Financial Access Constraints, Misallocation and Firm Performance in the Zimbabwean Informal Manufacturing Sector

Godfrey Kamutando

University of Cape Town

Introduction

- Factor and product market distortions prevent the optimal allocation of resources across firms (Hsieh and Klenow, 2009)
- One salient distortion that may cause allocative inefficiency is the existence of financial access constraints
- Financial access constraints have been shown to be quantitatively fundamental in affecting firm performance
  - 28% of firms in all countries identify access to finance as a major constraint to their business operations, higher amongst Sub-Saharan African firms (39%) compared to East Asia and the Pacific (14%) and 56% in Zimbabwe (World Bank, 2016)

Introduction

- Two mechanisms through which financial constraints affect firm performance and aggregate TFP
  - Direct effect
  - ‘Reallocation’ effect (allocative efficiency)
- Unequal access to finance has an ambiguous effect on aggregate TFP via its impact on allocative efficiency
  - Preferential access to finance to certain firms may dampen aggregate TFP if these firms are relatively inefficient
  - Better access to finance by more productive firms enhances allocative efficiency
- The ‘reallocation’ effect of financial constraints is important for policy
- A policy that promotes easy access to finance by less efficient firms may exacerbate aggregate TFP losses through an increase in allocative inefficiency

Research Questions

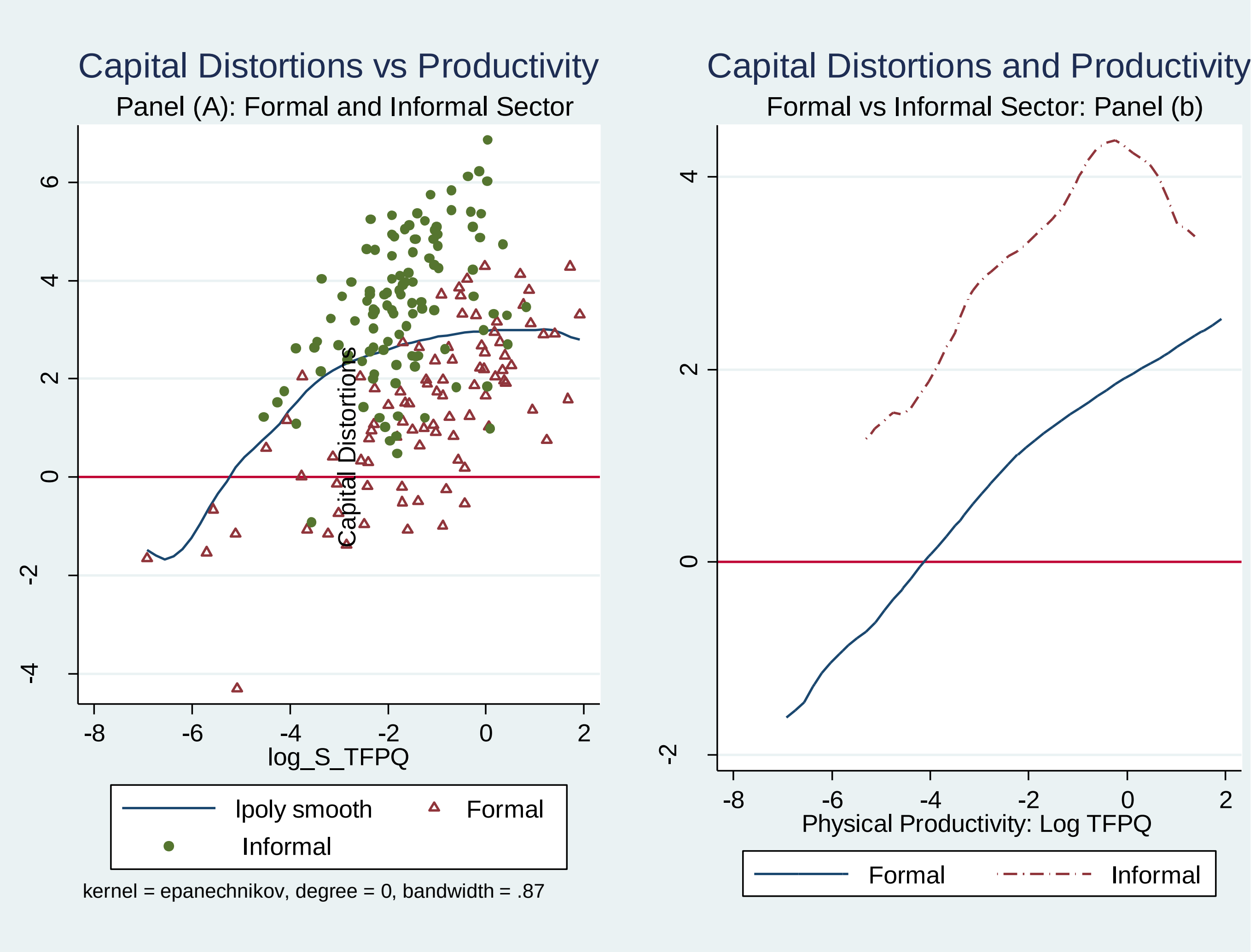
- This study seeks to investigate the extent to which financial access constraints contributes to misallocation and hinder firm performance in the informal manufacturing sector in Zimbabwe

- Key questions;
  1. How important are financial constraints as a source of misallocation?
  2. What is the link between financial constraints and informal manufacturing firm performance in Zimbabwe?

Zimbabwean context

- Faced over a decade of weak or declining growth, declining formal manufacturing sector and a rise in informality
- Large informal sector economy

  The share of informal employment to total employment rising from 84.2% in 2011 to 94.5 % in 2014 (LEDRIZ, 2016)
- Financial access constraints are one of the biggest challenges affecting firms and the effects are exceptionally large in the informal sector
- Widespread evidence of misallocation
- The informal sector provides a good basis to test the theoretical channels through which financial access constraints affect aggregate TFP and firm performance



Empirical Model

- Question 1: Financial constraints as a source of misallocation

$$\boldsymbol{lnD_{ist} = \beta_0 + \beta_1 FA_{ist} + \beta_2 TFP_{ist} + \beta_3 FA_{ist} \times TFP_{ist} + X_{ist}{}'\gamma + \varepsilon_{ist}} \qquad (1)$$

where lnD_{ist} represents the log of measures of misallocation, FA is the measure of financial access constraint , TFP_{ist} is a measure of firm productivity relative to industry and X_{ist} is a vector of firm characteristics

- Question 2: Financial constraints and firm performance

$$\boldsymbol{\Delta Y_{ist} = \alpha_0 + \alpha_1 TFP_{ist-1} + \alpha_2 FA_{ist-1} + \alpha_3 TFP_{ist-1} \times FA_{ist-1} + X_{ist-1}{}'\rho + \upsilon_{ist}} \quad (2)$$

where ΔY_{ist} is the measure of firm performance (average employment growth or firm investment), TFP is initial firm level (log) productivity relative to industry, FA is a measure of initial financial access constrain and X is the measure of firm characteristics

Data

- Dataset of Zimbabwean manufacturing firms that we collected under the "Matched Employee-Employer Panel Data for Labour Market Analysis in Zimbabwe" project over a period of 2015 to 2018.

Years	2015	2016	2017	2018
Waves of 2015	**130**	**99**	**-**	**105**
Waves of 2017	**-**	**-**	**74**	**68**

- Collected from three key manufacturing industries: Metal, Textile and Wood
- Variables include information on different measures of financial access constraints, production and sales, employment, capital and investment among other key variables

Prevalence of financial access constraints

year	2015	2017	2018
Objective Measures			
Fin_Access1: Credit rationed/Discouraged	**0.66**	**0.88**	**0.88**
Subjective Measures			
Fin_Access3: One of three major constraints affecting business growth	**0.79**	**0.86**	**0.84**

Financial constraints and firm characteristics

	Financial Access Constraints	
	No	**Yes**
Key Depended Variables		
Investment (=1 if firm bought equipment)	**0.51**	**0.33**
employment growth	**0.06**	**0.06**
Other Key Firm Characteristics		
TFP (log)	**6.67**	**7.01**
Value Added per Worker (log)	**7.77**	**7.86**
Capital/L (log)	**5.55**	**5.34**
Firm age	**9.93**	**9.83**
Profit Margin	**0.28**	**0.21**

Financial constraints as a source of misallocation

VARIABLES	(1) TFPR	(2) MRPK	(3) Capital Market Distortions
Fin Constraint	0.435***	0.254**	0.024***
	(0.097)	(0.126)	(0.004)
TFP	0.465***	0.478***	0.008***
	(0.065)	(0.080)	(0.003)
Fin Constraint × TFP	0.056	0.249**	-0.006
	(0.077)	(0.105)	(0.004)
Constant	1.256***	1.347***	2.710***
	(0.057)	(0.010)	(0.084)
Observations	433	433	433
R-squared	0.441	0.392	0.499
Location control	Yes	Yes	Yes
Industry control	Yes	Yes	Yes

Financial Constraints and Firm Investment

	Marginal effects		
VARIABLES	(1) Fin_Acess	(2) Initial TFP	(3) Fin_Acess × Initial TFP
Fin Constraint	-0.193***	-0.205***	-0.171***
	(0.055)	(0.055)	(0.065)
TFP_lag		-0.033**	-0.058*
		(0.015)	(0.031)
Fin Constraint × TFP_lag			0.033
			(0.035)
Observations	434	421	421
Location control	Yes	Yes	Yes
Industry control	Yes	Yes	Yes

Financial Constraints and Employment Growth

VARIABLES	(1) Fin_Acess	(2) Initial TFP	(3) Fin_Acess × Initial TFP
Fin Constraint	-0.021	-0.036	-0.004
	(0.053)	(0.054)	(0.055)
Initial_TFP		-0.003	-0.028
		(0.019)	(0.022)
Fin Constraint × Initial_TFP			-0.033
			(0.031)
Constant	0.190	0.221**	0.217**
	(0.099)	(0.094)	(0.093)
Observations	428	415	415
R-squared	0.049	0.076	0.079
Location control	Yes	Yes	Yes
Industry control	Yes	Yes	Yes

Conclusion

- Very high proportion of firms are financially constrained in the informal manufacturing sector
- The empirical results show a positive and statistically significant correlation between financial access constraints and misallocation
- Misallocation high for more productive firms
- Negative and significant relationship between financial constraints and investment but non significant on employment model
- Strategic improvement to access to finance needed

Thank you for your attention!