Diaspora Investments and Firm Export Performance in Selected Sub-Saharan African Countries

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Research questions

1. Are **diaspora firms** more likely to export than domestic (or foreign) firms?

2. If yes, which firm-level characteristics can explain this **difference?**

Motivation: Growing importance

- Diasporas can be defined as "groups of migrant origins residing and acting in host countries but maintaining strong sentimental and material links with their countries of origin - their homelands" (Sheffer, 1986).

- The number of African people residing abroad is rapidly growing, with conservative estimates at 30.6 million in 2010 (World Bank 2011). About 50% of the African diaspora is located on the African continent.

- The recent increase in African migration is also evidenced by remittance inflows to Africa, which have quadrupled between 1990 and 2010, reaching nearly $ 40 billion.

Motivation: Growing attention…

- **From African governments**: A few African countries have established government agencies to encourage diasporas to invest, assist local communities and/or provide policy advice (ex. Ethiopia, Ghana, Nigeria, and Uganda).

- **From international organizations**: e.g. the African Diaspora Program (World Bank), launched in September 2007.

Motivation: Pro-development effects…

- **First**, diasporas contribute to financial flows to their home countries through private money transfers, i.e. remittances (Ratha et al., 2011).

- **Second**, diasporas, as "facilitators", can increase bilateral trade and investment flows between host and origin countries (Combes et al., 2005; Javorcik et al. 2010; Leblang 2010).

- **Third**, diasporas may ease domestic firms' access to technologies and skills (Agrawal et al., 2006; Kerr, 2008).

- **Fourth, diasporas can act as entrepreneurs in their countries-of-origin.**

    Existing research concerning this topic is scant (particularly in sub-Saharan Africa), and the majority of current work is theoretical (Gillespie et al., 1999; Nielsen and Riddle, 2007; Nielsen and Riddle, 2010) or based on anecdotal evidence.

Contribution

This paper investigates whether diaspora firms differ from domestic and foreign firms in terms of export performance, and tries to shed light on some explanatory factors.

Its contribution to the literature is twofold:

- First, it looks at the impact of diaspora people as entrepreneurs in sub-Saharan African context.
- Second, it employs a firm level analysis, in line with the heterogeneous firms literature (Melitz, 2003; Melitz and Ottaviano, 2008).

Data & Model (1)

- We use firm-level data collected through the **UNIDO Africa Investor Survey 2010** across 19 sub-Saharan African countries:

  Burkina Faso, Burundi, Cameroon, Cape Verde, Ethiopia, Ghana, Kenya, Lesotho, Madagascar, Malawi, Mali, Mozambique, Niger, Nigeria, Rwanda, Senegal, Tanzania, Uganda and Zambia.

- The survey questionnaire was designed to collect information from business owners/senior managers on finance, investment, investor characteristics, perceptions, etc. In total, the survey includes data on about 6500 companies and the database comprises more than 700 (derived) variables.

Do diaspora firms perform better than domestic one's in terms of export propensity (and intensity)?

Methodology 1 – Non-parametric (stochastic dominance)

- We compare the **distributions** of firm export intensity corresponding to **diaspora** and **domestic firms** (Delgado *et al*. 2002):

  - *F(z)*: the export intensity distribution of diaspora firms

  - *G(z)*: the export intensity distribution of domestic firms

- Stochastic dominance of *F* relative to *G* is defined by the following condition: $F(z)-G(z) \leq 0$ uniformly in all $z \epsilon R$, with strict inequality for some z.

(i) Two sided test:

H_0 : $F(z)-G(z)=0$ all $z\epsilon R \rightarrow$ **rejected**

(ii) One-sided test:

H_0 : $F(z)-G(z) \leq 0$ all $z\epsilon R \rightarrow$ **not rejected**

Table 2 - Kolmogorov-Smirnov tests for first order stochastic dominance - export intensity

	Diaspora firms vs Domestic firms	
Year	Two sided	One sided
2009	0.1541	-0.0006
	(0.000)	(1.000)
2008	0.1398	0.0000
	(0.000)	(1.000)

	Diaspora firms vs Foreign firms	
Year	Two sided	One sided
2009	0.0657	-0.0657
	(0.236)	(0.118)
2008	0.0782	-0.0782
	(0.135)	(0.068)

Notes: Two sided is a test of the null that the two cumulative distribution functions are equal against the alternative that they differ. One sided is a test of the null that the cumulative distribution function of the second group lies below (or is equal to) the cumulative distribution function of the first group against the alternative that it lies above.

We **reject** the null in the **first test**.

We **fail to reject** the null in the **second test**.

Methodology 2 – Parametric approach

$y_i = \alpha + \beta\ \textbf{\textit{diaspora firm}}_i + \gamma\ \textbf{\textit{foreign firm}}_i + \delta\ X_i + \eta\ country_i + \lambda\ I_i + \varepsilon_i$

With

- y_i : export performance indicator for firm i (more specifically, exporter status, a binary variable taking the value of 1 if the firm exports and 0 otherwise; and export intensity, measured by the export to sales ratio).

- *diaspora firm*$_i$: dummy equal to 1 for diaspora firms and 0 else.

- *foreign firm*$_i$: dummy variable equal to 1 for foreign firms and 0 else.

- X_i is a vector of the control variables (employment; skills and gender composition; labour productivity; ownership structure; domestic inputs; product diversification).

- *country*$_i$ and I_i are dummy variables for countries and industries.

Export status (Probit)

	(1)	(2)	(3)	
	Coefficient	Coefficient	Coefficient	Marginal effects
Diaspora firm	0.3047**	0.2888**	0.3239***	0.1173***
	(0.1196)	(0.1208)	(0.1221)	(0.0466)
MNE	0.5209***	0.5081***	0.5483***	0.1916***
	(0.0587)	(0.0595)	(0.0635)	(0.0226)
Employment	0.0004***	0.0004***	0.0004***	0.0001***
	(0.0000)	(0.0000)	(0.0000)	(0.0000)
Labor productivity (ln)	0.1217***	0.1460***	0.1424***	0.0481***
	(0.0182)	(0.0189)	(0.0190)	(0.0064)
Domestic inputs	-0.1703***	-0.1749***	-0.1755***	-0.0580***
	(0.0613)	(0.0622)	(0.0624)	(0.0201)
Multi_product	0.0760	0.0910	0.0931	0.0311
	(0.0579)	(0.0588)	(0.0588)	(0.0195)
Blue-collar	0.5211***	0.4966***	0.5103***	0.1722***
	(0.1372)	(0.1388)	(0.1393)	(0.0470)
Female employment		1.0253***	1.0306***	0.3479***
		(0.1333)	(0.1335)	(0.0450)
Family business			-0.1115*	-0.0378*
			(0.0605)	(0.0206)
Industry Fixed Effects	Yes	Yes	Yes	
Country Fixed Effects	Yes	Yes	Yes	
Pseudo R^2	0.1987	0.2134	0.2143	
Observations	2916	2893	2893	

Export intensity (Tobit)

	(1)	(2)	(3)
Diaspora firm	0.0532**	0.0460**	0.0446*
	(0.0237)	(0.0232)	(0.0234)
MNE	0.1004***	0.0922***	0.0905***
	(0.0116)	(0.0114)	(0.0120)
Employment	0.0001***	0.0001***	0.0001***
	(0.0000)	(0.0000)	(0.0000)
Labor productivity (ln)	0.0007	0.0061*	0.0063*
	(0.0034)	(0.0034)	(0.0034)
Domestic inputs	-0.0224*	-0.0205*	-0.0205*
	(0.0116)	(0.0114)	(0.0114)
Multi_product	-0.0458***	-0.0438***	-0.0438***
	(0.0110)	(0.0108)	(0.0108)
Blue-collar	0.1436***	0.1419***	0.1413***
	(0.0259)	(0.0253)	(0.0254)
Female employment		0.2984***	0.2983***
		(0.0248)	(0.0248)
Family business			0.0047
			(0.0110)
Industry Fixed Effects	Yes	Yes	Yes
Country Fixed Effects	Yes	Yes	Yes
Pseudo R^2	0.4137	0.4894	0.4895
Observations	2911	2888	2888

Why diaspora firms have a better export performance?

Labor productivity

Table 7 - Kolmogorov-Smirnov tests for first order stochastic dominance - labor productivity

	Diaspora firms vs Domestic firms	
Year	Two sided	One sided
2009	0.1150	-0.0059
	(0.001)	(0.980)
2008	0.1157	-0.0198
	(0.002)	(0.818)

We **reject** the null in the **first test**.

We **fail to reject** the null in the **second test**.

Information advantage

Familiarity with international trade agreements	Diaspora firm	Domestic firm	MNE
EBA - Everything But Arms (EU)	38.0%	23.9%	30.2%
AGOA - African Growth and Opportunity Act (USA)	59.5%	52.0%	53.8%
BTAs - Bilateral trade agreements	23.8%	20.3%	17.0%

Familiarity with regional trade agreements	Diaspora firm	Domestic firm	MNE
COMESA	81.3%	59.6%	64.9%
EAC	69.1%	42.8%	53.2%
ECOWAS	57.6%	44.5%	51.2%
SADC	46.8%	40.0%	41.8%
UEMOA	21.0%	16.8%	18.7%
CEMAC	9.6%	9.9%	13.0%
ECCAS	9.8%	9.7%	11.0%

Concluding remarks

- Our results suggest that diaspora firms have i) a higher probability of exporting and ii) a higher share of exports in total sales than domestic firms.

- The presence of diaspora investors and entrepreneurs in the country-of-origin's economy can therefore contribute positively to the export performance of the domestic economy.

- These results provide support to the choice of several African government (e.g. Ethiopia, Ghana, Nigeria, and Uganda) and international organizations to devote a growing attention to diaspora communities and encourage their participation in origin countries' economic development.

THANK YOU

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