

Market Competition, Management Practices, and Performances of Small and Medium-sized Enterprises in Burkina Faso

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This project highlights how improving managerial practices may foster the development of the private sector and how the economic environment may create incentives for better management among small and medium-sized enterprises in low-income countries. From our empirical results, liberalisation is expected to create a virtuous circle of higher competition, better management, and higher performance, contributing to overall economic growth and employment.

Introduction

Small and medium-sized enterprises (SMEs) are recognised as an underpinning force driving industrial development and structural transformation of all economies, and an important contributor to private-sector employment and growth. But knowledge of how policymakers in developing countries may tap into the potential of SMEs is limited by a lack of research and data, particularly in sub-Saharan Africa. We fill these gaps by providing evidence on how improved management practices may boost productivity of firms and how the economic environment may create incentives for improving management quality. We also validate recent studies (Bloom et al., 2010; Bloom et al., 2013), which used a similar approach to quantitatively measure management quality, with firm surveys in Burkina Faso.

Methodology

Building on the Management and Organizational Practices Survey (Buffington et al., 2017), we used 16 questions to assess management-based monitoring activities, target setting, and incentive schemes. Regarding monitoring, we focused on how firms collect data to monitor and improve their production process. On target setting, we assessed the accuracy, realism, and transparency of targets set by firms. Finally, we evaluated the incentive schemes in place for employees. The incentives describe the practices of bonuses, promotion, reassignment, and dismissal in the firms. Practices were normalised to be on a scale of 0 (worst practices) to 1 (best practices) and the results were aggregated into a single measure of management practices.

We also collected information on firm characteristics, performances, and other operations. This allowed us to derive a measurement of competitive pressure at the firm level. The survey was conducted in 2018 in the two main cities of Burkina Faso, Ouagadougou and Bobo-Dioulasso. These cities host the headquarters of more than 85% of private firms (INSD, 2010). To ensure representativeness, we stratify across location and sectors.

The total sample, after cleaning, comprises 476 SMEs from Ouagadougou and 175 from Bobo-Dioulasso. Table 1 displays the economic activities across the sample of SMEs in the two cities of the study area.

Table 1: Distribution of the sample by sector and by location

Sector of activities	Bobo Dioulasso	Ouagadougou	Total
Manufacturing	19	62	81
Services	56	123	179
Building and Civil Engineering	25	84	109
Commerce and Others	75	207	282
Total	175	476	651

Table 2 provides descriptive statistics for each sector. The statistics show that the average age of the SMEs is about seven years with manufacturing and commerce being the oldest on average. The average number of employees is 9.88. However, manufacturing and building and civil engineering are the sectors with the highest potential for employment with 19 and 12 employees on average respectively. The level of capital also varies across sectors. Capital is more concentrated in building and civil engineering. Enterprises in this sector also have more access to credit than those in other sectors. This confirms the common belief that larger enterprises have better access to credit than smaller enterprises that usually face credit constraints to expand their business (Quartey et al., 2017).

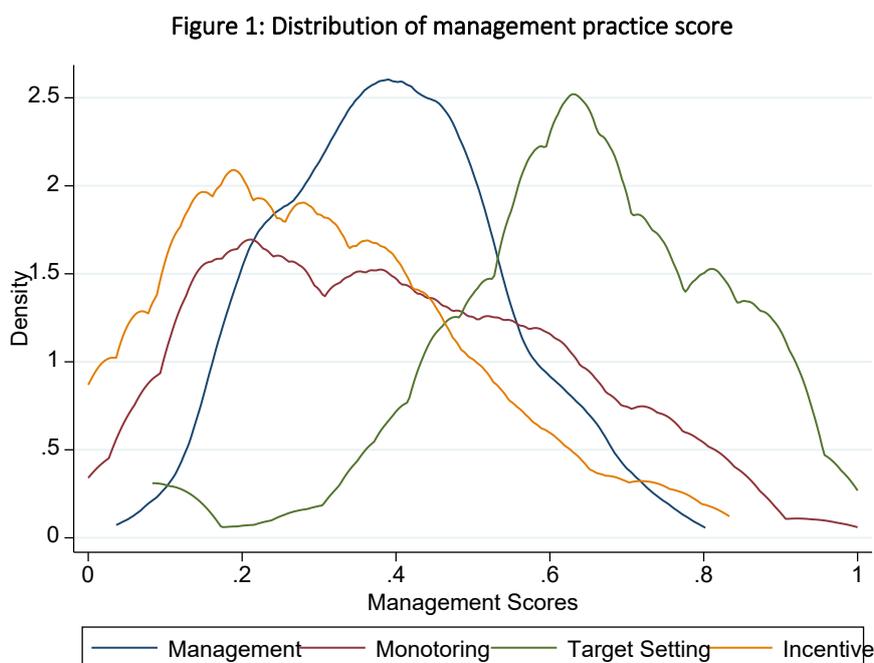
Table 2: Average value of variables by sector

Variables	Manufacturing	Services	B&CE	Commerce	Total
Management practice score	0.374 (0.121)	0.395 (0.153)	0.373 (0.146)	0.403 (0.140)	0.392 (0.143)
Number of managers	3.721 (2.436)	2.741 (2.459)	3.067 (2.016)	2.448 (2.955)	2.801 (2.641)
Number of full-time employees	19.47 (30.13)	6.360 (7.555)	12.86 (15.27)	7.946 (13.86)	9.886 (16.53)
Capital (in millions of FCFA)	91.05 (241.1)	19.30 (51.33)	101.9 (351.4)	44.39 (156.8)	53.77 (202.2)
Sale value (in millions of FCFA)	532.2 (1408.5)	116.4 (319.0)	256.8 (409.3)	273.0 (1622.0)	262.2 (1203.3)
Wage (in millions of FCFA)	19.84 (42.42)	16.60 (39.41)	24.77 (47.13)	21.10 (120.4)	20.36 (84.90)
Credit received (in millions of FCFA)	58.01 (190.1)	44.71 (186.7)	79.71 (361.4)	65.18 (253.1)	61.27 (252.7)
Credit dummy (1=yes)	0.338 (0.477)	0.489 (0.502)	0.478 (0.502)	0.489 (0.501)	0.467 (0.499)
Number of competitors	51.24 (43.36)	65 (40.59)	71.81 (37.19)	67.17 (44.39)	65.30 (42.37)
Age of the enterprise	6.956 (8.023)	5.561 (6.196)	5.756 (5.602)	7.348 (8.427)	6.541 (7.408)

Note: Standard deviation in parentheses.

Main Findings

Comparing our measures of management practices, we find that our incentive measure has the lowest score while target setting has the highest (Figure 1). This suggests that firms are averse to adopting management practices that are costly, such as incentive schemes that involve bonuses and promotion, and monitoring activities that necessitate additional human and financial resources.



We find no significant difference in terms of management practices between SMEs in Ouagadougou and Bobo-Dioulasso (Figure 2). In addition, SMEs across the sectors appear to have similar levels of management quality on average (Figure 3).

Our measurement of the average management score in Burkina Faso is lower than those reported in previous studies for other countries. We find an average score of 0.39 (Table 2) in Burkina Faso while Lemos et al. (2016), following a similar estimation method, found an average management score of 0.64 in the US and 0.44 in Pakistan.

In order to evaluate the impact of management on performance (as measured by sales, profits and value added), we estimate a Cobb-Douglas production model with a fixed-effects estimator. The results indicate a positive and significant effect of management on the performances of SMEs. This suggests that enterprises that set targets at the beginning of each year and develop tools to frequently evaluate the evolution of the indicators are more likely to experience higher productivity and profitability. The combination of managerial efforts has the potential therefore to strengthen the growth of SMEs in Burkina Faso and to increase their contribution to overall economic growth. These findings corroborate the results of the majority of recent empirical studies on management practices (Bloom et al., 2013; Nemlioglu and Mallick, 2017).

To assess the role played by the market structure in the choice of managerial efforts by SMEs in this context, we use the fixed-effects estimation approach with panel data to assess the effect of competitive pressure in the environment surrounding the firm on management scores. We found all measurements of competition to be associated with better management practices. The positive effect of competition is observed across different management sub-indicators with the highest effect on monitoring activities. These results are consistent with the empirical literature (Bloom et al., 2015).

Figure 2: Distribution of management practice score by city

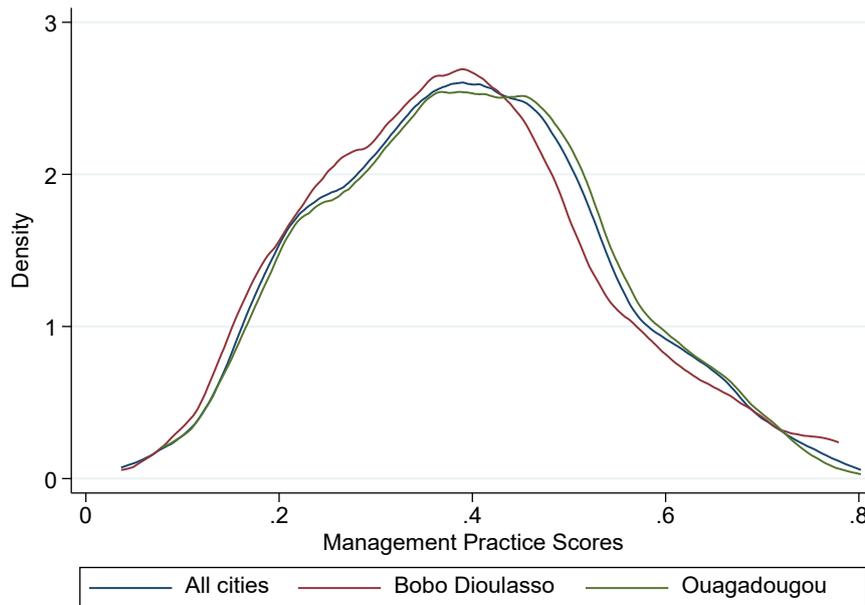
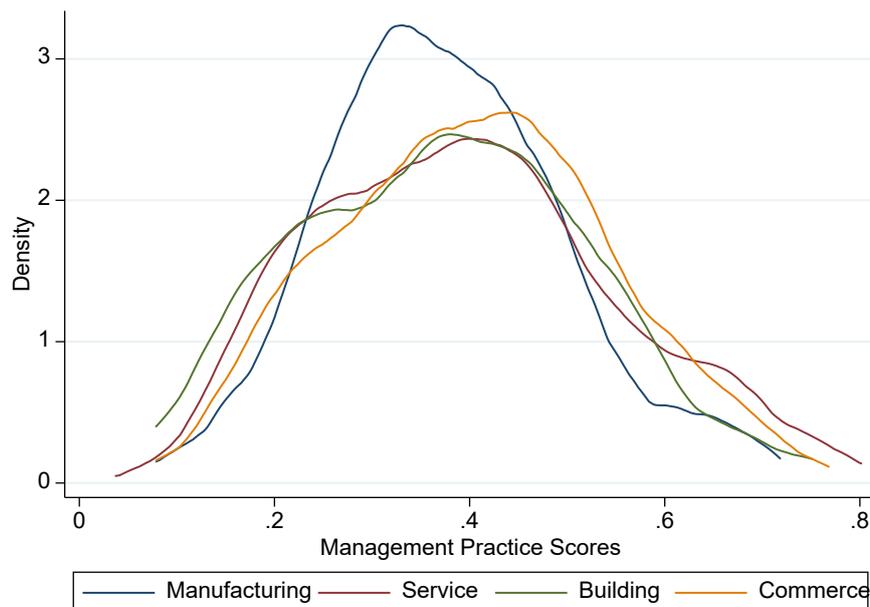


Figure 3: Distribution of management practice score by sector



Policy Implications

The various initiatives supporting enterprises (including start-ups) should go beyond financial grants and support entrepreneurs to improve managerial skills. This has the benefit of raising the performance of enterprises and, therefore, their contribution to reducing unemployment. This may be expressed through the development of realistic indicators, design of adequate strategies to monitor indicators, and identification of adequate incentive schemes. Public institutions that support the promotion and the creation of small and medium-sized enterprises should provide adequate training on these aspects of management to the SMEs. Finally, market liberalisation should be considered as a strategy to attract the entry of more enterprises into under-competitive sectors in order to promote greater competition and thus higher-quality management of firms.

Moving Forward

These results focus on the effect of management on productivity and profitability and the extent to which market competition impacts the quality of firms' management. Next, we aim to use this dataset to examine the relationship between innovation and management. Further, with the outbreak of the COVID-19 pandemic, we are investigating an opportunity to undertake a complementary survey to understand how management practices may affect the coping strategies and resilience of enterprises to aggregate shocks.

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