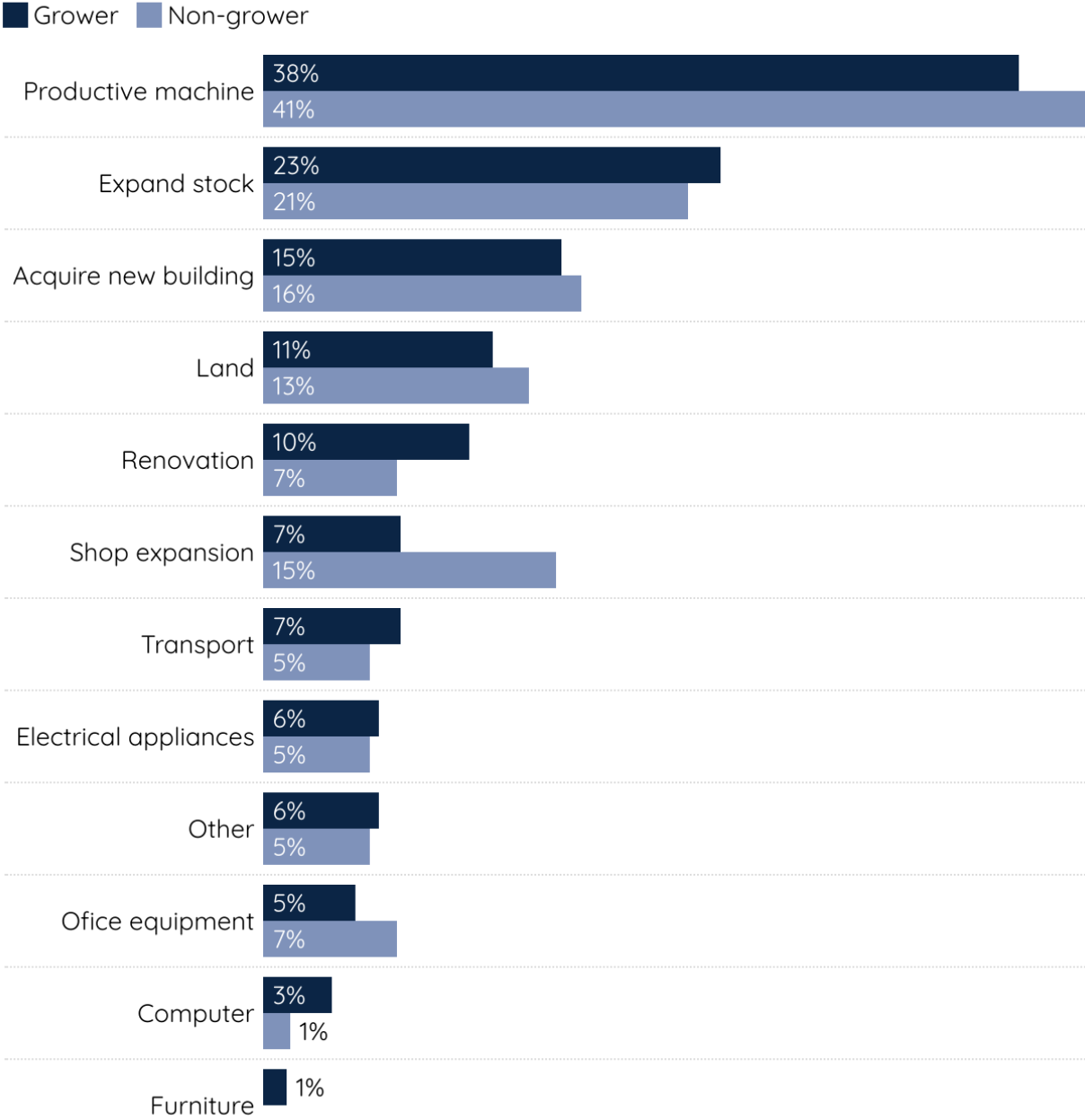
Since most policy efforts focused on growth in this segment of the economy prioritize investment (e.g. with policies to provide investment credit or subsidize investment credit), we looked especially at firms' investment behavior and intentions. With quantitative data we looked how firms might be investing in growth through a specific lens: the relative size of expenses. Specifically, we looked at single expenses with an amount that is larger than three times the standard deviation above the mean of single expenses for the given firm. We classified these as "large purchases."

Most firms (88%)—grower or not—made a "large purchase" at some point in the study period. When we look at these actual expenses during the year of the study we find that large purchases were overwhelmingly focused on raw materials, not capital assets; there were not differences between growers and non-growers in these terms.

When we ask firms about future investments that they would like to make, about 40% of them report that they would like to invest in a productive machine (Figure 8.6). The only other investment that a significant portion of firms aspired to was to expand stock, which was somewhat common with about 20% of firms selecting it, though raw materials or stock would not qualify as an investment in most small business credit programs. Interestingly, while there was not a gap

between growers and non-growers in terms of desire to invest in a machine or raw materials, non-growers reported interest in shop expansion at a nearly 8% higher rate than growers (Figure 8.6)

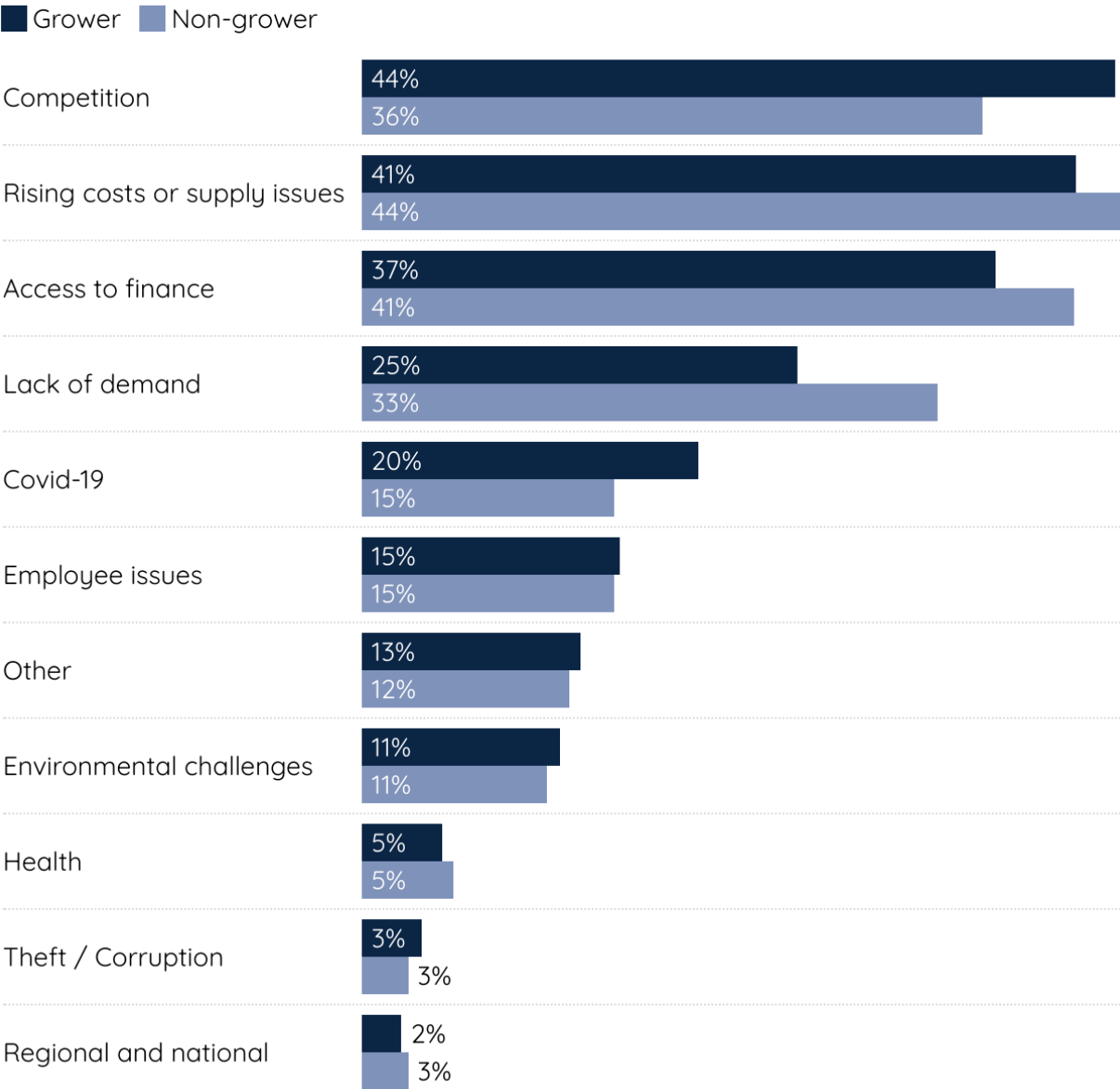
FIGURE 8.6: DESIRED INVESTMENTS, PERCENT OF FIRMS



Consistent with the value of large purchases being focused on raw materials, almost half (~40%) of firms in Indonesia report that the biggest barrier to achieving their aspirations is rising costs of raw materials—although a similar percentage note competition, as well as access to finance as a barrier (See Figure 8.7).

When instead we asked firms about barriers to making their specific desired investments (noted in Figure 8.6), more than three quarters 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, 75% of firms (71% of growers vs 80% of 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 8.7: 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 impacted by factors outside of the firms' control, such as

competition and risk. On competition, 48% of firms report having “a lot of competitors.” Of firms that have “a lot of competitors,” 20% report their competitors are typically the same size as them, compared to 24% reporting competitors are larger than themselves. To differentiate themselves from competitors, firms most commonly reported “quality” (61% of firms), while 60% of firms reported differentiating on prices or service. A higher proportion of services firms reported differentiating on each factor than light manufacturing or agri-processing firms (Figure 8.8). For instance, a higher proportion of services firms reported prices to be a differentiating factor (68%) compared to light manufacturing (63%), and agri-processing (48%). Additionally, across genders firms also differ in terms of differentiation factors (Figure 8.9). Women-owned firms are slightly less likely than men-owned firms to differentiate on prices (58% vs 62%) while women-owned firms are more likely to differentiate on quality (66% vs 59%), better service (49% vs 42%), place of selling (49% vs 34%), and way of selling (43% vs 27%). Given the high level of competition, it is perhaps surprising that 26% of firms report having a business association or similar group with their competitors. When asked about the primary function of these associations, it appears to be social (74% of responses), with fewer being used for cooperation (45% of associations give advice and training information and 21% have joint production), or negotiations (26% set standards for products and services).

FIGURE 8.8: REPORTED DIFFERENTIATION FROM COMPETITORS, PERCENT OF FIRMS PER INDUSTRY

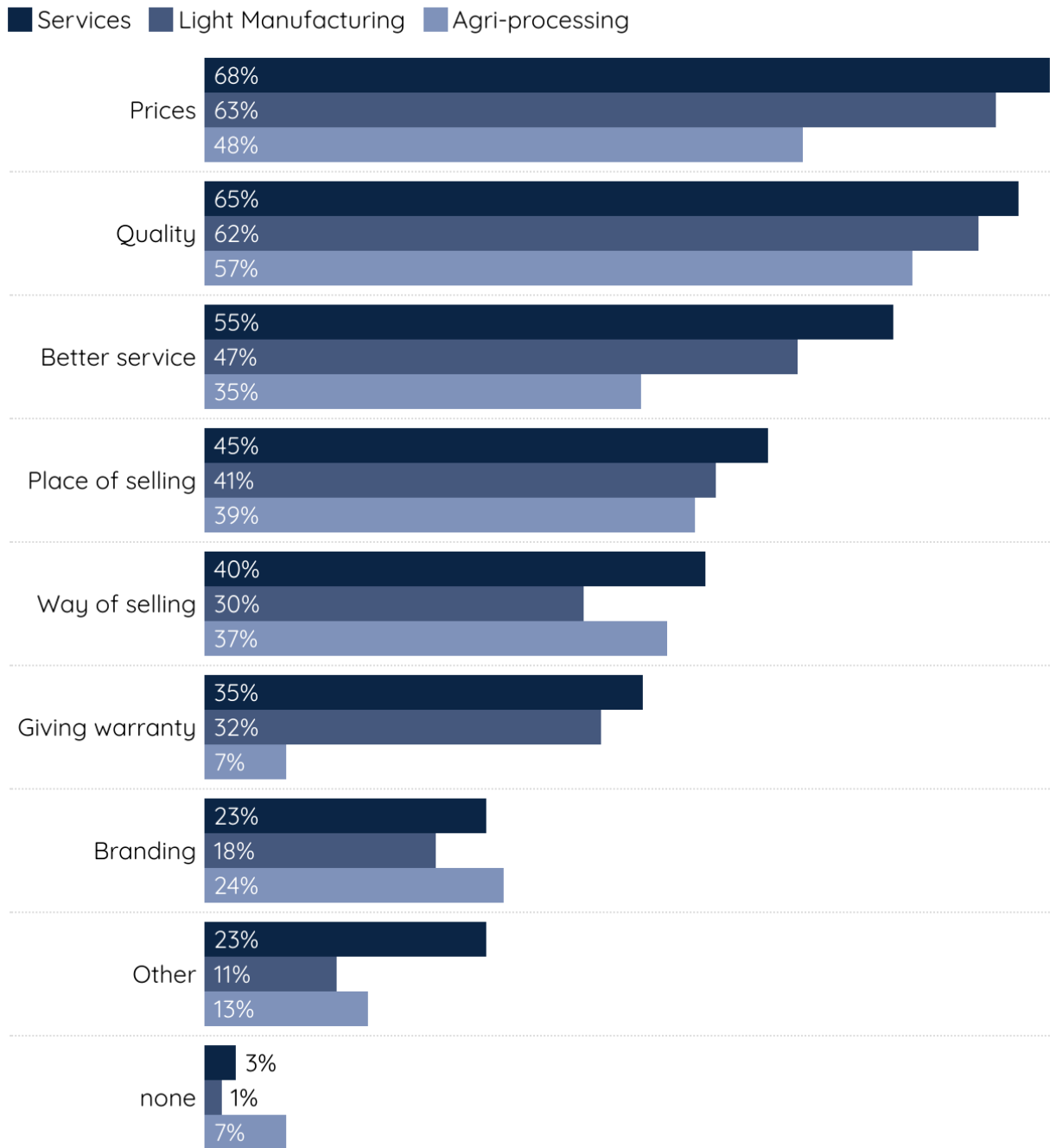
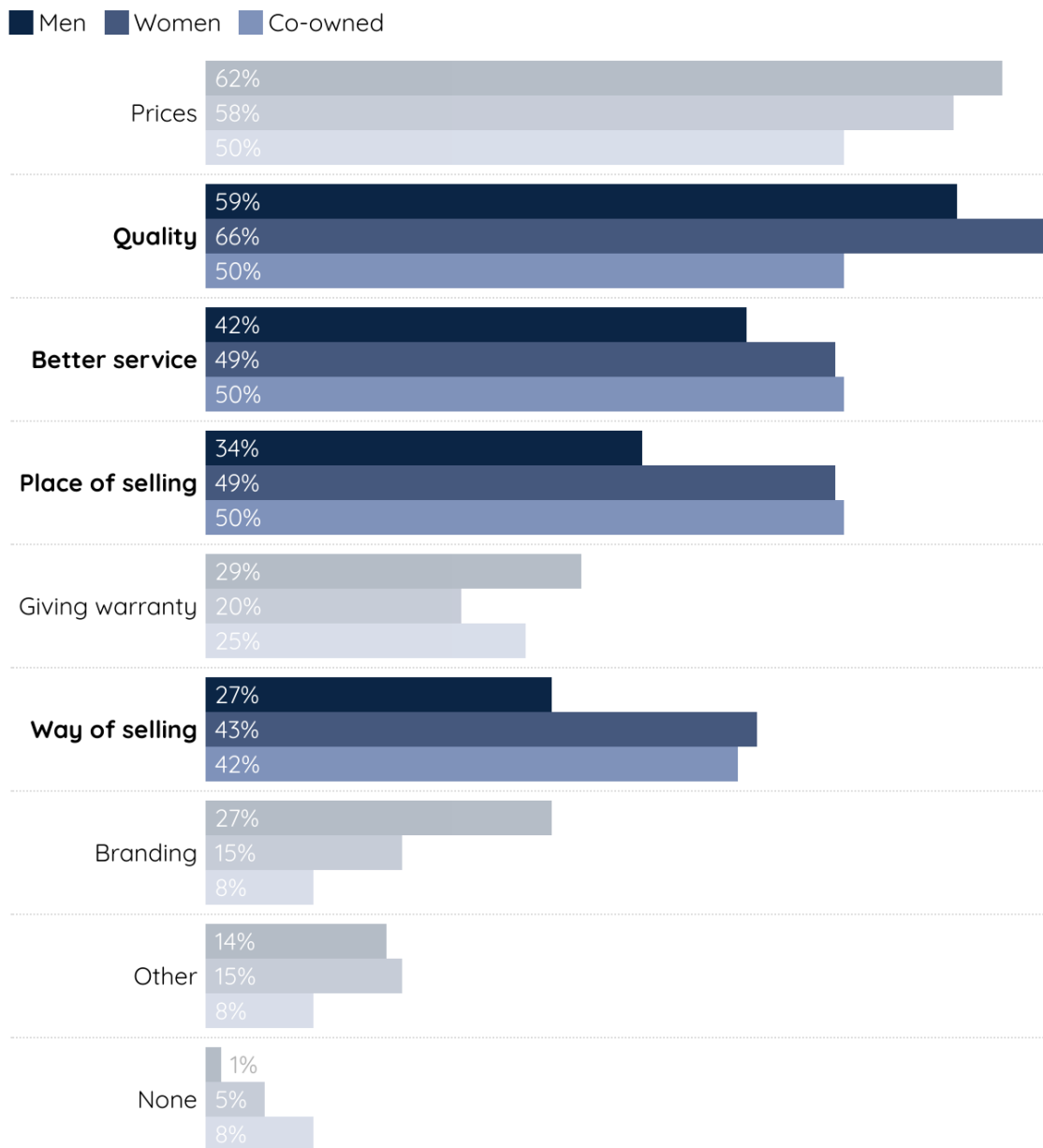
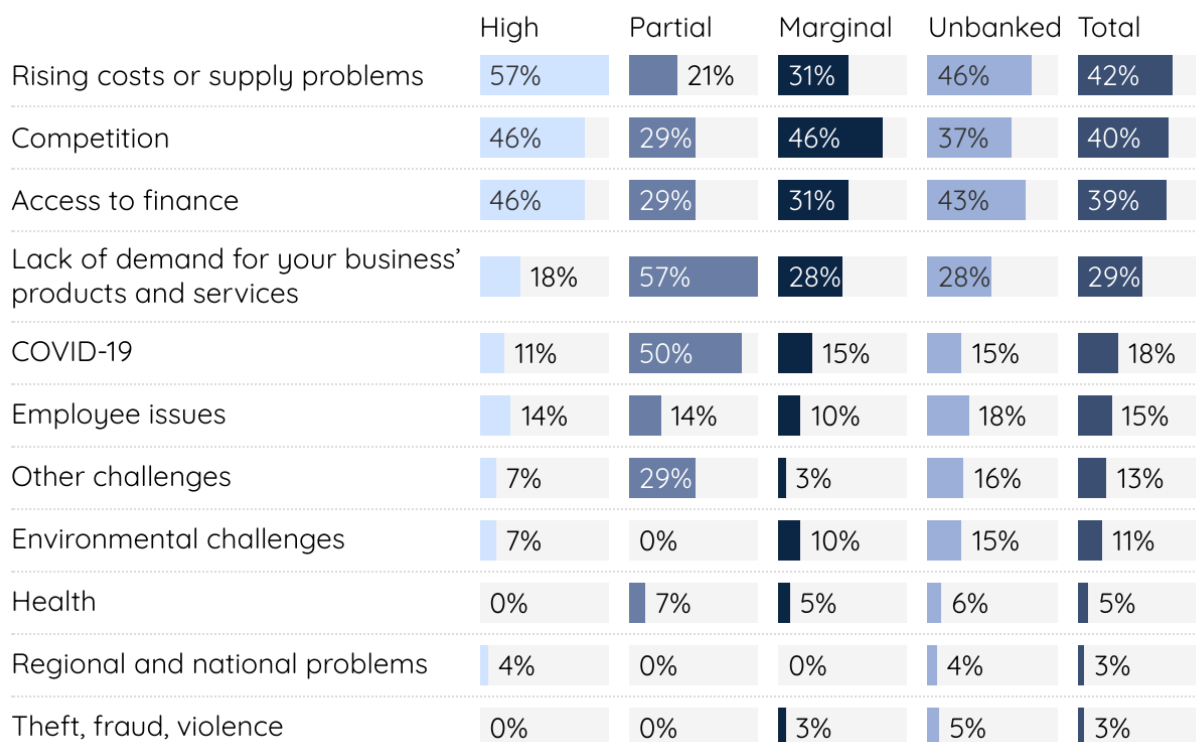


FIGURE 8.9: REPORTED DIFFERENTIATION FROM COMPETITORS, PERCENT OF FIRMS PER GENDER



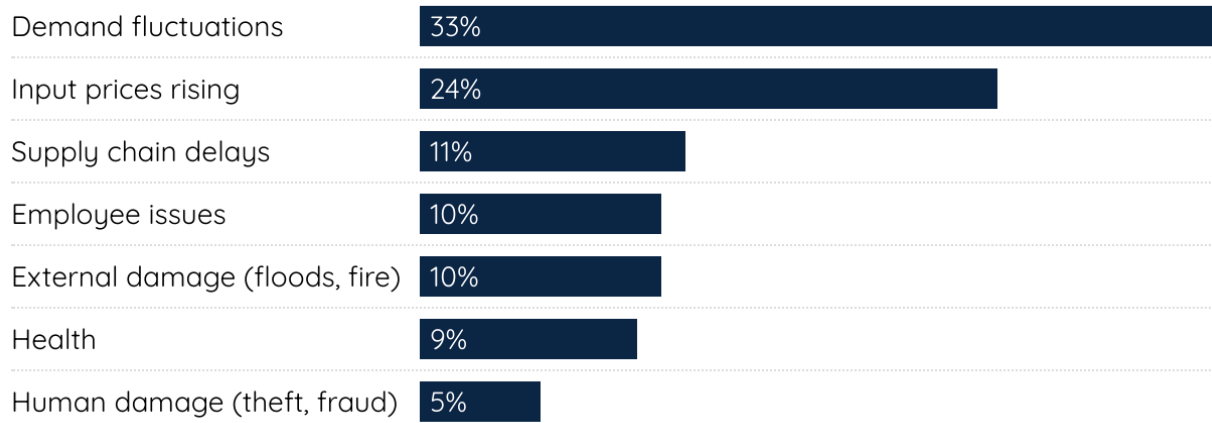
Looking further into the responses to the barriers question, if we segment the firms by levels of formal and regulated financial systems integration (based on usage of mobile money or bank accounts, see Financial Services section for more details) (Figure 8.10) there are few differences. A higher percentage of more integrated firms are concerned about rising costs of supplies.

FIGURE 8.10: MAIN BARRIERS TO GOALS BY LEVEL OF BANKING INTEGRATION



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 8.11 below, 33% of firms were affected by fluctuations in demand, while 24% were affected by rising price of inputs. 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—41% compared to just 14% taking a loan. Likewise, firms that experienced demand fluctuations primarily used savings (52%) not credit (6%). This is consistent with other findings noting the need for, and lack of, working capital credit.

FIGURE 8.11: 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 Indonesia and other countries in the study. This report provides an overview of the data we gathered in Indonesia; it is not intended to be a “final” report. Instead, we publish this data in order to enable others interested in Indonesia and especially small firms in Indonesia 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 Indonesia.

While analysis continues, there are patterns and trends arising in the Indonesia 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 Indonesia 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. This includes loans (76% of firms held a loan, with government banks

being the most common source). It also includes digital financial services, particularly debit cards, ATM machines, and mobile banking. They use mobile wallets for business purposes at very low rates. Cash still dominates other modes of transactions in this segment (46% of the small firms run their businesses entirely in cash).

- The financial tools they have access to 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 a large segment of small 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.

Indonesian 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, a full third of the firms said they wanted to both grow and gain stability. In interviews, many comment that they see the two goals as complementary, and that they want to pursue the kind of “slow and steady” growth that makes their business more stable.

Firms in the global sample, like their Indonesian counterparts, cite “rising costs and supply problems” and “access to finance” as major barriers to achieving their vision of growth and stability (while Indonesian firms more commonly cite competition as another major barrier than firms in other countries).

Despite access to finance being a major barrier to firm owners’ vision for success, half of firm owners say they rarely or never need a loan. This is particularly notable as many of the firms are 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 Indonesia report relatively low desire for credit, saying they never or rarely need a loan. Desired uses for loans are predominantly within what could

be categorized as working capital, rather than for purchasing large assets. Firms closely match revenues and expenses on a month-to-month basis. This helps confirm that they lack working capital/liquidity. Firms rarely take any operating risk that could result in negative monthly cash flow.

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

4. Fragile Jobs, Vulnerable Workers

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

- The employment picture is different and more volatile than it appears from simple counts of employees. Most workers' pay varies considerably from month to month.
- From the perspective of the firms, the number of jobs they offer fluctuates a great deal month by month; in many cases, the individuals who fill those positions can change several times during the year.
- In the global sample we find that many jobs only continue for a few months, though it is noteworthy that in Indonesia firms are more likely to have a key employee who is employed over a longer period of time. Still, half of the small firm employees got paid 7 months or less in a 10-month period.
- At the same time, small firm workers find it difficult to earn income elsewhere. Half of workers surveyed reported no other source of income.
- Just under half of the workers we talked to in Indonesia (44%) said that they lacked money to meet their basic or food needs at some point during the study, including 16% who reported that a child in their household had not eaten enough in the past week. This figure was much higher in Bandung and Medan than in Makassar and Yogyakarta.
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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. This is especially important outside of Java because of historic patterns of exclusion.
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 fully passed on to employees. Programs and policies that directly support the workers in small firms should be explored.

Credits

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

MSC Indonesia and L-IFT managed data collection for the Indonesian arm of the Small Firm Diaries study. The MSC Indonesia team contributed to Indonesia-specific elements of the research design, and collaborated in creating research outputs, including this report. MSC Indonesia also convened the project's Indonesian Advisory Group which served as a valuable sounding board throughout the project, responding to early research findings, and advising on Indonesian priorities and context.

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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

Industry Differences

This table summarizes the differences between industries that we discuss throughout the report.

	Agri-Processing	Light Manufacturing	Services
Median Monthly Revenue	IDR 16.84 M	IDR 14.61 M	IDR 13.93 M
Median Monthly Expenses	IDR 10.43 M	IDR 8.44 M	IDR 7.73 M
Median Monthly Operating Margin	IDR 4.75 M	IDR 5.55 M	IDR 7.19
CV Monthly Revenue	0.32	0.48	0.32
CV Monthly Expenses	0.36	0.47	0.43
CV Monthly Operating Margin	0.87	0.81	0.68
Percentage of firms with positive revenue growth	70%	58%	53%
Percentage of firms with Bank Accounts	57%	70%	68%
Percentage of firms with Mobile Money Accounts	4%	1%	10%
Percentage of firms with bank loans	26%	40%	20%
Percentage of firms with MFI loans	11%	5%	14%
Percentage of employees paid for less than 3 months of the study	27%	18%	17%

Location Differences

This table summarizes several out key metrics across cities. Of note, monthly revenues, expenses, and operating margin are significantly lower in Bandung than other cities, additionally the variability of operating margins in Bandung is much higher than other cities. On the other hand, a significantly lower percent of firms in Medan and Yogyakarta have bank accounts compared to Makassar and Bandung.

	Bandung	Makassar	Medan	Yogyakarta
Median Monthly Revenue	IDR 10.7 M	IDR 17.9 M	IDR 14.9 M	IDR 20.0 M
Median Monthly Expenses	IDR 7.1 M	IDR 9.1 M	IDR 9.0 M	IDR 8.6 M
Median Monthly Operating Margin	IDR 3.2 M	IDR 9.7 M	IDR 6.2 M	IDR 6.6 M
CV Monthly Revenue	0.39	0.44	0.31	0.42
CV Monthly Expenses	0.39	0.48	0.38	0.54
CV Monthly Operating Margin	1.38	0.65	0.61	0.89
Median Business Practices Index Score	0.33	0.54	0.33	0.50
Percent of firms with Bank Accounts	71%	84%	59%	57%
Percent of firms with Mobile Money Accounts	0%	3%	10%	6%
Percentage of firms with bank loans	32%	38%	29%	33%
Percentage of firms with mobile money loans	0%	0%	0%	0%
Percentage of firms with MFI loans	0%	9%	16%	4%
Percentage of firms with informal savings group loans	0%	0%	2%	0%
Percentage of employees paid for 8-10 months of the study	58%	41%	45%	35%