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**PRIVATE EQUITY
AND VENTURE CAPITAL**

**2000 TO 2019:
A TWENTY-YEAR REVIEW
OF PRIVATE EQUITY
IN AFRICA**

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Independent Study Paper

2000 to 2019: A Twenty-Year Review of Private Equity in Africa

An Independent Study completed by Femi Giwa, under the supervision of Professor Gordon Phillips, in partial fulfilment of academic credits at the Dartmouth Tuck School of Business

A B S T R A C T

Background: While the universe of private equity (PE) in emerging markets has been fairly studied, a comprehensive examination of the nature of the firms, deals executed, economic benefits, and the relationship between PE and other funding sources is limited. The objective of this paper is to elucidate a contemporary view of private equity firms and private capital formation on the continent.

Data sources: African Private Equity and Venture Capital Association (AVCA), PitchBook, Security Data Corporation, The World Bank, Thomson Reuters, and Zephyr.

Results: The proportion of PE firms investing in Africa yet with headquarter (HQ) locations outside the continent has been steadily increasing. During the review period, these firms represented 62% of all firms investing on the continent. PE, as a source of capital, appears substitutive and countercyclical to traditional sources of corporate finance.

Conclusions: Though particularly immature, the African PE landscape is fast becoming an opportunity for global PE firms to achieve portfolio diversification. PE firms seeking successful exits are better served through a multisector strategy that selects quality of business environment and disposable income over market size.

INTRODUCTION

The private equity (PE) industry has its humble beginnings buried in early 20th century investment offices of wealthy American families (Lerner, Ledbetter, Speen, Leamon, & Allen, 2016). Today, PE is the catchall for firms that fund development projects in high-growth ventures, supply growth capital to firms with proven business models, and or fund the buyout of firms or managements (de Beer & Nhleko, 2008). For the purposes of this paper, I defined PE as an investment asset class of shares in listed and or unlisted stocks for the funding of either growth or buyout opportunities.

This paper contributes, to the extant literature on PE in emerging markets, a continent-wide mapping of PE firms in Africa. I have manually collected a database of 467 PE firms executing 1,984 deals on the continent between January 1, 2000 and December 31, 2019. An understanding of the structural organization of the African PE market and how it has shifted in the past two decades may, in addition to other benefits, help to answer the question: is PE activity in Africa ephemeral and likely to never take root or is it a consequence of economic fundamentals organic to the continent? Or both?

Despite its promise, PE in Africa remains infantile when compared to PE in other markets, including the emerging geography. Doing business in Africa has been fraught with problems, namely business environment challenges, enterprise quality and quantity issues, weak capital market structures and related exit deficiencies, and dearth of talent (Babarinde, 2012). Similarly, the development of this paper has been largely limited by scarce data and relative inconsistency of available data.

MATERIALS and METHODS

2.1 Criteria for considering PE firms and deals for this study

The goal of this paper was to first map the universe of privately managed PE firms actively investing on the African continent since January 1, 2000. The analysis focused only on private players; while there are several government interventions in Africa, the possible political undertones of such investments require exclusion of such observations from this analysis.

I used the proprietary dataset of PitchBook, a Seattle-based SaaS company that supplies data, research, and technology to private capital markets, including PE companies. The resulting data was triangulated using publicly available information from websites of private equity firms and of portfolio companies. In addition, I accessed data from private market promotion institutions such as the African Private Equity and Venture Capital Association, AVCA, etc., and reports published by industry associations and consulting firms. Inconsistencies in triangulated data was resolved by frequency tallies and to the extent that a data point differed across sources, PitchBook data was used.

The search on PitchBook incorporated a few restrictions. I considered observations between January 1, 2000, and December 31, 2019. Similarly, I observed deals executed by these firms during the period. No restrictions by PE headquarters (HQ), fund size, region or sector focus, year of founding, investment tickets were applied. I maintained search diaries both in PitchBook and by hand to document keywords, databases, and search results. Firms not active in Africa were excluded. In addition, deals that were not executed in Africa during the defined period were excluded.

Prior to conclusion of the manuscript, I conducted a final (third) search in PitchBook to adjust for updates to the PitchBook database since the second (February 20, 2020) search was concluded. The final search returned no new hits.

2.2 Data extraction: PE firms; deals; changes to portfolio companies; and structural impact of portfolio companies; comparative sources of financing

Data collection was done by hand. The resulting Pitchbook data panels were screened line-by-line (firm-by-firm and deal-by-deal) for eligibility: Description notes, Financing Status Notes (both PitchBook data columns), and firm websites were thoroughly examined.

Data extraction of included PE firms and deals was completed in Excel. I extracted data on characteristics of the firms, including name of firm, year founded (as a proxy for age and experience of the firm), number of investments and exits during the period, active portfolio, preferred industry, preferred verticals, preferred geography, preferred investment amount, preferred company financial metrics, fundraising status, number of funds open, assets under management (AUM), primary investment type, company description, and contact details. For each portfolio company, I extracted name of the company, deal location, deal type, financing status note, deal size, primary industry sector, deal date, deal synopsis, and contact details. For each deal, I collected information about status (active or exited), country and sector of the target. Due to paucity of data, I was unable to collect data on outcomes of the investment in terms of returns to the private equity company (gross IRR and multiplier); similarly, I was unable to collect data on variations in workforce and sales of targets and changes in top management between entry and exit. The former would have enabled me to conduct a public market equivalent (PME) analysis while the latter would have enabled me to determine whether private equity leads to job creation, increased turnover, and changes in management practices.

The extracted data panels were scrutinized for incorrect and duplicate entries. For example, the second search returned 469 private equity firms; however, during manual screening two wrong firm entries were detected – Aureus Capital had been acquired by The Abraaj Group and The Abraaj Group itself had been absorbed by Actis in 2018. Debt transactions, non-Africa transactions, etc. and

identified duplicates were also deleted. Issues of missing data such as year of founding, country of origin etc. were resolved through online searches.

Finally, I analyzed the extent to which PE is a complement to or a substitute for other sources of capital on the continent. Specifically, I compared private equity to six different other sources of equity and debt capital including: initial public offerings (IPO) of equity; all equity issuances to public sources (Equity Issuances); bonds that are either publicly issued or publicly guaranteed (PPG Bonds); commercial bank debt from private banks and other private financial institutions that is public or publicly guaranteed (PPG Commercial Bank Debt); other private debt from manufacturers, exporters, and other suppliers of goods, and bank credits covered by a guarantee of an export credit agency (PPG Private Credit Debt); and private non-guaranteed bonds (PNG Private Non-Guaranteed Bonds). I extracted data on value of PE investments, IPO, proceeds of equity issues by country, by year, from PitchBook, Security Data Corporation, Thomson Reuters, and Zephyr database. Country-level data (annual flows) for the remaining three sources of capital as well GDP and population data were extracted from the World Bank economic indicators database.

2.3 Data analysis

The data on PE firms, deals, changes to portfolio companies, and structural impact of portfolio companies have been summarised in tables. The descriptive analysis was completed in Microsoft Excel while the correlation and regression analysis were conducted in STATA.

Annual changes in various types of sources of capital were expressed as log changes and correlated at country level. Using simple multivariate regressions, I regressed annual changes in each funding flow variable on gross domestic product, GDP, and population growth, including year dummy variables – standard errors in each regression were adjusted for year clustering. The regression was conducted in two streams: first, I specified only year fixed-effects to adjust for cross-country

differences; second, I specified both year and country fixed-effects to more examine within-country changes in sources of funding to African enterprises.

I repeated same analysis using a financial crisis indicator variable for the years 2007 through 2010. This variable was regressed on change in GDP and population growth including only year fixed-effects and both year and country fixed-effects. The analysis was summarized in tables. Due to “insufficient observations” in PPG Commercial Bank Debt, STATA returned “omitted” results in the regression output. As a result, the corresponding columns are blank (Tables 6-9).

RESULTS

I identified 467 private equity firms and 1,984 deals (Table 1). These were investors executing deals in Africa between January 1, 2000, and December 31, 2019. The proportion of PE firms with African HQ was 38% with more than half of those being South African PE firms – South African firms represent about 20% of the total number of investors doing deals on the continent. The mean age of all investors was about 26 years; mean age of firms with African HQ was 20 years while mean age of South African PE firms was 23 years. I was able to extract data on year of founding for 91% of firms in the data sample (426/467).

I also tabulated characteristics of the portfolio companies to dimension the nature of the deals executed on the continent (Table 2). Even though most PE firms report “geographical focus” intentions and PitchBook equally reports this data, I decided to analyse the actual deal decisions of the firms. There are 1,974 observations (10 missing data items) included in this analysis and 40% of these deals occurred in Southern Africa with about 39% occurring in the nation of South Africa alone. As a contrast, Nigeria, with 3.3x the South African population and a larger GDP than South Africa’s, only attracted 8% of deals during same period. The Services and consumer/retail sectors attracted about 46% of deals executed while Financial Services attracted about 17% of deals executed during the period. The mean overall investment ticket was \$115.4 million through such vehicles as development capital (PEF) and balance sheet (LBOs) at about 53% and 46%, respectively. The investment sizes, as observed through time, do not reveal any interesting pattern.

The sample includes AUM data for 249 PE firms (Table 3). While the mean AUM for Africa and South Africa are \$366 million and \$439 million respectively, the corresponding median AUM are \$148 million and \$211 million. Except for the 1 Australian firm in the sample, AUM for African PE firms lag AUM for non-African PE firms by many orders of magnitude.

In this study, I also explored the extent to which private equity is either a compliment to or a substitute for other sources of capital available to African enterprises (Table 4). PE is a weak substitute for PPG Bonds, PPG Private Creditor Debt, and PNG Bonds. In addition, it has a weak complementarity with IPOs, Equity Issuances, and PPG Commercial Bank Debt. While the complementary relationship between PE and PPG Commercial Bank Debt is weak, it is an expected observation because of the additive role of debt in PE transactions. It is, however, unclear how PE complements IPO and other equity issuances on the continent – perhaps this is developmental in outlook. The negative correlations, though weak, are indicative of the substitutive effect of PE in the absence of traditional funding sources.

Furthermore, I examined whether the seven financial flows were related to changes in GDP and population. The years reviewed were 2000 to 2018 – as at the time of data collection in February 2020, complete 2019 data for both population and GDP were unavailable. The simple multivariate regression reflects a weak relationship between both GDP growth and population growth. For example, the result suggests that a one standard deviation in population growth will likely result in 7.45% increase in PE flows while a one standard deviation increase in GDP growth will likely result in a 0.08% increase in PE flows. I must caution that these results do not implicate causality but rather an indication of an association (Table 5).

In the follow-on regression with year fixed effects, I adjust for cross-country differences (Table 6). In this instance, I was able to observe a statistically significant relationship between GDP growth and PE investments. The result suggests that a one standard deviation in GDP growth will likely result in 98% increase in PE flows while a one standard deviation increase in population growth will likely result in a 23% increase in PE flows.

I repeated the above regressions employing a financial crisis indicator variable in STATA for the years 2007 to 2010. The result of the year fixed-effects model suggests that a standard deviation increase in population growth would likely result in a 19% increase in PE flows.

As earlier noted, I could not explore the economic benefits of PE investments in Africa. In addition, I could not conduct the public market equivalent (PME) analysis – IRR data on PE exits in Africa were scant.

Due to data limitations, it is unclear what the magnitude and direction of the above relationships would be if the data set analysed was as large as would be expected in other climes with more developed capital market structures.

DISCUSSION

I mapped the universe of private equity firms and deals executed in Africa to improve understanding of the private equity market on the continent – specifically, to elucidate the nature of the firms, type of deals completed, economic benefits, and the relationship between PE and other funding sources – and I found that the formation of private capital implicates investor optimism about the continent’s promise of economic transformation. This analysis suggests a changing investor profile in the African PE landscape, an upward trend in private capital inflows, and growth in capital commitments to consumer-based and productivity sectors. It further confirms some of the prevailing truths about private capital formation in Africa: the continent still offers limited opportunities for PE investments; South Africa remains a dominant leader in Africa PE; the same time-honored factors still drive country coverage.

The “face” of PE on the continent appears to be changing. In their unpublished work, Phillips and Triki (Phillips & Triki, 2013) observed that 66% of private equity investors active on the continent are African firms with a preponderance of firms with South African origin. The authors examined data from 1994 through 2012; the results of my analysis take a departure from their finding. The face of PE firms in Africa is increasingly becoming global: in the dataset, African PE firms represent 38% of total private investors compared to 66% observed by the authors in 2013. Since the completion of their work, Africa has seen an inflow of PE firms from Europe (from 13% to 29%), North America (from 13% to 24%), and Asia (from 1% to 4%). Australian PE firms have also made inroads into the continent. There are a few plausible explanations. According to the AVCA, Africa offers global PE firms portfolio diversification in an increasingly volatile and uncertain global economy. Investors are willing to bet on the medium-to-long term growth potential of the continent while holding the view that any local uncertainties would only have short-term ramifications (Lerner, Ledbetter, Speen, Leamon, & Allen, 2016) (Delevingne, 2015). The destination of private capital also bears out this

theory. During the period under review, more deals were executed in the Services (B2B), Consumer Retail (B2C), and Technology sectors than in other sectors. This supports the classic expectation of investors: as emerging markets mature, they are likely to transition from extractive economies into service-based economies, characterised by a burgeoning middle class, decent disposable income levels, and robust productivity (Lerner, Ledbetter, Speen, Leamon, & Allen, 2016).

The shifting nature of PE firms in Africa has another important implication. The industry was heralded in the 1990s by supply of capital from development institutions such as the World Bank's International Finance Corporation (Babarinde, 2012). However, with many global PE firms setting up local teams in Africa, development institutions have seen a reduction in their roles as limited partners (LPs). Most global PE firms source capital from institutional investors, such as pension funds, and this has implications for the size of investments raised, which are typically much larger than development institutions can underwrite. This is likely antithetical to the theory that suggests the observed uptick in Africa fundraise may be a bubble (Dupoux, Becker, Hammoud, & El Fihri, 2016).

Local realities may also be driving the observed shift. As of 2015, only four African countries – Egypt, Morocco, Nigeria, and South Africa – had stock exchanges capitalized at \$50 billion or more, limiting access to capital for local enterprises. This scarcity of alternative financing (despite potential for growth) may be responsible for the changing face of private capital (Dupoux, Becker, Hammoud, & El Fihri, 2016) – a case of local demand outstripping local supply. This position is further corroborated by the uptick in total capital raised relative to fund count since 2010.

While there have been shifts and changes, “eternal truths” persist. For instance, South Africa is not going anywhere. It is the HQ for 20% of all firms in the dataset and 54% of firms with an African HQ compared to “over 50% of African investors” in 2012 (Phillips & Triki, 2013). Furthermore, 38% of deals executed on the continent during the review period were completed in

South Africa. A possible explanation is the cost of doing business on the continent. Due to political risks, red tape, immature legal systems, infrastructure deficits, dearth of talent etc., the cost of doing business in Africa is unusually high. This has the effect of “pushing” capital to relatively developed African markets where it is easier and less costly to “do business” (Babarinde, 2012). In the Doing Business Rankings of the past decade, South Africa has consistently ranked higher than Nigeria, Egypt, and other African nations of similar GDP size (The World Bank, 2019). The mean age of South African PE firms (23 years relative to 20 years for all of Africa) also offers a window of insight. This suggests South African PE firms have had more time to mature and, as a result, drive and contribute to the development of a local environment for private investments. This has the potential to build “PE discipline” in South African target companies further bolstering the probability that more than one in three (38%) deals done in Africa would be done with a professionally managed South African enterprise.

The drivers of country coverage also appear unchanged. There are significant similarities between my country coverage analysis and the analysis conducted by Phillips and Triki. The results are consistent with the expectation that political stability and depth of governance frameworks rank highly for PE firms. It is worth noting that Kenya ranked almost equally with Nigeria in the country coverage analysis (153 deals vs. 159 deals) despite its GDP being less than a fifth of Nigeria’s – Kenya was ranked 61 in the 2019 Doing Business Ranking while Nigeria was ranked 146 (The World Bank, 2019). More importantly, Kenya’s GDP per capita is three quarter Nigeria’s. Clearly, private capital has an unmistakable preference for the environment of business and disposable income of consumers over the number of consumers.

GDP growth appears to be more correlated to PE flows than it is to other sources of financing on the continent; population growth also appears to be more correlated to PE flows than it is to other

sources of financing on the continent with the exception of IPO and Equity Issuances. This result is in keeping with Africa's market realities, including a less developed capital market framework.

Finally, I observe that Africa's PE industry is still in its nascent stages. PE firms have refused to change their "multisector" strategy – in this analysis, over 70% of PE firms have a deliberate multisector focus. This lends credence to prevailing evidence that individual African industries are likely not large enough to command robust deal flows (Phillips & Triki, 2013).

CONCLUSION

This analysis demonstrates significant changes in the African private capital market, including becoming a critical component of global diversified portfolios and lending support to the thesis that the “Africa Rising” narrative is not dead – that the need for private capital in Africa will endure. It also confirms that PE in Africa, though infantile, could serve as a substitute source of capital given the paucity of traditional sources of finance on the continent.

PE firms investing on the continent will likely see decent returns if they adopt a multisector investment strategy and a geographical focus that prioritizes business environment and demand sophistication over sheer market size.

There is an opportunity for a future study to examine the economic benefits of PE firms in Africa and further elucidate the firm-level effects of PE. It may be more practical for such study to be planned prospectively given the paucity of historical data.

REFERENCES

- Babarinde, O. (2012). The Private Equity Market in Africa: Trends, Opportunities, Challenges, and Impact. *Journal of Private Equity*.
- de Beer, B., & Nhleko, Z. (2008). Measuring the economic impact of private equity funds: the South African experience. *IFC Bulletin No 31* (p. 495). Basel: Bank for International Settlements.
- Delevingne, L. (2015, March 17). *Private investors pile into Africa*. Retrieved from CNBC Web Site: <https://www.cnbc.com/2015/03/17/private-equity-investors-pile-into-africa.html>
- Dupoux, P., Becker, M., Hammoud, T., & El Fihri, S. (2016, September 15). *Why Africa Remains Ripe for Private Equity*. Retrieved from BCG Consulting Web Site: <https://www.bcg.com/en-ca/publications/2016/private-equity-globalization-why-africa-remains-ripe-private-equity.aspx>
- Lerner, J., Ledbetter, J., Speen, A., Leamon, A., & Allen, C. (2016). Private Equity in Emerging Markets: Yesterday, Today, and Tomorrow. *Journal of Private Equity*.
- Phillips, G., & Triki, T. (2013). Private Equity in Africa. *Unpublished*.
- The World Bank, G. (2019). *The World Bank: Doing Business Data Catalog*. Retrieved from The World Bank Web Site: <https://datacatalog.worldbank.org/dataset/doing-business>

EXHIBITS

Table 1. Distribution of PE Firms by Geographical Origin

Africa (N = 176)		Outside Africa (N = 291)	
Region	Count	Region	Count
Central Africa	1	Asia	18
East Africa	32	Europe	136
North Africa	24	Middle East	24
Southern Africa	95	North America	113
West Africa	24		

Table 2. Portfolio Company Characteristics (N = 1,984)

Panel A: Sector / Industry		Panel D: Year of Investment	
Label	Count	Label	Count
Financial Services	338	2000	9
Services	915	2001	18
Healthcare	139	2002	11
Energy	115	2003	33
Materials and Resources	258	2004	28
Information Technology	219	2005	45
		2006	66
		2007	128
		2008	99
		2009	100
		2010	94
		2011	125
		2012	135
		2013	153
		2014	185
		2015	181
		2016	175
		2017	168
		2018	137
		2019	94

in millions USD

Table 2. Portfolio Company Characteristics (N = 1,984)**Panel E: Deal Location, Country**

Country	Count	Country	Count
Algeria	16	Malawi	4
Angola	15	Mali	12
Benin	8	Mauritania	5
Botswana	28	Mauritius	57
Burkina Faso	12	Morocco	92
Burundi	1	Mozambique	21
Cameroon	17	Namibia	13
Central Afr. Republic	4	Niger	10
Chad	1	Nigeria	159
Comoros	4	Reunion	2
Congo	10	Rwanda	15
Djibouti	2	Senegal	25
Egypt	156	Sierra Leone	7
Equatorial Guinea	1	Somalia	1
Ethiopia	24	South Africa	744
Gabon	4	Swaziland	1
Ghana	62	Tanzania	39
Ivory Coast	46	Togo	18
Kenya	153	Tunisia	55
Lesotho	1	Uganda	39
Liberia	8	Zambia	27
Libya	3	Zimbabwe	25
Madagascar	27		

Panel F: Deal Location, Region

Country	Count	
Central Africa	52	2.6%
East Africa	441	22.2%
North Africa	330	16.6%
South Africa	787	39.7%
West Africa	374	18.9%
	<i>1,984</i>	<i>100%</i>

Table 3. Assets Under Management of PE Firms by Geographical Origin

Region	N	Mean	Median	MIN	MAX
South Africa	26	\$439	\$211	\$31	\$2,000
Asia	8	\$3,575	\$3,500	\$115	\$10,000
Australasia	1	\$130	\$130	\$130	\$130
Central Africa	1	\$39	\$39	\$39	\$39
East Africa	15	\$160	\$100	\$7	\$644
West Africa	8	\$302	\$99	\$50	\$1,124
North Africa	8	\$623	\$295	\$58	\$2,161
Europe	89	\$8,582	\$824	\$32	\$96,000
Middle East	13	\$680	\$350	\$90	\$3,909
North America	80	\$26,317	\$4,850	\$54	\$571,000

in millions USD

Table 4

A correlation of annual changes in the various country-level sources of capital to firms. All series are expressed as log annual changes. Ending year is 2019.

	Private Equity IPO	Equity Issuances	PPG Bonds	PPG Commercial Bank Debt	PPG Private Credit Debt	PNG Private Non-Guaranteed Bonds
Private Equity	1					
IPO	0.0231	1				
Equity Issuances	0.1089	0.0795	1			
PPG Bonds	-0.1812	0.0981	-0.0715	1		
PPG Commercial Banks	0.0015	-0.0286	-0.0408	0.2787	1	
PPG Private Credit Debt	-0.0221	0.2083	-0.0008	0.0895	-0.0967	1
PPG Private Non-Guaranteed Bonds	-0.1417	-0.1436	-0.0565	0.3389	0.1212	0.0588

Table 5

A regression analysis of financial flows against GDP growth and population growth in African countries (2000-2018).

	Private Equity IPOs	Equity Issuances	PPG Bonds	PPG Commercial Bank Debt	PPG Private Credit Debt	PNG Private Non-Guaranteed Bonds
GDP Growth	0.0008	0.664	1.4739	0.2392	-0.1059	0.7357
	0.04	0.38	0.46	1.31	-0.3	0.52
Population Growth	0.0745	3.9678	1.6394	0.0817	2.0162	-3.9036
	1.16	0.68	0.15	0.13	1.67	-0.82
Constant	0.0016	0.0575	0.0596	-0.0058	0.0187	0.0246
	1.08	0.43	0.24	-0.41	0.67	0.22
R²	0.03	0.02	0.07	0.04	0.05	0.01
N	54	54	54	54	54	54

Table 6

A regression analysis of financial flows against GDP growth and population growth in African countries with Year Fixed Effects (2000-2018).

	Private Equity	IPOs	Equity Issuances	PPG Bonds	PPG Commercial Bank Debt	PPG Private Credit Debt	PNG Private Non-Guaranteed Bonds
GDP Growth	0.98	0.08	0	-0.12**		0.02	0.08
	0.55	0.74	0.01	-2.71		0.12	1.39
Population Growth	0.23	1.27	0.33	1.43		-1.6	0.22
	0.08	0.67	0.19	1.82		-0.72	0.24
Constant	0	0.01	-0.01	0		0	-0.01
	0.03	0.25	-0.19	0.08		-0.05	-0.31
R²	0	0	0	0.01		0	0
N	55	55	55	55		55	55

** indicates significance at the 5% level of significance

Table 7

A regression analysis of financial flows against GDP growth and population growth in African countries with Year and Country Fixed Effects (2000-2018).

	Private Equity	IPOs	Equity Issuances	PPG Bonds	PPG Commercial Bank Debt	PPG Private Credit Debt	PNG Private Non-Guaranteed Bonds
GDP Growth	0.10**	0.12	0.11	-0.01*		-0.04	0.09
	0.55	0.96	0.95	-0.31		-0.28	1.55
Population Growth	-0.36	-0.34	0.23*	0.35		1.01*	-0.31
	-0.16	-0.24	0.17	0.63		0.6	-0.42
Constant	-0.01	-0.19	0	-0.01		0.05	-0.02
	-0.18	-0.02	-0.08	-1.01		1.18	-0.93
R²	0	-0.6	0	0		0	0
N	55	55	55	55		55	55

** , * indicates significance at the 5% & 1% level of significance respectively

Table 8

A regression analysis of financial flows against GDP growth and population growth in African countries over the financial crisis (2007-2010) with Year Fixed Effects.

	Private Equity	IPOs	Equity Issuances	PPG Bonds	PPG Commercial Bank Debt	PPG Private Credit Debt	PNG Private Non-Guaranteed Bonds
GDP Growth	0.10*	0.07	0.01*	-0.13**		0.02	0.08*
	0.54	0.61	0.09	-2.69		0.18	1.38
GDP Growth*Crisis	-0.04	1.16	0.03*	0.01*		0.03	-0.01
	-0.06	0.32	0.92	0.09		0.68	-0.05
Population Growth	0.19	0.77	0.62*	1.44		-1.33	0.22*
	0.06	0.4	0.35	1.8		-0.59	0.22
Population Growth*Crisis	0.09	0.52**	0.49*	0.04		0.1	0.07
	0.8	0.02	0.01	0.21		0.6	0.26
Constant	0	-0.19	0	0		0	0
	0.03	-0.02	-0.08	0.08		-0.06	-0.31
R²	0	-0.6	0	0		0	0
N	55	55	55	55		55	55

****, *** indicates significance at the 5% & 1% level of significance respectively

Table 9

A regression analysis of financial flows against GDP growth and population growth in African countries over the financial crisis (2007-2010) with Year and Country Fixed Effects.

	Private Equity	IPOs	Equity Issuances	PPG Bonds	PPG Commercial Bank Debt	PPG Private Credit Debt	PNG Private Non-Guaranteed Bonds
GDP Growth	0.10*	0.11	0.11	-0.01**		-0.04	0.10*
	0.55	0.96	0.95	-0.31		-0.28	1.55
GDP Growth*Crisis	0.16	0.48	0.04*	0.07*		0.21	1.25
	0.85	0.62	0.92	0.05		0.81	0.29
Population Growth	-0.36	-0.34	0.23*	0.35		1.01	-0.31
	-0.16	-0.24	0.17	0.63		0.6	-0.42
Population Growth*Crisis	0.13	0.51	0.03*	0.19		0.09*	0.26
	0.03	0.02	0.01	0.17		0.21	0.01
Constant	-0.01	-0.19	0	-0.01		-0.05	-0.02
	-0.18	-0.02	-0.08	-1.01		1.18	-0.93
R²	0	0	0	0		0	0
N	55	55	55	55		55	55

****, *** indicates significance at the 5% & 1% level of significance respectively