

What Predicts the Growth of Small Firms? Evidence from Tanzanian Commercial Loan Data

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A Focus groups

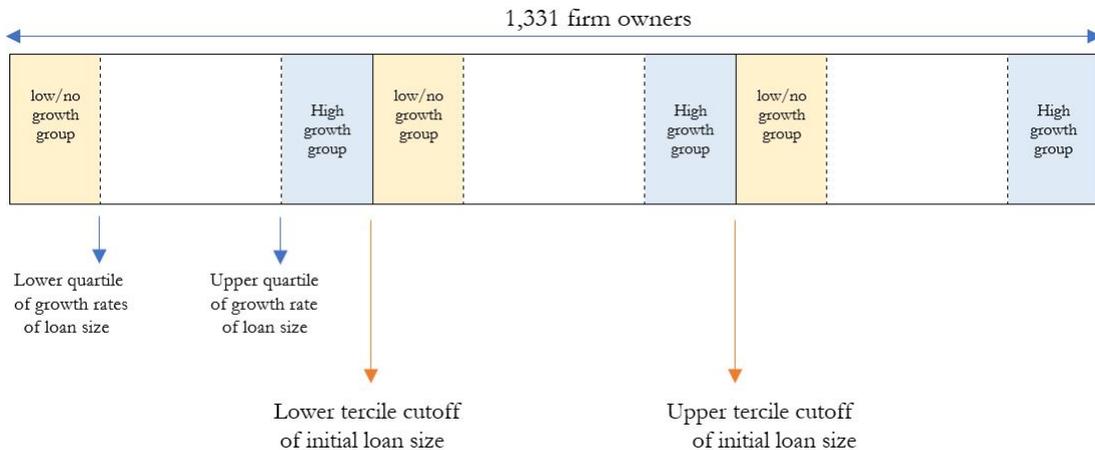
Below we list the set of 11 questions that were used to guide the focus group discussions. These meetings were semi structured and as such, different meetings focused on somewhat different topics. Therefore, some questions were not asked in some of the sessions and some questions were not asked precisely as phrased below.

1. What line of business are you in? Have your business activities changed at all since you started your business, and if so, how?
2. How many years have you been in this business?
3. What prompted you to start this business?
4. How have loans facilitated your business? For example, do you borrow money to finance working capital or investment or both?
5. Do you feel that you have been able to borrow as much as you have needed for your business? Or, do you feel that your business would be more successful if you were able to take larger or different loans? If you feel that your business would be more successful if you were able to take larger or different loans, please explain what kind of different loan would benefit you, and how?
6. When did you first take a commercial loan, and from where? What motivated you to take this loan?
7. Have you ever worked with SIDO? Why or why not and what services did SIDO provide for your business?
8. How many employees work for you now? How many employees did you have when you started the business?
9. Do you have plans to grow your business? If yes, please explain. If no, why not?
10. What do you see as the top three biggest limitations on growing your business? That is, are there any missing pieces, which, if they were available, you could be able to grow your business or grow it faster than you currently are able to? These could include limitations related to getting loans, hiring the right employees, skills you wish you could acquire, etc. (If you do not feel there are any big limitations, that is also helpful to know.)
11. Are there any public or private organizations which have been especially helpful to your business? Explain.

B Sampling

In addition to using administrative loans data to classify borrowers into two groups and conducting focus groups, we conducted a detailed survey covering high and low/no growth firm owners in Dar es Salaam from December 2019 to February 2020. Out of the 464 firm owners in our potential sample for this study, we successfully interviewed 258 firm owners for an overall coverage rate of 56%. Of those not surveyed, 46 percent were unreachable, 15 percent refused to be surveyed, 12 percent were scheduled but did not take place because we met our desired sample size, 8 percent were no longer NMB customers, 8 percent reported that the business closed, and 6 percent had relocated outside of Dar es Salaam. The remaining few were not surveyed because the business shifted from Dar es Salaam, or the firm owner was deceased, defaulted, or hospitalized. Therefore, the sample for this study includes 137 high-growth firm owners (53.1% of the surveyed sample) and 121 low/no-growth firm owners (46.9% of the surveyed sample). We find that the coverage rate is not differential across the samples with high-growth and low/no-growth firm owners (p-value 0.238). As each firm owner could report answers for multiple businesses in our survey, we have detailed data on 306 small- and medium-sized firms across the 258 firm owners.

Figure B.1: Classification of High and Low/No Growth Firm Owners using Administrative Loans Data



Note: Loan growth classification is based on the average growth rate of loan volume over the sample period.

C LASSO cleaning procedure

Before proceeding with the analysis, we apply a cleaning/transforming procedure to all potential covariates. First, we convert all variables (except continuous variables) to indicator variables and

square each continuous variable to allow for non-linearities. We generate missing dummies for variables with missing information and replace the missing values with zero. Next, we drop variables that have no variation. Moreover, we add two-way interactions of all variables and drop perfectly collinear ones, and lastly, standardize all the variables by subtracting the mean and dividing by the standard deviation.

D List of all Variables

Table D.1: List of All Variables

FIRM OWNER LEVEL VARIABLES		
Female	Past business(es) closed due to:	Use of business profits:
Owner's Age	High competition from other small firms	To invest in equipment
Owner has primary education	High competition from other large firms	For expanding business
Owner has some primary education	Low demand for products	To invest in buildings for business
Owner has secondary education	High cost of inputs	To buy a vehicle
Owner has secondary education	Lack of inputs	To build/ improve houses
Owner has technical training	Lack/poor market for products	To invest in land
Owner has a university degree	Harassment from authorities	To invest in livestock
Owner has any other occupation currently	Lack of proper management skills	To purchase more stock
Owner's primary occupation is running business(es)	Greater opportunities in another sector	To start a new business
Owner currently emp. in a formal pvt. business	Changing market structure	For HH expenses/school fees, etc.
Owner currently emp. in an informal pvt. business	Profits enabled owner to diversify	For a retirement plan
Owner currently emp. in a family enterprise	Low prices for products sold	
Owner currently emp. by the government	Insufficient working capital	Negative external shocks:
Owner ever emp. in a formal pvt. business	Due to weather	Ever bought insurance for the business
Owner ever emp. in an informal pvt. business	Due to equipment breakdown	Ever experienced a significant theft
Owner ever emp. in a family enterprise	Business workspace become unavailable	Experienced sig. theft by a relative
Owner ever emp. by the government	Lost skilled workers	Experienced sig. theft by a worker
	Misappropriation by workers	Experienced sig. theft by a friend
	Due to problems related to utilities	Experienced sig. theft by another business
		Experienced sig. theft by a stranger
Owner's motivation to be an entrepreneur:	Motivation to start add. businesses:	
Lost a previous job	To diversify income	
Could not find job elsewhere	Wanted to make more money	
To support himself/herself and family	Saw a good opportunity	Steps to recover from a theft:
To try out a business idea	Other businesses struggling	Sell business assets
Believe can make more money	Encouraged by relatives/friends	Sell personal assets
No other means for survival	Wanted to transition to a new activity	Reduce business expenses
Parents/relatives were in business	Easy, passive form of income	Borrow money from family/friends
Saw a good opportunity		Get a bank loan
Always wanted to have own business		
Encouraged by friends and relatives	Owner plans to operate multiple businesses	Taken any actions to prevent theft
To supplement income	Loans taken in last 5 years	Ever experienced a fire
Flexible hours	Total loan amount in last 5 years	Experienced demolitions from construction
	Avg. loan amount in last 5 years	Ever experienced a traffic accident
Owner's other sources of income:	Use loan to open a new branch	Products were banned
No other sources of income	Use loan to buy more stock	
Spouse's earnings	Use loan to buy a house	Steps to recover from ext. shocks:
Family contributions/remittances	Use loan to purchase a machine	Sell business assets
Pension	Use loan to pay school fees	Sell personal assets
Salary from other employment	Use collateral for loans	Reduce business expenses
Salary from other business	Use house as collateral	Borrow money from family/friends
Subletting of business premise	Use own car as collateral	Get a bank loan
Subletting of house	Use business premises as collateral	
Farming/agriculture	Use business equipment as collateral	Owner keeps written financial records
	Value of available collateral	Owner keeps records of daily sales
Average household (HH) monthly income	%age of loans used for working capital	Owner keeps records of payments to workers
Average HH annual income	%age of loans used for personal expenses	Owner keeps records of utility payments
Percentage of HH income from business	%age of loans used for investment	Owner keeps records of rental payments
		Owner keeps records of interest payments
House and car ownership:	Procedure for acquiring a loan:	Owner keeps records of purchases of material
Owner owns a house	Submit company's performance record	
Houses owned	Submit audited performance record	Networks:
Houses owned before starting business	Submit evidence of business registration	Member of any business association
Have title deed for house(s)	Get community member to vouch	Pay membership fee
House used by immediate family	Get an official to vouch	Membership fee amount (in TZS)
House used by extended family	Get signature from Mjumbe (messenger)	Frequency of paying membership fee
House rented out	Get signature from the local gov.	
House used as collateral for loans	Interest rate is too high	Motivation to join networks:
Owner owns a car	Challenges with borrowing:	To learn from other entrepreneurs
Had car before starting current business	Documentation is in English	Get support on a specific issue
Use own car to get around	Too many steps	Get direct benefits from membership
Have a personal driver	Bribery to get signatures	As similar business are members too
Use taxi to get around	Privacy concerns	
Use bicycle/motorcycle taxis to get around	Property not counted as collateral w/o deed	Association met this year
Use minibus share taxis to get around	Receive less than requested amount	Frequency of association meetings
Walk to get around	Duration	
	Preparing written accounts	Discussion at meetings about:
Owner struggles to pay for food		Issues with suppliers
Owner struggles to pay for water	Use loan only for personal expenses	Issues with customers
Owner struggles to pay for medical treatment	Use loan for some personal exp.	Marketing strategies
Owner struggles to pay for electricity	Use loan for different business	Ways to improve product/service quality
Owner struggles to pay rent for home	Loan source: Akiba	Borrowing from banks
Owner struggles to pay children school fees	Loan source: CRDB	Management strategies
Owner never struggles to pay	Loan source: NMB only	Issues related to employees
	Used loan for buying a house	Ways to deal with competition
Owner has operated any past businesses	Used loan for purchasing land	Issues related to the business environment
Number of past businesses	Used loan for refurbishing house	
Number of years since first business	Used loan for purchasing vehicle	Owner not part of a network because:
	Used loan for children school fees	Too costly
Type of first or any business:	Used loan for wedding/funeral exp.	Not provide any benefits
Manufacturing	Owner has a plan for how to use loan	Has no time to actively participate
Construction	Owner member of NMB business club	Get better support from personal networks
Retail	Owner attended NMB business training	Did not want to
Services	Owner uses loans from family/friends	
Wholesale	Owner uses loans from microfin. orgs.	Owner has informal personal networks
Agriculture	Borrowed from SIDO	Number of people in the personal networks
Agricultural processing	Bought goods or equipment from SIDO	Number of personal networks
Bar	Received training or advice from SIDO	
Number of current businesses		

Note: Bold title case text (e.g., "Owner's motivation to be an entrepreneur" indicates a question with multiple categorical responses, which are listed below in non-bolded text (e.g., "Lost a previous job," etc.)

Table D.2: List of All Variables (cont.)

<p>Attitudes & aspirations Consider leaving business for a salaried job Willing to sell the business</p> <p>Owner would consider selling business if: Offered a full-time job Offered to be partner/owner at the company Buyer paid back business assets at mkt prices Buyer paid a certain amount Amount the buyer would pay to buy (in TZS) Not sell business under any circumstances</p> <p>Owner views business as growing Owner views business environment as better Owner expects business env. to improve in future Owner has plans for expanding business</p> <p>Owner plans to expand business by: Owner plans to hire more workers Owner plans to open another branch or shop Owner plans to increase variety of prods/services Owner plans to purchase more equipment Owner plans to purchase a vehicle</p> <p>Owner has taken steps to achieve expansion goals Owner plans to diversify into another activity Owner plans to quit open a different business Owner has no plans to change business activities</p> <p>Owner judges the business environment by: Customer demand Level of competition Prices charged by the business Cost of inputs/materials Cost of rent/land Taxes Burden of government regulation Access to loans</p> <p>Reasons for decline in business env.: Less demand for the product Economy overall is in decline Government regulation/tax burden is worse Too much competition from other businesses</p> <p>Reasons for imp. in business env.: More demand for the product Economy overall is improving Government regulation/tax burden is better Less competition from other small businesses</p> <p>Business problems faced currently: Having to keep the prices low Insufficient working capital Insufficient market access Lack of proper working space Lack of skilled workers Lack of trusted worker Lack of management skills</p> <p>External challenges currently: Low demand for owner's products or services High competition from other businesses High cost of inputs Access to or costs of finance/credit Harassment from authorities Shortage of inputs Lack of access to utilities Poor roads/access to business Restrictive laws Corruption Owner Crime, theft, disorder Business licensing and permits</p> <p>Problems when started business: Low demand for owner's products or services High competition from other businesses High cost of inputs Having to keep the prices low Insufficient working capital Access to or costs of finance/credit Insufficient market access Harassment from authorities Shortage of inputs Lack of proper working space Lack of skilled workers Lack of trusted worker Lack of access to utilities Poor roads/access to business Lack of management skills Restrictive laws Corruption Crime, theft, disorder Business licensing and permits</p> <p>District dummies for owner location (5) Ward dummies for owner's location (59)</p>	<p>FIRM LEVEL VARIABLES Owner started business himself/herself Owner took business from others</p> <p>Owner acquired business from family Owner acquired business from friend Owner acquired business from a bus. person Owner acquired business for free Owner bought the business Firm runs full-time</p> <p>Firm type: Manufacturing Construction Retail Services Wholesale Agriculture Agricultural Processing Bar Lodge</p> <p>Reasons for starting the business Experience in similar line of business Friends/relatives in similar business Saw others succeed in similar business To fill the gap caused by unmet demand Viewed the market demand as reliable Due to owner's startup capital constraints No apparent reason</p> <p>Age of the business Start-up cost (in TZS)</p> <p>Sources of start-up capital Own funds or savings (inc. %) Loans or gifts from family/friends (inc. %) A commercial bank loan (inc. %) Money from non-bank financial insts. (inc. %)</p> <p>If no funding available, owner would: Have started at a smaller scale Have found another source of funding Opened another type of business Sought employment instead</p> <p>Firms customers are: Individuals/households/farmers Small traders in the area/town Large traders in the area/town Small traders outside the area/town Large traders outside the area/town Large enterprise other than traders Export market/outside the country Government Co-operative</p> <p>Firm meets the customers at: At the place of business At a market At the customer's residence At customer's establishment</p> <p>Owner travels far to sell products Owner transports the goods outside Dar Owner does not sell products outside Dar Average number of customers per day Business comes from repeat clients only Faces problems with delayed payments</p> <p>Dealing with non-payment: Do nothing Refuse to give credit in future Borrow to meet the shortfall Hold back on paying for expenses Sell assets</p> <p>Firm's suppliers are: Individuals/households (not farmers) Individual farmers Commercial farms Small traders in the area/town Large traders in the area/town Small traders outside the area/town Large traders outside the area/town Small enterprises other than traders Large enterprise other than traders Suppliers outside the country Government Co-operative</p> <p>Firm meets suppliers at: At the place of business At a market At supplier's residence At supplier's establishment</p>	<p>Owner travels far to purchase products Owner makes purchases from outside Dar Does not purchase inputs from outside Dar</p> <p>Number of suppliers Frequency of purchasing from suppliers Firm uses credit to pay for supplies Duration allowed by suppliers for repayment Interest rate charged for credit payments</p> <p>Product quality Discuss quality issues with suppliers Satisfied with quality of inputs Changed suppliers due to quality issues Discuss quality issues with customers Customers satisfied with product quality Taken actions to improve quality</p> <p>Business costs, sales, and profits Business affected by seasonality Firm hires workers during good months Firm increases prices in good months Firm/owners works more in good months Firm buys more inputs in good months Number of workers hired in good months Firm reduces workers during bad months Firm reduces prices in bad months Allocate time to other tasks in bad months Number of workers reduced in bad months Number of workers kept in bad months Number of good months for business Number of bad months for business Number of average months for business Average revenue in good months Average revenue in bad months Average revenue in average months Average costs in good months Average costs in bad months Average costs in average months Average profit in a good month Average profit in a bad month Average profit in an average month</p> <p>Expenses during an average month for: Purchase of goods, inputs, services Purchase of machinery/equipment Wages of labor Transport Fertilizer/other farm input Insurance Finance/loans (to repay loans) Rent for premises Mobile phone costs Maintenance and repair Water, electricity, and other utilities</p> <p>Firm's profits have increased over last year Profits increased due to higher demand Profits increased due to lower costs of inputs Profits increased due to charging higher prices Profits increased as business got bigger Profits increased due to lower competition Profits decreased due to lower demand Profits decreased due to higher costs of inputs Profits decreased due to charging lower prices Profits decreased as business got smaller Profits decreased due to more competition</p> <p>Business Assets Asset value: land (undeveloped land) Asset value: residential buildings Asset value: non-residential buildings Asset value: machinery and other equipment Asset value: electricity generation equipment Asset value: transport equipment Asset value: furniture and office equipment Asset value: ICT equipment Value of fixed assets increased over last year Value of business stocks Value of business stocks increased over last year</p> <p>Business location In the home In a traditional market place Along roadside or path In a formal commercial area In a formal industrial site Business is mobile On a farm District dummies for business location (5) Ward dummies for business location (70)</p> <p>Reason for current location: Close to owner's home Due to good infrastructure Close to customers Required workers are in the area</p>
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Table D.3: List of All Variables (cont.)

Close to important suppliers/raw materials	Ever received technical support/advice
Rent/land prices are cheap	Received advice from:
Environment is dynamic/close to other successful firms	Customers
Type of nearby businesses:	Suppliers
Other formal businesses in the same activity	Small firms
Other formal businesses in different activities	Large firms
Informal businesses in same activity	A business development organization
Informal businesses in different activities	A lender
No other businesses nearby	The government
Firm has ever changed location	Family or friends
Reasons for changing location:	Nature of support or advice:
Needed a bigger place	Advice to improve products or services
Rent was too high	Advice to upgrade managerial practices
Wanted to be closer to markets/customers	Advice to change organizational structure
Needed a place with electricity/water	Advice on how to market goods or services
Prior location was destroyed by authorities	Made improvements to business in last 3 years
Premises owned by the owner	Nature of business improvements:
Premises owned by a private landlord	Machinery/equipment investment
Premises owned by the owner's family	Better design
Premises owned by the government/municipality	Increase variety of products
Owner has title deeds to the property	Increase quality of products
Approximate value of the property	Improve working space
Owner has a formal rental agreement	Workers skill improvement
Employment	Managerial skill improvement
Owners and partners when started business	New forms of distribution and marketing channels
Paid workers (managers) when started business	Better supply chain
Paid workers (professional staff) when started business	Organization modernization
Paid workers (technicians) when started business	Reasons for making changes to business:
Paid workers (unskilled) when started business	Emergence of new demand
Family/friends working for no pay when started business	Acquired better skills
Apprentice/trainees when started business	Higher competition
Owners and partners currently	
Paid workers (managers) currently	
Paid workers (professional staff) currently	
Paid workers (technicians) currently	
Paid workers (unskilled) currently	
Family/friends working for no pay currently	
Apprentice/trainees currently	
Owners and partners when had most employees	
Paid workers (managers) when had most employees	
Paid workers (professional staff) when had most employees	
Paid workers (technicians) when had most employees	
Paid workers (unskilled) when had most employees	
Family/friends working for no pay when had most employees	
Apprentice/trainees when had most employees	
Total number of employees currently	
Ever provided training to workers	
Owner's hiring decisions	
Hires his/her family members	
Hires people already trusted	
Hires people with relevant experience	
Hires people who seem intelligent	
Hires people who seem committed to work	
Owner's evaluation of employee performance	
Evaluates whether the profits have gone up	
Evaluates whether they created any problems	
Evaluates whether they are honest and trustworthy	
Evaluates whether they have been reliable	
Evaluates whether they are good at their job	
Major problems related to the employees	
Not productive	
Dishonesty	
High absenteeism due to illness	
High absenteeism for other reasons	
Lack of skill	
Laziness	
Low work ethic	
No major problems	
Business administration and innovation	
Firm has a license	
Firm pays taxes	
Firm uses a mobile phone for business	
Firm use internet for business	
Firm/products that are competition	
Informal small businesses in area	
Formal small businesses in area	
Local importers of foreign-made products	
Large national companies	
Foreign companies	
Response to competition	
Improve quality of goods and services	
Reduce prices	
Change locations	
Change line of business	

E Predicting Growth: Excluding “Business Challenges” Variables

E.1 Firm-Owner Level Prediction Excluding “Business Challenges” Variables

Table E.1: Predictors of High Growth Using Firm-Owner Level Characteristics

	(1) High Growth owners	(2) High Growth (female owners)	(3) High Growth (male owners)
Owner’s Characteristics & Behavioral variables			
Owner’s age (-)	-0.276 (0.196)	-0.262*** (0.060)	-0.164 (0.226)
Owner’s age squared (-)	0.018 (0.151)		-0.091 (0.188)
Owner views business as growing (+)	0.072** (0.029)		0.100*** (0.034)
Owner has plans to expand business by opening another branch or shop (+)	0.058** (0.028)		
Owner records interest payments (+)	0.071*** (0.026)		0.077** (0.037)
Owner records worker payments (+)			0.037 (0.039)
Owner judge business environment by the prices she can charge (+)			0.069** (0.032)
Owner does not want to be part of any business association (-)	-0.054** (0.025)		
Owner not part of business associations as sees them as unbeneficial (+)	0.033* (0.019)		0.035 (0.022)
Owner has informal personal networks for the business (+)			0.082*** (0.025)
Owner gets around using bicycles and motorcycle taxis (-)	-0.074*** (0.026)		-0.074*** (0.025)
Owner currently employed by the government (-)	-0.056*** (0.018)		
Owner willing to sell company if made partner/owner (-)			-0.087** (0.034)
Owner lives in ward Bunju (+)	0.078*** (0.024)		0.085*** (0.026)
Financial variables			
Value of collateral (TZS) (+)	0.084*** (0.030)		0.078** (0.039)
Owner uses loan to refurbish house (-)	-0.049* (0.027)		-0.058* (0.035)
Owner uses profits to expand business (+)			0.030 (0.034)
Average household annual income (+)			0.041 (0.026)
<i>N</i>	258	85	173
<i>R</i> ²	0.325	0.165	0.427

Note: Robust standard errors are included in parentheses. * $p < .10$, ** $p < .05$, *** $p < .01$. The left-most column contains the predictors selected using by the lasso. Column 1 includes the OLS estimates for the variables selected using lasso on the full sample of 258 firm owners. Column 2 and 3 include OLS estimates for the variables selected using lasso on the female and male only firm owner sample respectively. Missing entries in each column mean the corresponding variable in the left-most column was not selected for the respective sample. The sign included in () at the end of each selected variable in the left-most column is the sign on the coefficient estimated using lasso.

E.2 Firm-level Predictors of Growth Status: Excluding “Business Challenges” Variables

Table E.2: Predictors of High Growth Using Firm- and Owner-Level Characteristics

	(1) High Growth Firms	(2) High Growth (female- owned firms)	(3) High Growth (male- owned firms)
Owner's Characteristics & Behavioral variables			
Owner's age (-)	-0.149*** (0.025)	-0.178*** (0.031)	-0.151 (0.095)
Owner's age - squared (-)			0.010 (0.090)
Owner believes business can grow in the future (+)	0.062** (0.027)		0.063** (0.027)
Owner views business as growing (+)	0.005 (0.028)		0.037 (0.025)
Owner has plans to expand business by opening another branch or shop (+)	0.041* (0.024)	0.094** (0.038)	
Owner records interest payments (+)	0.099*** (0.030)		0.080*** (0.028)
Owner records worker payments (+)	0.021 (0.031)		0.036 (0.034)
Owner ever employed in a family enterprise (+)		0.047* (0.027)	
Owner has other occupation (-)			-0.017 (0.024)
Owner's any past business was agricultural (+)			0.032 (0.021)
Owner's first business type was a bar (-)		-0.042** (0.021)	
Number of years since started first business (-)			-0.101*** (0.030)
Owner does not want to be part of any business association (-)	-0.056** (0.024)		-0.072*** (0.025)
Owner gets around using bicycles and motorcycle taxis (-)	-0.053* (0.028)		-0.057** (0.029)
Owner gets around by walking (+)			0.029** (0.011)
Owner motivated to be an entrepreneur as parents/relatives were in business (+)	0.073*** (0.025)		0.081*** (0.027)
Owner willing to sell company if made partner/owner (-)	-0.031 (0.030)		-0.083*** (0.031)
Motivation to join network: learn from other entrepreneurs (-)	-0.049 (0.033)		
Owner evaluates employee performance by the problems they create (+)		0.081*** (0.029)	
Owner hires employees with relevant experience (+)	0.040 (0.025)		0.030 (0.028)
Owner started multiple businesses as her other business were struggling (-)		-0.051* (0.027)	
Owner chose business type as friends/relatives were in same line of business (-)			-0.030 (0.021)
Owner not part of business associations as sees them as unbeneficial (+)	0.022 (0.020)		0.012 (0.024)
Owner has informal personal networks for the business (+)			0.046* (0.026)
Owner member of NMB business association (+)			0.034 (0.028)
Discuss how to improve product quality/service at business association meetings (-)			-0.120*** (0.029)
Discuss marketing strategies at business association meetings (-)	-0.012 (0.025)		0.024 (0.037)
Owner judge business environment by the prices she can charge (+)			0.039 (0.028)
Owner reduces prices in face of competition (-)			-0.039* (0.022)
Owner has some primary education (+)			0.035** (0.016)
Owner does nothing in response to repayment (+)		0.024 (0.027)	
Owner lives in ward Bunju (+)	0.068** (0.028)		0.052** (0.025)
Owner lives in ward Kibada (-)		-0.063*** (0.014)	
Owner lives in ward Kibamba (+)	0.048*** (0.015)	0.067** (0.033)	
Owner lives in ward Makongo (-)			-0.035*** (0.012)
Owner lives in ward Charambe (-)		-0.078*** (0.012)	
Owner lives in ward Kunduchi (+)			0.038* (0.021)
Owner lives in ward Kibonde (-)			-0.036*** (0.012)
Owner lives in ward Wazo (-)			-0.033 (0.020)
Owner lives in ward Ndugumbi (-)			-0.030*** (0.007)
Owner lives in district Temeke (-)		-0.061** (0.031)	

Note: Standard errors clustered at the firm-owner level are included in parentheses. $*p < .10$, $***p < .05$, $***p < .01$. The left-most column contains the predictors selected using the lasso. Column 1 includes the OLS estimates for the variables selected using lasso on the full sample of 306 firms. Column 2 and 3 include OLS estimates for the variables selected using lasso on the female-owned and male-owned firms respectively. Missing entries in each column mean the corresponding variable in the left-most column was not selected for the respective sample. The sign included in () at the end of each selected variable in the left-most column is the sign on the coefficient estimated using lasso. Recall that lasso selects covariates and estimates coefficients but does not provide the standard errors required for performing statistical inference. The table continues in Table F.2.

Table E.3: Predictors of High Growth Using Firm- and Owner-Level Characteristics (cont.)

	(1) High Growth Firms	(2) High Growth (female- owned firms)	(3) High Growth (male- owned firms)
Firm's Characteristics			
Number of suppliers (+)			0.029 (0.019)
Owner meets suppliers at the place of business (+)	0.088*** (0.022)	0.059** (0.028)	0.026 (0.021)
Firm does not sell products/services outside of Dar es Salaam (-)	-0.034 (0.040)	-0.014 (0.035)	
Total number of current employees (+)	0.033** (0.016)		0.036** (0.016)
Number of paid unskilled workers and laborers employed by the firm when started (+)	0.043* (0.024)	0.037 (0.026)	
Number of paid unskilled workers and laborers employed by the firm currently (+)	0.013 (0.023)	0.042 (0.046)	0.001 (0.021)
Firm type: wholesale (+)	0.061** (0.025)		0.038 (0.027)
Firm owner transports products outside of Dar es Salaam for selling (+)	0.032 (0.040)		0.065** (0.026)
Firm's customers are small traders in the area/town (+)	0.005 (0.025)		0.039 (0.028)
Firm's customers are large enterprises (+)	0.036* (0.022)		0.031 (0.020)
Firm's customers are largers traders in the area/town (-)		-0.106*** (0.032)	
Owner travels outside Dar es Salaam to purchase firm inputs (+)		0.080*** (0.029)	
Business premises owned by the government (-)	-0.023 (0.023)		0.002 (0.026)
Firm's current location is due to cheap rent/land prices (-)	-0.059** (0.024)	-0.128*** (0.034)	
Firm's current location is at home (-)		-0.041* (0.023)	
Firm's profit increased due to lower input costs (-)			-0.091*** (0.019)
Firm's profit declined due to higher competition (-)	-0.034 (0.023)	-0.108*** (0.033)	
Firm's profit increased due to lower competition (-)			-0.038** (0.016)
Firm hires family (-)			-0.025 (0.031)
Firm location: ward Kawe (-)		-0.060*** (0.015)	0.016 (0.019)
Firm location: ward Kijichi (+)			0.045*** (0.012)
Firm location: ward Mbezi Juu (-)	-0.045*** (0.016)		-0.038* (0.019)
Firm location: ward Keko (+)			0.034* (0.018)
Firm location: ward Mbweni (+)			0.011 (0.012)
Financial Variables			
Value of collateral (TZS) (+)	0.029 (0.023)		0.062** (0.030)
Loan taken from NMB in past five years (+)	0.048* (0.026)		0.034* (0.020)
Ever borrowed from SIDO (-)	-0.048*** (0.016)		
Owner improved business premises in the past 3 years (+)		0.059* (0.035)	
Owner uses loans to refurbish house (-)			0.004 (0.028)
Owner uses profits to expand business (+)			-0.011 (0.027)
Owner uses profits to start a new business (+)			0.043* (0.022)
Average household annual income in TZS (+)			0.045** (0.018)
Average monthly profit during good months (+)			0.082*** (0.017)
Owner has other income source from family contributions/remittances (-)			-0.076*** (0.026)
Owner uses collateral for loans (-)			-0.007 (0.027)
Owner uses premises as collateral (-)			-0.033*** (0.011)
Monthly expenses for insurance (dummy for missing values) (+)	-0.002 (0.016)		
Monthly repair expenses (dummy for missing values) (+)	0.059*** (0.021)		0.037*** (0.013)
Monthly expenses for fertilizer and other farm inputs (dummy for missing values) (+)	0.028 (0.022)		
Monthly expenses for wages (dummy for missing values) (+)			0.047*** (0.015)
Average monthly profit (missing dummy) (-)			
<i>N</i>	306	101	205
<i>R</i> ²	0.533	0.779	0.782

Note: Standard errors clustered at the firm-owner level are included in parentheses. * $p < .10$, ** $p < .05$, *** $p < .01$. The left-most column contains the predictors selected using by the lasso. Column 1 includes the OLS estimates for the variables selected using lasso on the full sample of 306 firms. Column 2 and 3 include OLS estimates for the variables selected using lasso on the female-owned and male-owned firms respectively. Missing entries in each column mean the corresponding variable in the left-most column was not selected for the respective sample. The sign included in () at the end of each selected variable in the left-most column is the sign on the coefficient estimated using lasso. Recall that lasso selects covariates and estimates coefficients but does not provide the standard errors required for performing statistical inference. This table is a continuation of Table F.1.

F Differences between Male and Female Firm Owners

Table F.1: Differences between Male and Female Firm Owners

	(1) Mean for male firm-owners	(2) Mean for female firm-owners	(3) Difference in means
Owner's characteristics & Behavioral variables			
Owner's age	44.139	46.176	-2.038
Owner views business as growing	0.746	0.776	-0.031
Owner has plans to expand business by opening another branch or shop	0.678	0.553	0.125
Owner believes business can grow in future	0.792	0.894	-0.102**
Owner records interest payments	0.301	0.239	0.062
Owner records purchases of materials	0.878	0.851	0.027
Owner does not want to be part of any business association	0.331	0.280	0.051
Owner not part of business associations as sees them as unbeneficial	0.037	0.040	-0.003
Owner owned a car before starting business	0.190	0.318	-0.128
Owner gets around using bicycles and motorcycle taxis	0.220	0.059	0.161***
Owner currently employed by the government	0.185	0.313	-0.127
Owner lives in district Temeke	0.214	0.188	0.026
Owner lives in ward Bunju	0.064	0.059	0.005
Challenges Faced by the Owner			
Business problem faced by the owner: insufficient working capital	0.595	0.576	0.019
Submit audit records of company's performance to obtain a loan	0.092	0.071	0.022
Business problem faced by the owner: lack of working space	0.092	0.035	0.057*
Owner's past businesses closed due to lack of management skills	0.283	0.270	0.013
Owner has experienced a traffic accident	0.029	0.024	0.005
Get signature from the local government authority to obtain a loan	0.890	0.871	0.020
Time to get a loan is a challenge with the borrowing process	0.243	0.247	-0.004
All documentation is in English is a challenge with the borrowing process	0.069	0.047	0.022
Owner has experienced theft by a friend	0.028	0.000	0.028
Owner has experienced theft by a stranger	0.444	0.360	0.084
Challenge faced when started business: lack of mgmt skills	0.052	0.012	0.040
Owner faced low demand for products when first started business	0.220	0.165	0.055
Challenge faced when started business: insufficient capital	0.532	0.412	0.120*
Challenge faced when started business: insufficient market access	0.202	0.200	0.002
Financial variables			
Value of collateral (in million TZS)	85.950	111.835	-25.885*
Owner uses loan to refurbish house	0.145	0.141	0.003
Owner uses profits to expand business	0.653	0.647	0.006
Average household annual income (in million TZS)	20.129	34.616	-14.487**

* $p < .10$, ** $p < .05$, *** $p < .01$. Note: Column (1) includes the mean values for the variables in the left-most column for the male firm owners, while column (2) includes the means for females. In column (3), we test if the differences in means are statistically significant. Number of observations for males and females is 173 and 85, respectively.