

Abstract

This thesis analyses investment behaviour in African manufacturing, using firm-level panel data from the first part of the 1990:s. Four main topics closely linked to investment are investigated empirically, namely irreversibility and adjustment costs; financial factors; human capital; and risk.

Chapter 1 discusses the theoretical and empirical background. The last decade has witnessed substantial changes in the way economists analyse firm-level investment, and in this chapter the microeconomic investment literature is reviewed with a focus on these new developments. The perspective in the first part of the chapter is theoretical, where it is discussed how investment behaviour will depend crucially on the structure of adjustment costs. Empirical approaches and results are reviewed in the second part of the chapter. The chapter ends by discussing methodological issues relevant to the subsequent analysis.

Chapter 2 examines patterns of investment in Cameroon, Ghana, Kenya, Zambia and Zimbabwe during 1991-95, assessing the consistency of those patterns with different adjustment cost structures. While the descriptive statistics and findings are supportive of models of fixed costs and irreversibilities, our best-specified transition data model tends to support quadratic costs or irreversibilities. Some explanations for the mixed results are proposed.

Chapter 3 is based on data from Kenya, focusing on the link between financial factors and investment. The data show that investment activity has been low during the sample period, and that firms have funded investments mainly by internally generated funds. Regression results indicate that investment is quite insensitive to variation in liquidity: a decrease in the ratio of variable costs to the value of output by one percentage point is associated with an increase in investment by around 0.6%. Although this suggests that credit constraints matter for investment, the quantitative effect is not large.

Chapter 4 is based on data from Kenya, and explores how investment is connected to the availability of human capital. Econometric results indicate that the education and experience (years of tenure) of the employees are important factors driving investment: given that a firm invests, an increase in the average level of workers' education by one year would spur investment by approximately 14%, whereas one additional average year of tenure would be associated with an increase by 7%. From a policy perspective this implies that improving the educational system might prove to be quite rewarding, because of the increased incentive for accumulation of physical capital by firms.

Chapter 5 uses data from Ghana to investigate the extent to which risk averse managers facing high uncertainty attempt to smooth profits at the expense of lower average profits, as predicted by a mean-variance model. To this end, experimental data designed to measure managers' risk attitudes are used. Joint estimation of profit and profit variance functions support model predictions. Firms with more risk averse managers facing high risks have lower profit rate variability and lower mean profit rates. These mean and variance differences are economically important and statistically significant.

Keywords: investment, firm-level panel data, adjustment costs, irreversibility, finance, human capital, risk.

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