

# Incentives and Firms' Productivity: Exploring Multidimensional Fiscal Incentives in a Developing Country

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## Aim of the study

The aim of the study is to investigate the impact of fiscal incentives on manufacturing firms productivity in Cameroon.

Three categories of fiscal incentives are considered:

- . Import duty exemption,
- . Profit tax exemption, and
- . Export financing.

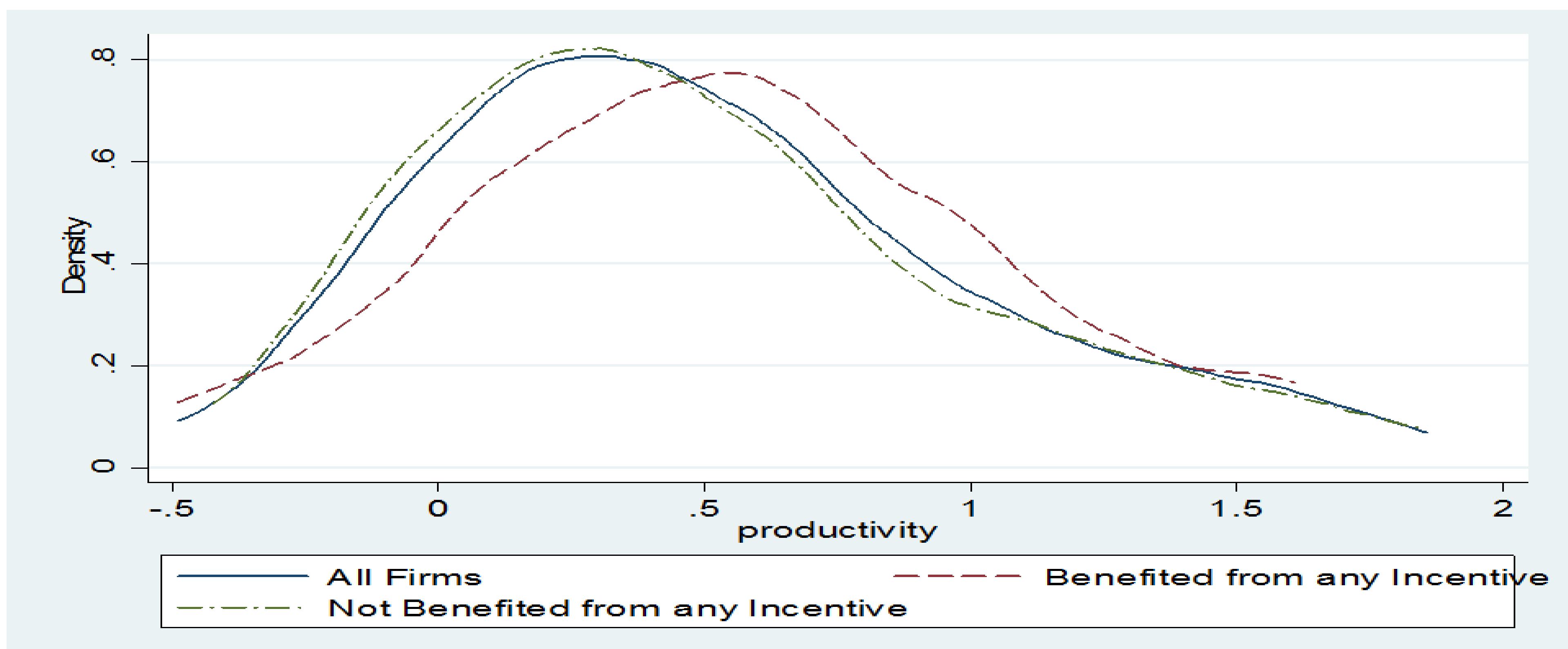
## Data

Data used are from the World Bank's Enterprise Surveys for the year 2009. The sample covers 300 manufacturing firms.

## Methods

- . Productivity is measured as the ratio of firms' output (sales) to firms' input.
- . Kernel density estimates of the productivity across beneficiary and non beneficiary firms (benefiting from fiscal incentives considered as the treatment)
- . Probit model to estimate the determinants of benefiting from fiscal incentives
- . Propensity Score Matching (PSM) technique is applied to assess the impact of fiscal incentives on firms' productivity.

## Descriptive evidences: Kernel density plot (productivity and fiscal incentives)



## Propensity Scores of Treated & Untreated

Models		Propensity score			
		Min	Max	Mean	Sig
Import Duty Exemption	treated	0.023	0.275	0.084	0.999
	untreated	0.006	0.130	0.031	
Profit Tax Exemption	treated	0.146	0.601	0.299	0.994
	untreated	0.003	0.663	0.141	
Export Financing	treated	0.023	0.293	0.099	0.996
	untreated	0.001	0.328	0.036	

## Results: Average Treatment Effects for Productivity

Treatment	Bias Adjustment	Nearest Neighbour Matching		Kernel Matching		Radius Matching		Stratified Matching	
		ATT	Std. Err.	ATT	Std. Err.	ATT	Std. Err.	ATT	Std. Err.
Import Duty Exemption	No	0.243	0.216	0.108	0.182	0.017	0.206	0.007	0.206
	Yes	0.243	0.261	0.108	0.182	0.017	0.113	0.007	0.176
Profit Tax Exemption	No	0.465*	0.059	0.677*	0.056	0.837	0.647	0.273*	0.036
	Yes	0.271*	0.059	0.677*	0.056	0.330*	0.084	0.257*	0.036
Export Financing	No	1.054*	0.338	0.401*	0.148	0.638*	0.368	0.661*	0.210
	Yes	0.894*	0.338	0.401*	0.148	0.638*	0.410	0.661*	0.100

Note: The subscript \*, \*\* and \*\*\* imply significance levels at 1, 5 and 10 percent respectively. The variables used to determine this statistics are in their log-linear form. This suggest that any coefficient in the Table will be interpreted as percentage change.

## Conclusion

The paper thus provides support for the argument that the government's involvement in the firm should be targeted at rewarding outputs and not supporting processes, and thus provides an essential element of a strategy for industrialisation.