

SMEs of Pakistan:
What have we learned from the missed
opportunities?

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Outline

- Motivation
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Motivation

- Importance of SMEs in Pakistan
- Link between access to finance and SMEs
- Limited prior empirical research
- Data constraint

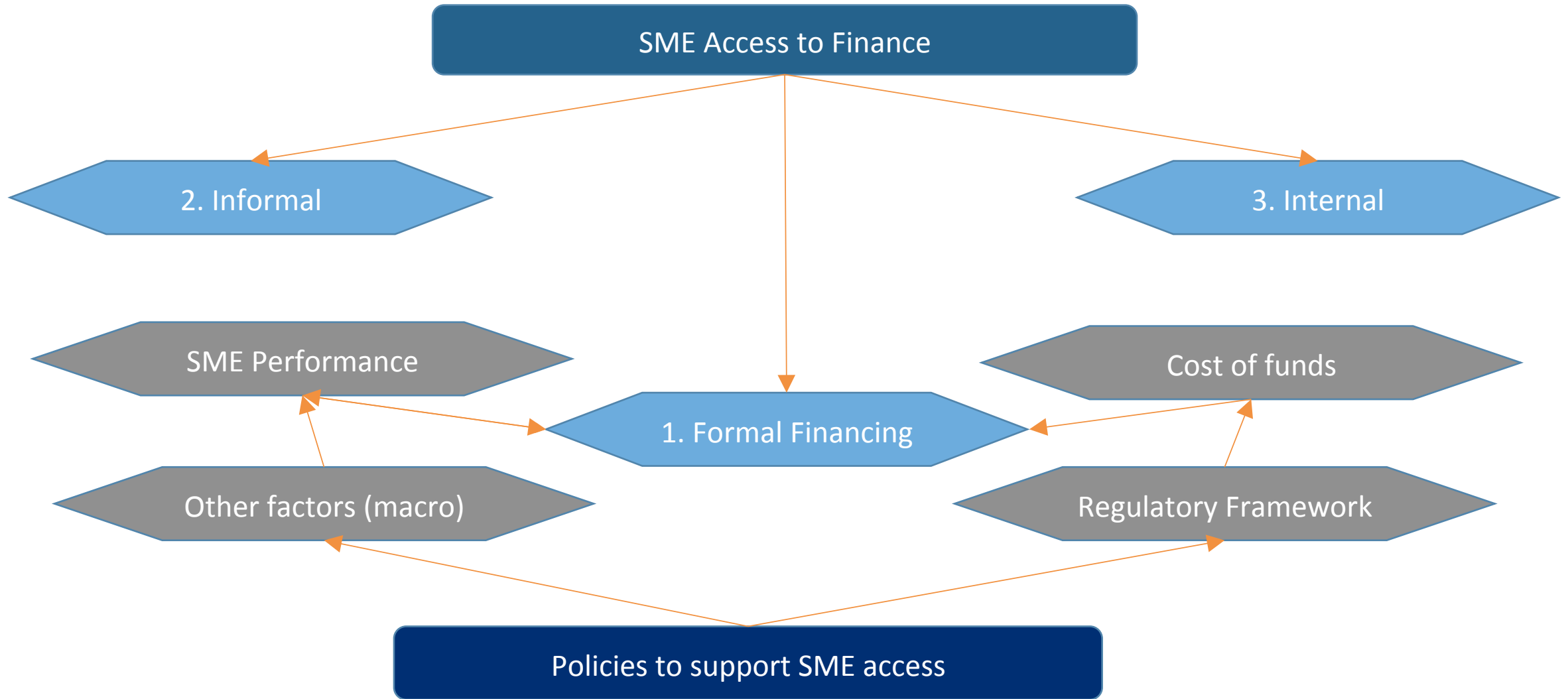
Objectives

- To fill the gap in existing literature
- To develop a better understanding of access to financing of SMEs
- To subsequently compare the Pakistani SMEs with SMEs of other regional countries
- To provide stakeholders with actionable information

Theoretical Foundations

1. Credit rationing theory/ behavior of financial institution (Stiglitz and Weiss (1981)/ Churchill and Frankiewicz (2006)
2. Ownership restructuring/ optimal capital structuring Correia et al. (2008)
3. Financing gap due to market failure/ imperfect market Park et al.(2008)
4. Asymmetric information and Agency problems faced by SMEs Deakins et al. (2008)
5. Adverse selection and moral hazards (Akerlof, 1970).
6. Risk management (Saunders, 2006)

Theoretical Foundations



The Data

- World Bank Enterprise Surveys
- Data from Pakistan (2013), Bangladesh (2013), and India (2014) utilized for empirical estimation
- Coverage: small, medium and large enterprises
- Universe consists of firms belonging to manufacturing, services, and transportation and communication sectors
- Responses to core questionnaire used, to facilitate cross-country comparison

Data summary – Pakistan (2013)

Variable	Obs	Mean	Std. Dev.	Min	Max
la2f_p13	1099	0.165	0.371	0	1
firmsize	1125	1.827	0.769	1	3
firmage	1125	23.499	13.824	2	78
legalform	1118	3.203	0.644	1	5
bankacc	1075	0.700	0.459	0	1
f_ceo	1121	0.057	0.232	0	1
qual_cert	1064	0.345	0.476	0	1

Data summary – Bangladesh (2013)

Variable	Obs	Mean	Std. Dev.	Min	Max
la2f_b13	1433	0.249	0.433	0	1
firmsize	1437	1.955	0.800	1	3
firmage	1437	20.978	13.693	1	124
legalform	1436	3.039	0.702	1	5
bankacc	1434	0.889	0.314	0	1
f_ceo	1437	0.058	0.233	0	1
qual_cert	1422	0.218	0.413	0	1

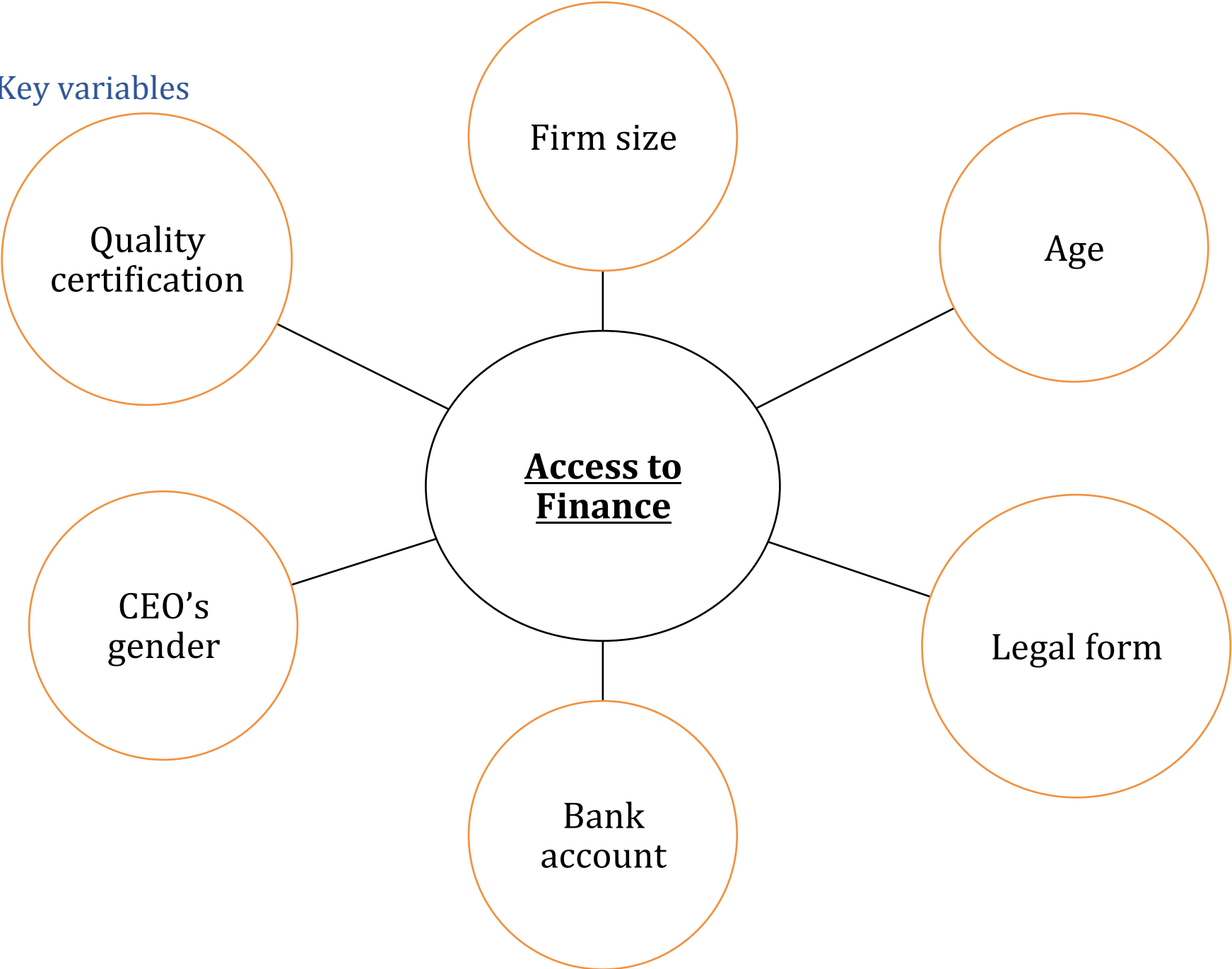
Data summary – India (2014)

Variable	Obs	Mean	Std. Dev.	Min	Max
la2f_i14	9223	0.1372	0.3440	0	1
firmsize	9260	1.9408	0.7424	1	3
firmage	9260	19.2738	14.2606	0	150
legalform	8983	3.4766	0.9809	1	5
bankacc	9243	0.9573	0.2023	0	1
f_ceo	9240	0.0782	0.2686	0	1
qual_cert	9157	0.4488	0.4974	0	1

Method

- Probit
- Step 1: Estimating the coefficients
- Step 2: Marginal effects
- Linear probability model (LPM) is ill-suited in this context

Figure 1: Key variables



Method

- $Limited\ A2F_i = \gamma_{\downarrow 0} + \gamma_{\downarrow 1} firmsize_{\downarrow i} + \gamma_{\downarrow 2} firmage_{\downarrow i} + \gamma_{\downarrow 3} legalform_{\downarrow i} + \gamma_{\downarrow 4} bankaccl_{\downarrow i} + \gamma_{\downarrow 5} f_ceo_{\downarrow i} + \gamma_{\downarrow 6} qual_cert_{\downarrow i} + \epsilon$

where

- $Limited\ A2F_i$ is a dummy which gauges whether the firm has limited access to finance. Question: How much of an obstacle is access to finance? Firm was deemed to have limited access if the response was ‘major obstacle’ or ‘very severe obstacle’
- $firmsize$ is a dummy variable representing size of the firm. It has three categories – small (less than 20 employees), medium (20 – 99 employees), or large (100 or more employees). ‘Large’ is taken as the base category.

Method

- *firmage* is a continuous variable capturing the age of the firm. Age is computed as the difference between the year in which the WBES was administered and the year in which the establishment began operations
- *legalform* is a dummy variable representing the legal status of the firm. Five main categories: public limited company, private limited company, sole proprietorship, partnership (base category), and limited partnership
- *bankacc* is a dummy variable to determine whether the firm has a checking and/or saving account.

Method

- *f_ceo* is a dummy variable capturing responses to the question: Is the top manager female?
- *qual_cert* is a dummy variable which establishes whether the firm has an internationally-recognized quality certification or not.

Findings

	(1)	(2)	(3)	(4)	(5)	(6)
	pk_13	mfx_pk13	bd_13	mfx_bd13	in_14	mfx_in14
Limited A2F						
small	0.38996*	0.08377*	0.28271*	0.08747*	0.21488***	0.04656***
	(0.019)	(0.012)	(0.013)	(0.012)	(0.000)	(0.000)
medium	0.33025*	0.06867*	0.13432	0.03948	0.10872*	0.02219*
	(0.033)	(0.022)	(0.202)	(0.197)	(0.020)	(0.017)
Age of firm	-0.00843*	-0.00198*	0.00151	0.00047	0.00066	0.00014
	(0.026)	(0.026)	(0.580)	(0.580)	(0.585)	(0.585)
plc	-0.16974	-0.02818	0.15476	0.04557	-0.49785**	-0.09239***
	(0.741)	(0.716)	(0.547)	(0.565)	(0.001)	(0.000)
pvt ltd	-0.01430	-0.00261	0.01692	0.00472	-0.30048***	-0.06239***
	(0.972)	(0.972)	(0.903)	(0.903)	(0.000)	(0.000)
sole prp	0.28824*	0.06259*	0.23932*	0.07261*	-0.11405**	-0.02618*
	(0.042)	(0.024)	(0.014)	(0.011)	(0.009)	(0.010)
lim part	0.17434	0.03557	0.68498	0.23411	-0.06006	-0.01417
	(0.535)	(0.559)	(0.244)	(0.301)	(0.260)	(0.259)

Findings

	(1)	(2)	(3)	(4)	(5)	(6)
	pk_13	mfx_pk13	bd_13	mfx_bd13	in_14	mfx_in14
Limited A2F						
Bank a/c=1	0.19996	0.04508	0.09354	0.02817	0.21318*	0.04181**
	(0.075)	(0.063)	(0.432)	(0.420)	(0.017)	(0.007)
Fem. CEO=1	0.19882	0.05062	-0.33107	-0.09190*	0.05280	0.01182
	(0.355)	(0.390)	(0.077)	(0.044)	(0.406)	(0.417)
Qual cert=1	0.02992	0.00706	-0.23463*	-0.06941*	-0.09077*	-0.01973*
	(0.806)	(0.807)	(0.025)	(0.019)	(0.014)	(0.013)
Observations	998	998	1414	1414	8815	8815
Pseudo R-squared	0.030		0.029		0.011	
Chi-squared	25.90823		45.85651		77.47338	
Log LL-hd	-423.040		-772.762		-3507.155	
CC proport.	84.16834		74.96464		86.14861	

Implications

- Bangladesh appears to have policies that may have successfully reduced the financing constraints for medium-sized SMEs. Merits more detailed review
- Sole proprietors in Pakistan appear to be at a significantly greater disadvantage compared to other setups. Future research could address whether this is due to perceptual bias/higher perceived credit risk of lenders, or because sole proprietors are limited by skill-sets/time/networks
- Internationally-recognized certification appears to confer a significant advantage to firms in Bangladesh and India in terms of obtaining financing. Linked to better quality control and brand-building

Limitations and Scope

- Analysis pertains to cross-sectional data collected in 2013 and 2014.
- Gives static picture.
- Some variables which, in theory, have an impact on access to finance could not be tested here due to lack of data.
- Panel data - of firms which evolve from being small firms to medium sized ones, and finally grow into large firms – would give much richer insights.

Thank you.