

# **Essays on Industrial Development and Political Economy of Africa**

**av**

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**AKADEMISK AVHANDLING**

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### **Paper 1: Returns to Capital and Informality**

We study the pattern of returns to capital in the formal and informal manufacturing sectors in Ethiopia. We use a rich panel dataset of manufacturing firms in the formal sector for the period 1996-2006 and two rounds of repeated cross-sectional data of the urban informal sector firms. Both parametric and semi-parametric regression techniques are used to study the magnitude and pattern of returns to capital. Our results show that the median return to capital in the formal sector is 15-21%, while in the informal sector it is 52-140%. Higher returns in the informal sector potentially explain growing informality in Ethiopia. Investment in the informal sector is, however, limited since returns to capital decline as owner's share of time spent in the enterprise decreases. This restricts both formal and informal firms from establishing new informal firms in order to take advantage of the higher returns in the sector. Unlike the prediction of the poverty trap hypothesis, we find that returns to capital decrease with capital stock, creating an opportunity for small firms to grow by re-investing their profit. Making firm locations closer to customers affordable, creating equitable linkages with the formal sector and providing assistance on marketing skills are therefore policy recommendations that can encourage growth and eventual graduation of informal sector firms.

### **Paper 2: The Performance of New Firms: Evidence from Ethiopia's Manufacturing Sector**

We investigate the relative importance of technological and demand constraints for firm performance using a panel dataset of Ethiopian manufacturing sector (1996-2006). Previous empirical research on firm performance use revenue based productivity which confounds true efficiency with price effects. Using information on price and physical quantity of firms' products, we decompose revenue based productivity into physical productivity, price and idiosyncratic demand shocks. Comparison of various components of productivity across firms, using product and firm fixed effect estimation, reveals that entrants have lower demand and output prices than established firms. However, we do not find a robust difference in productivity between entrants and established firms. Thus, young and small firms are found to be most vulnerable to demand constraints. Analysis of firm survival using probit regression reveals that firms' market access is a more important determinant of survival than productivity. Securing access to markets and providing assistance on marketing skills during most vulnerable stage of firm entry are intervention areas so that efficient firms with long term growth prospect are not driven out of business.

### **Paper 3: The Effects of Agglomeration and Competition on Prices and Productivity: Evidence for Ethiopia's Manufacturing Sector**

We use census panel data on Ethiopian manufacturing firms to analyze the effects of enterprise clustering on two key determinants of firm performance: physical productivity and output prices. We show that distinguishing between productivity and prices is important for understanding the effects of agglomeration and competition. We find a negative and statistically significant effect of agglomeration of firms on prices, suggesting that new entry leads to higher competitive pressure in the local economy. We also find a positive and statistically significant effect of agglomeration on physical productivity, consistent with the notion that clustering leads to positive externalities. The net effect of enterprise clustering on revenue-based measures of performance is small and not significantly different from zero. Our results thus highlight the importance of separating price from productivity effects in this type of analysis. Cluster formation through creating industrial zones; and enhancing networking, technological learning as well as firm competition are key policy recommendations to boost enterprise productivity and cluster-based industrial development.

### **Paper 4: Ethnic Cleansing or Resource Struggle in Darfur? An Empirical Analysis**

The conflict in Darfur has been described both as an ethnic cleansing campaign, carried out by the Sudanese government and its allied militias, and as a local struggle over dwindling natural resources between African farmers and Arab herders. In this paper, we use a previously unexploited data set to analyze the determinants of Janjaweed attacks on 530 civilian villages in Southwestern Darfur during the campaign that started in 2003. Our results clearly indicate that attacks have been targeted at villages dominated by the major rebel tribes, resulting in a massive displacement of those populations. Resource variables, capturing access to water and land quality, also appear to have played an important role. These patterns suggest that attacks in the area were motivated by both ethnic cleansing and resource capture, although the ethnic variables consistently have a larger impact.

**Key words:** Agglomeration economies, African manufacturing, Credit constraints, Darfur, Ethiopia, Ethnic cleansing, Growth, Informal sector, New firms, Poverty trap, Prices, Productivity, Resource struggle, Returns to capital, Survival, Skills.

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