

# THE FUTURE OF THE AFRICAN CITY?

## The State of African Cities 2018: the geography of African investment

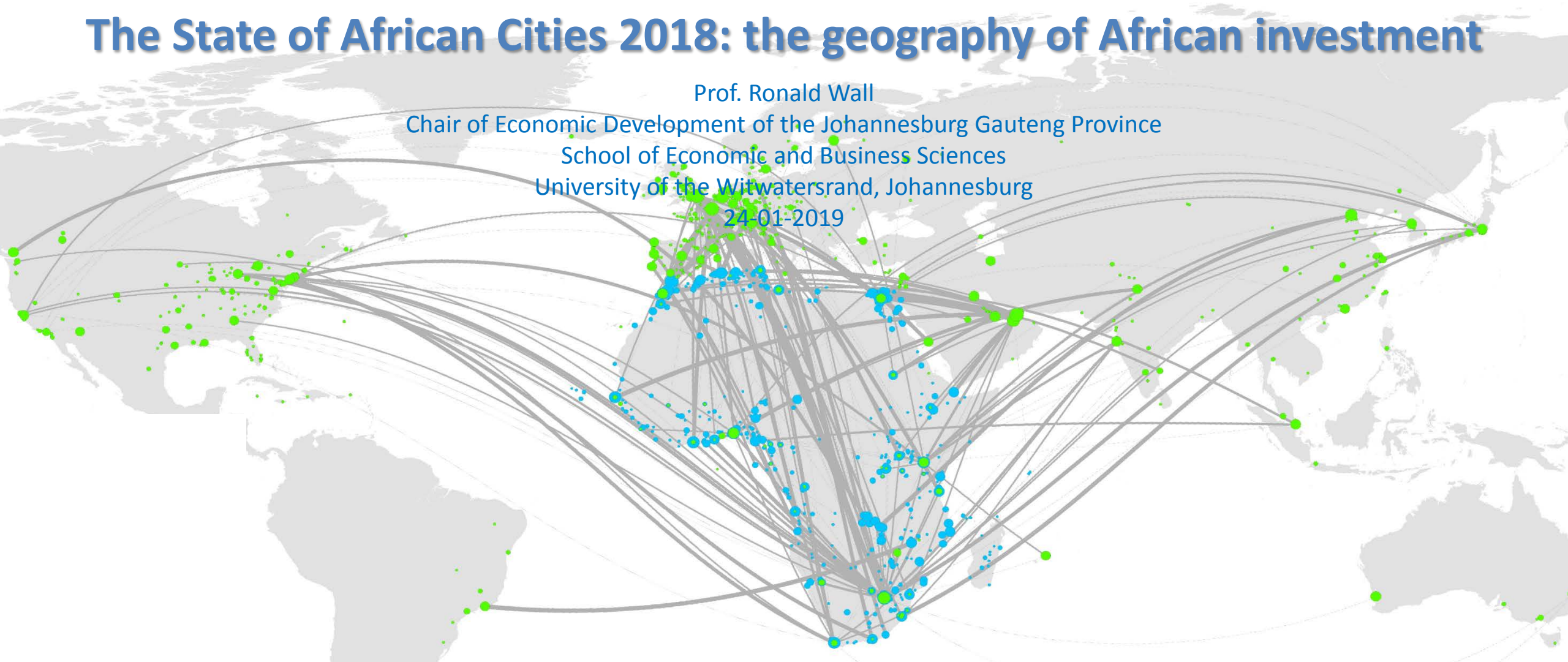
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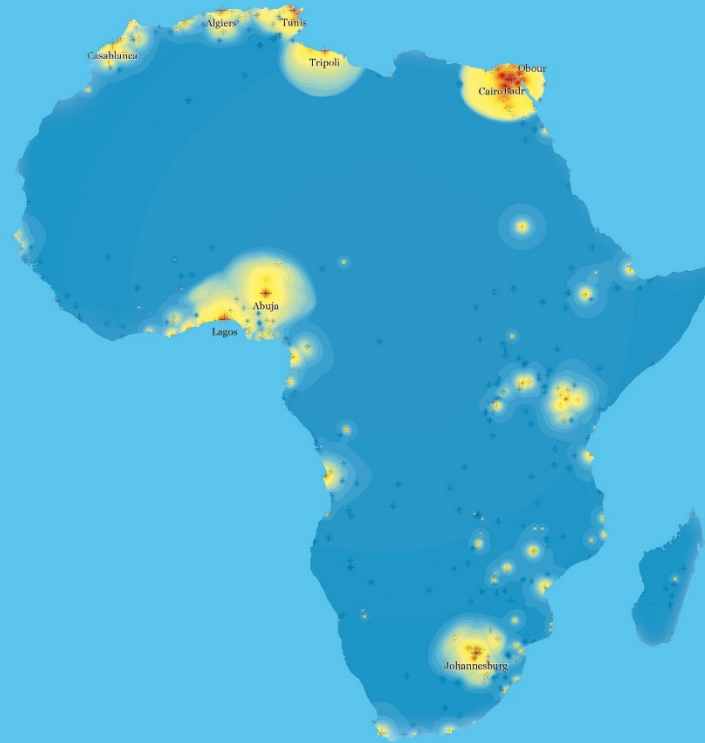


# Report topics

1. 400 page UN report
2. Topics on FDI
  1. Investment geography
  2. City competitiveness
  3. Chinese investment
  4. Income inequality
  5. Employment
  6. Wages
  7. Knowledge investment
  8. Food security
  9. Smart cities
  10. Renewable energy
  11. Real estate
  12. Green cities
  13. Road infrastructure
  14. Regional gateways
  15. Case Johannesburg
  16. Case Cairo
  17. Case Kigali
  18. Case Abidjan

## The State of African Cities 2018

The geography of African investment



## Introduction

1. Foreign Direct Investment (FDI) concerns **cross-border investment** made by a firm in one country into a firm in another country.
2. Many studies show that FDI contributes **economic growth** of developing economies by creating **employment opportunities, poverty reduction** (Carp, 2012; Huang and Ren, 2013; Tshepo, 2014; Chinyelu, 2014).
3. There is a **positive relationship between FDI and economic growth** in Africa but generally **not economic inclusion** (e.g. Oliva and Rivera-Batiz 2002, Asiedu 2002)
4. The economic fate of world cities is increasingly determined by their **power and position within global networks of investment** (Alderson and Beckfield 2004)

# The contribution of FDI to financing Africa

## Financial indicators for Africa (% current USD billions) 2011-2016

Investment Type	2011	2012	2013	2014	2015	2016
<b>Tax revenue</b>	36	34	33	33	40	39
<b>Domestic investment</b>	34	35	36	37	43	43
<b>Official reserves assets</b>	17	18	18	17	na	na
<b>FDI</b>	3	4	4	4	5	6
<b>Remittances</b>	4	4	4	4	6	6
<b>Portfolio investments</b>	2	2	2	2	1	1
<b>Development assistance</b>	4	3	4	4	5	5

Domestic financing

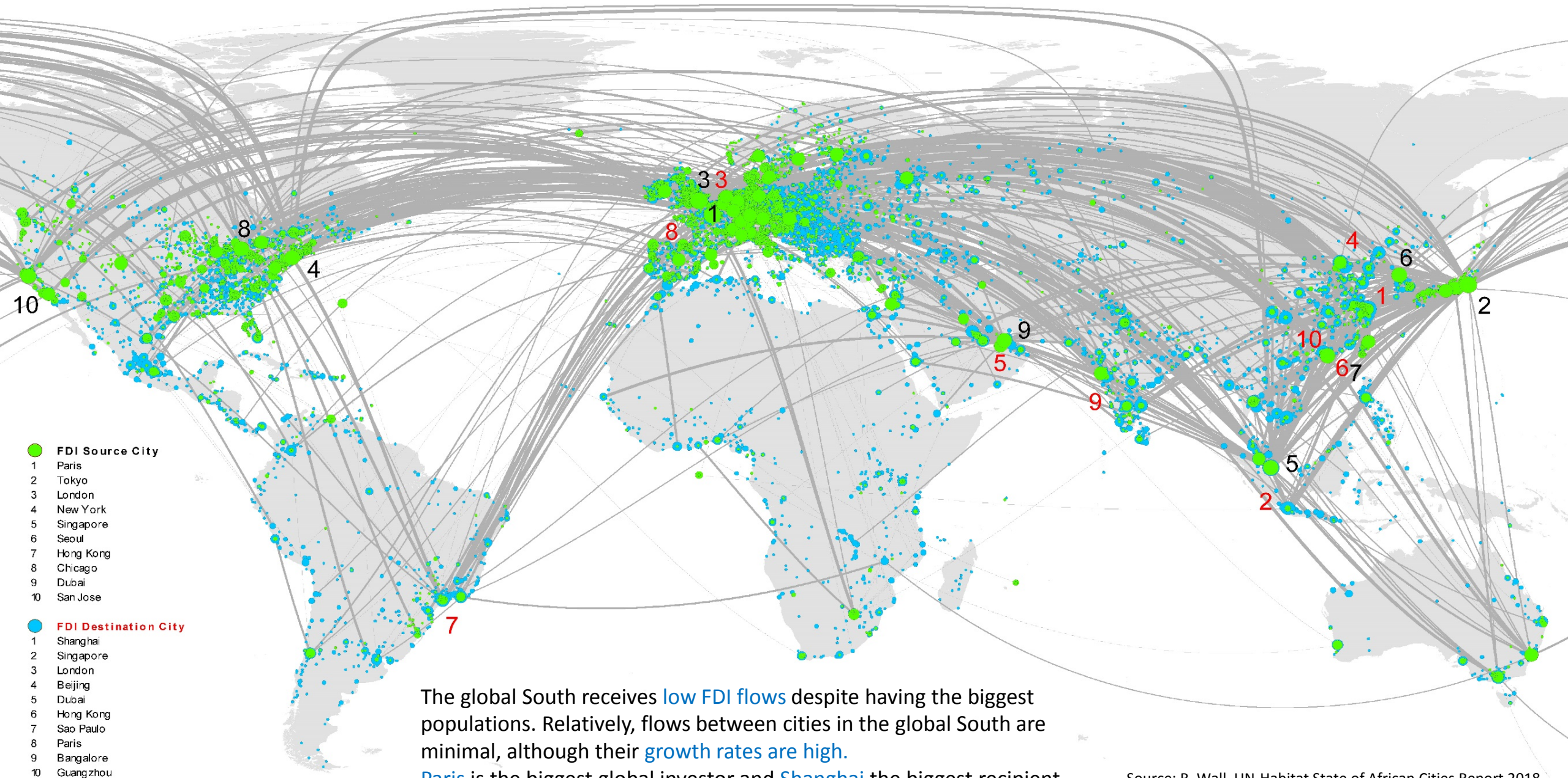
Foreign financing

Source: Based on UNECA (2017), AfDB (2016), IMF (2016), UNCTAD (2016) and World Bank (2016) data

What is the **geography** of African foreign investment?

# The global uneven distribution of FDI (3D GIS Model)

# Top 10 000 FDI connections in the world



The global South receives **low FDI flows** despite having the biggest populations. Relatively, flows between cities in the global South are minimal, although their **growth rates are high**. **Paris** is the biggest global investor and **Shanghai** the biggest recipient.

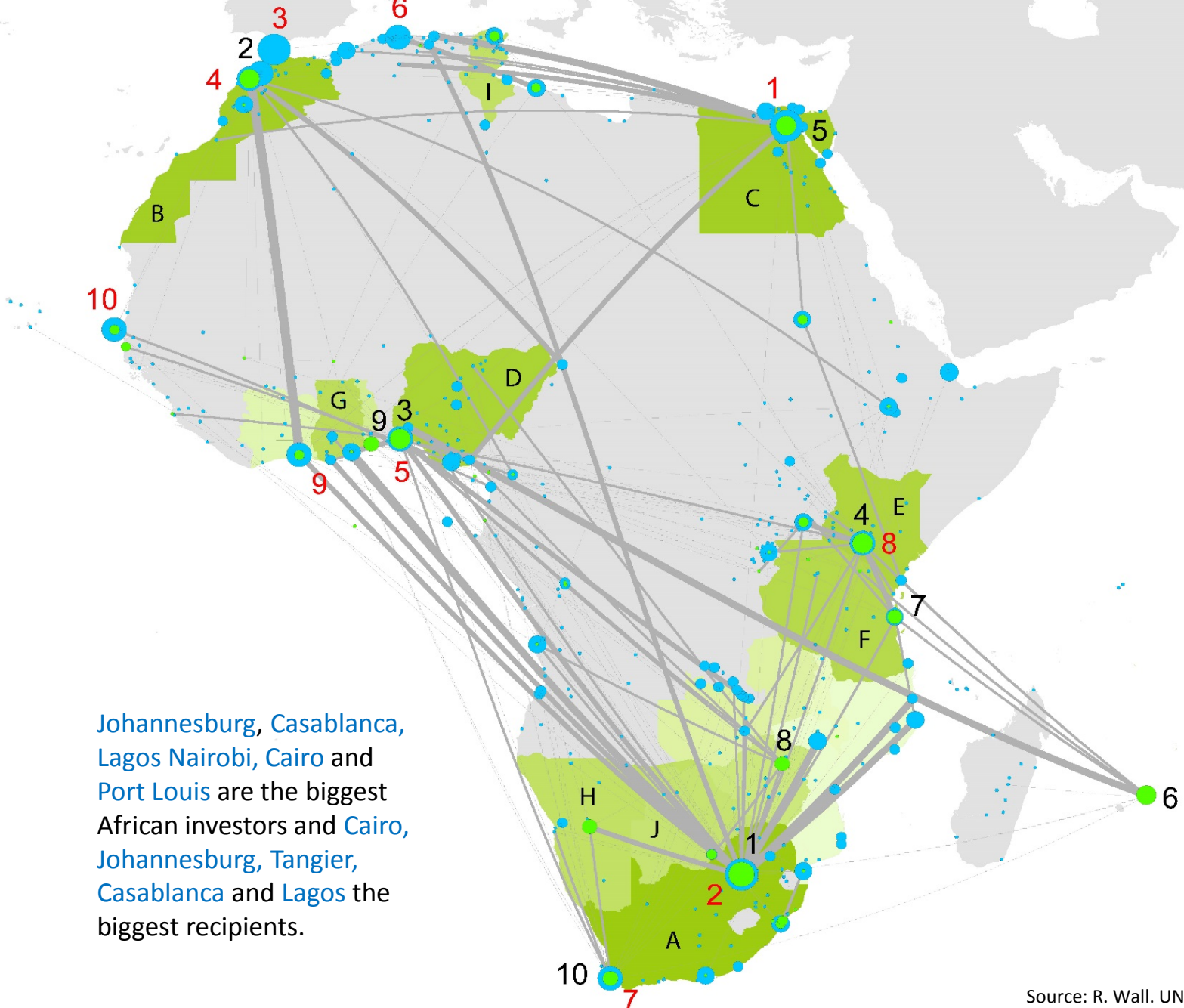
# FDI into Africa



Europe is still by far the biggest investor in Africa although Asia has higher growth rates. **Shared history, culture and language** play an important role in this. **Paris** is the biggest investor in Africa and **Cairo** the biggest African recipient.



# FDI within Africa



- **FDI Source City**
- 1 Johannesburg
- 2 Casablanca
- 3 Lagos
- 4 Nairobi
- 5 Cairo
- 6 Port Louis
- 7 Dar es Salaam
- 8 Harare
- 9 Lome
- 10 Cape Town

- **FDI Destination City**
- 1 Cairo
- 2 Johannesburg
- 3 Tangier
- 4 Casablanca
- 5 Lagos
- 6 Algiers
- 7 Cape Town
- 8 Nairobi
- 9 Abidjan
- 10 Dakar

- Homegrown African Multinationals (2005)**
- A South Africa
- B Morocco
- C Egypt
- D Nigeria
- E Kenya
- F Tanzania
- G Ghana
- H Namibia
- I Tunisia
- J Botswana

Johannesburg, Casablanca, Lagos, Nairobi, Cairo and Port Louis are the biggest African investors and Cairo, Johannesburg, Tangier, Casablanca and Lagos the biggest recipients.

# The more African cities economically integrate with each other the more FDI they attract

	FDI value		
<b>Independent variables</b>			
Regional Gateway	0.2168	(0.0522)	***
Global Gateway	0.1509	(0.0674)	*
<b>Control variables</b>			
GDP growth	0.2204	(0.0278)	***
Physical environments	-2.5921	(0.7058)	***
Urban development factors	0.9020	(0.6315)	
_cons	6.6340	(0.5923)	***
Observations		167	
R-sq		0.479	
Rmse		1.0285	

\*  $p < 0.05$ , \*\*  $p < 0.01$ , \*\*\*  $p < 0.001$ , robust SEs in parentheses

The more African cities [regionally integrate](#) through business, trade and investment the [more global investment they will attract](#).

## QUESTIONS ON AFRICAN INVESTMENT GEOGRAPHY

1. Should African cities prioritize attracting FDI from the global South?
2. Should African cities prioritize attracting FDI from Africa (regional and continental)?

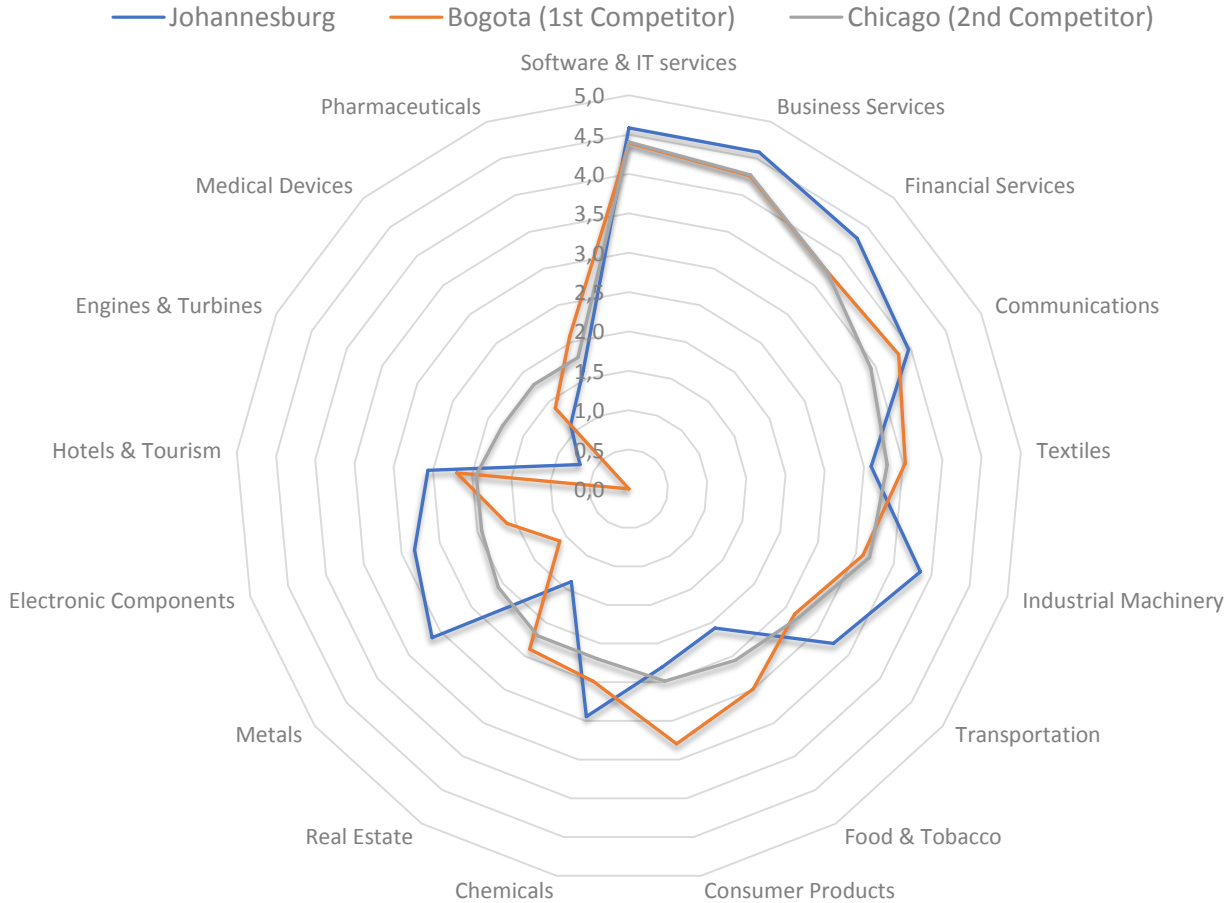
Which are the worldwide city **FDI competitors** of African cities?

## Theory

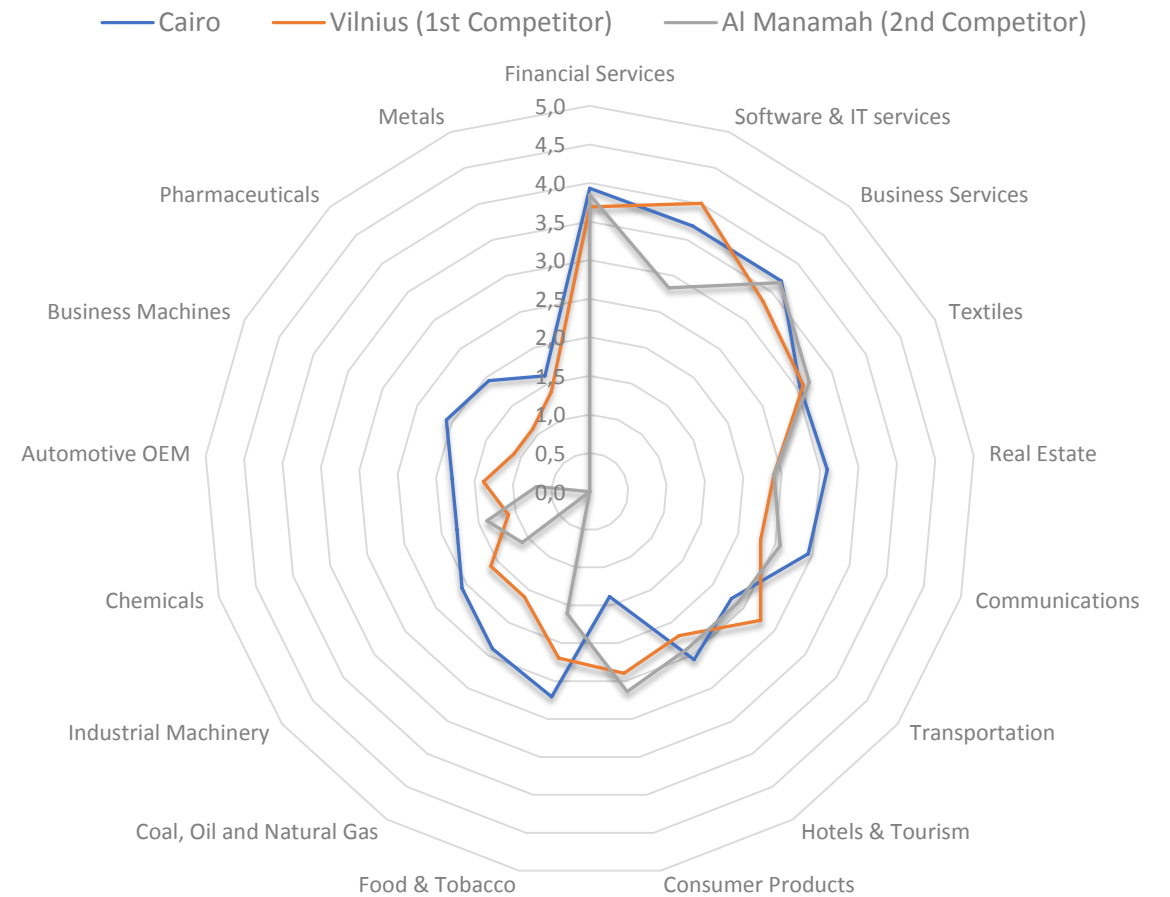
1. Today, cities are in **fierce competition for attracting FDI**. However, it remains **unclear which territories compete for which types of investments** (Phelps and Wu, 2009).
2. These ‘place wars’ take place at **local, regional, national, continental** and **global** scales (Gordon, 1999, Alderson and Beckfield 2004).

# The top two FDI competitors of Johannesburg and Cairo?

## Johannesburg's top two competitors



## Cairo's top two competitors



Two cities attracting exactly same sectors, same volumes and from the same source cities are **100% competitors**.

Source: R. Wall. UN-Habitat State of African Cities Report 2018

# The ranked FDI competitors of several cities, at different geographic scales

Table 5.1.  
The top five competitors of six selected cities—at thirteen geographic scales (2003-2016)

World Region	Competitor	Shanghai	New York	Johannesburg	Cairo	Abidjan	Kigali
World	1st	Dubai	Sydney	Bogota	Al Manamah	Kampala	Kampala
	2nd	Hong Kong	Dublin	Chicago	Vilnius	Kigali	Vientiane
	3rd	Singapore	Paris	Istanbul	Lima	Dar es Salaam	Lusaka
	4th	Beijing	Tokyo	Delhi	Kiev	Vientiane	Dakar
	5th	Paris	Madrid	Buenos Aires	Riyadh	Lahore	Addis Ababa
Africa	1st	Johannesburg	Johannesburg	Cape Town	Nairobi	Kampala	Kampala
	2nd	Casablanca	Cape Town	Casablanca	Accra	Kigali	Lusaka
	3rd	Nairobi	Cairo	Nairobi	Casablanca	Dar es Salaam	Dakar
	4th	Cape Town	Nairobi	Cairo	Tunis	Dakar	Addis Ababa
	5th	Cairo	Casablanca	Lagos	Lagos	Addis Ababa	Abidjan
Asia and Pacific	1st	Hong Kong	Sydney	Delhi	Auckland	Vientiane	Vientiane
	2nd	Singapore	Tokyo	Manila	Baku	Lahore	Jinan
	3rd	Beijing	Hong Kong	Jakarta	Almaty	Dhaka	Dushanbe
	4th	Tokyo	Beijing	Seoul	Rangoon	Karachi	Ipoh
	5th	Sydney	Melbourne	Hanoi	Brisbane	Islamabad	Nanning

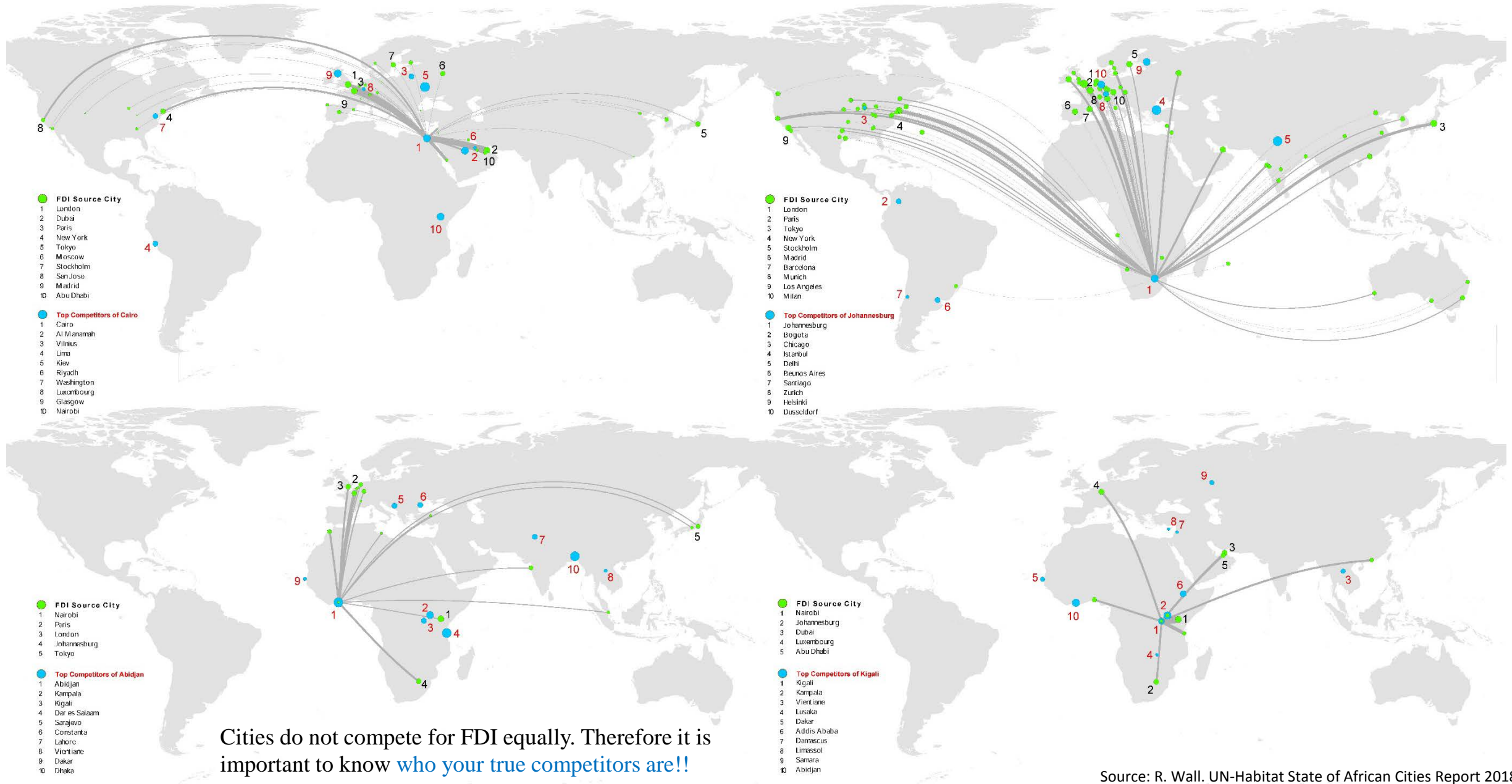
Johannesburg's 1<sup>st</sup> global competitor is [Bogota](#) then [Chicago](#).

Johannesburg's 1<sup>st</sup> African competitor is [Cape Town](#) then [Casablanca](#).

Johannesburg's 1<sup>st</sup> Asian competitor is [Delhi](#) then [Manila](#).

.... and so forth.

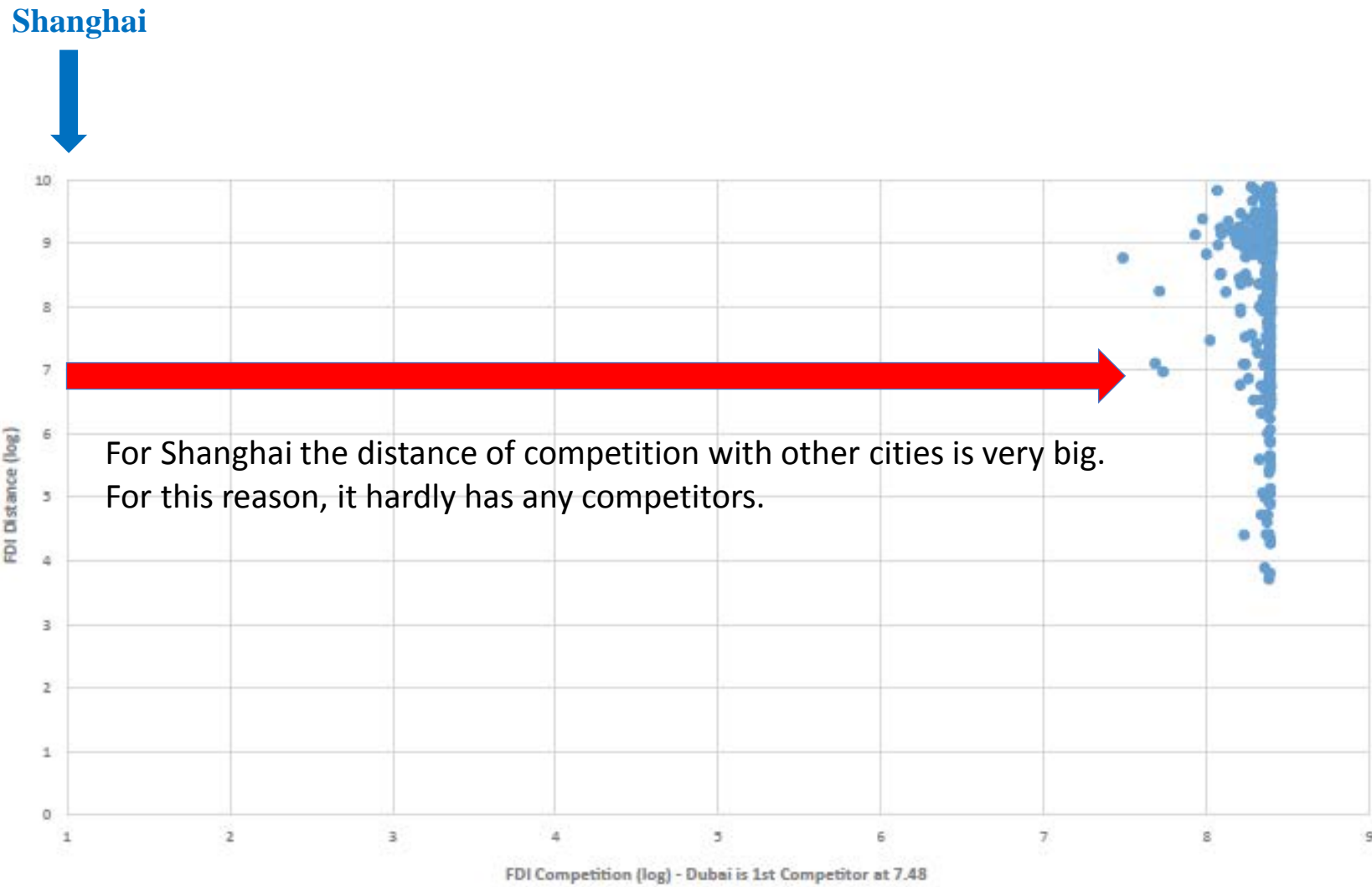
# Cities do not compete equally for FDI



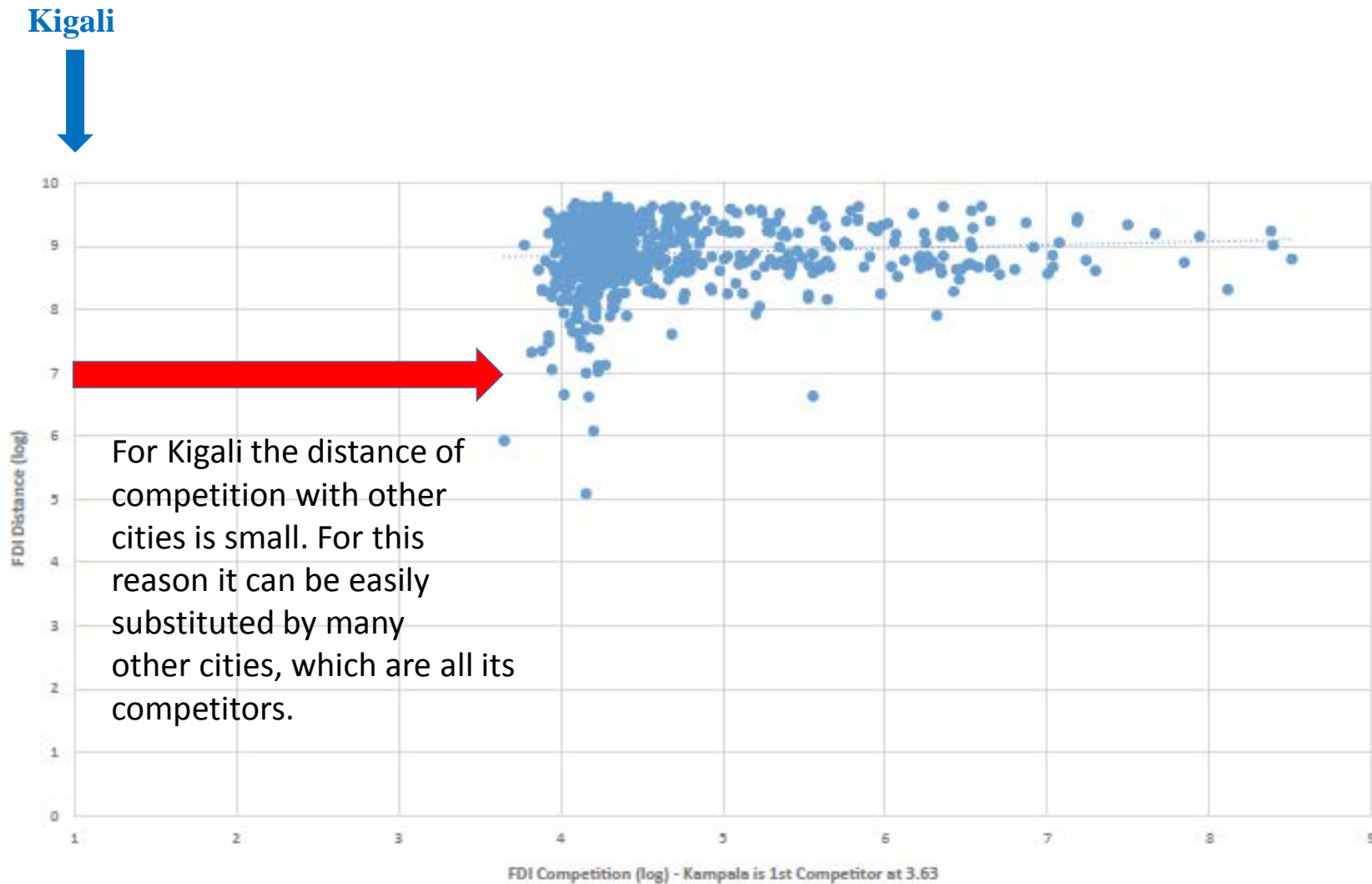
Cities do not compete for FDI equally. Therefore it is important to know **who your true competitors are!!**



# The need for sectoral diversification and specialization (Shanghai = city with least competitors)



# The need for sectoral diversification and specialization (Kigali = city with many competitors)



## QUESTIONS ON GROWTH AND COMPETITION OF INVESTMENT

1. To become more competitive should African cities prioritize specialization or diversification to attract more FDI?
2. Should African cities develop competition policy individually or collaborate nationally, regionally or at the scale of the continent?

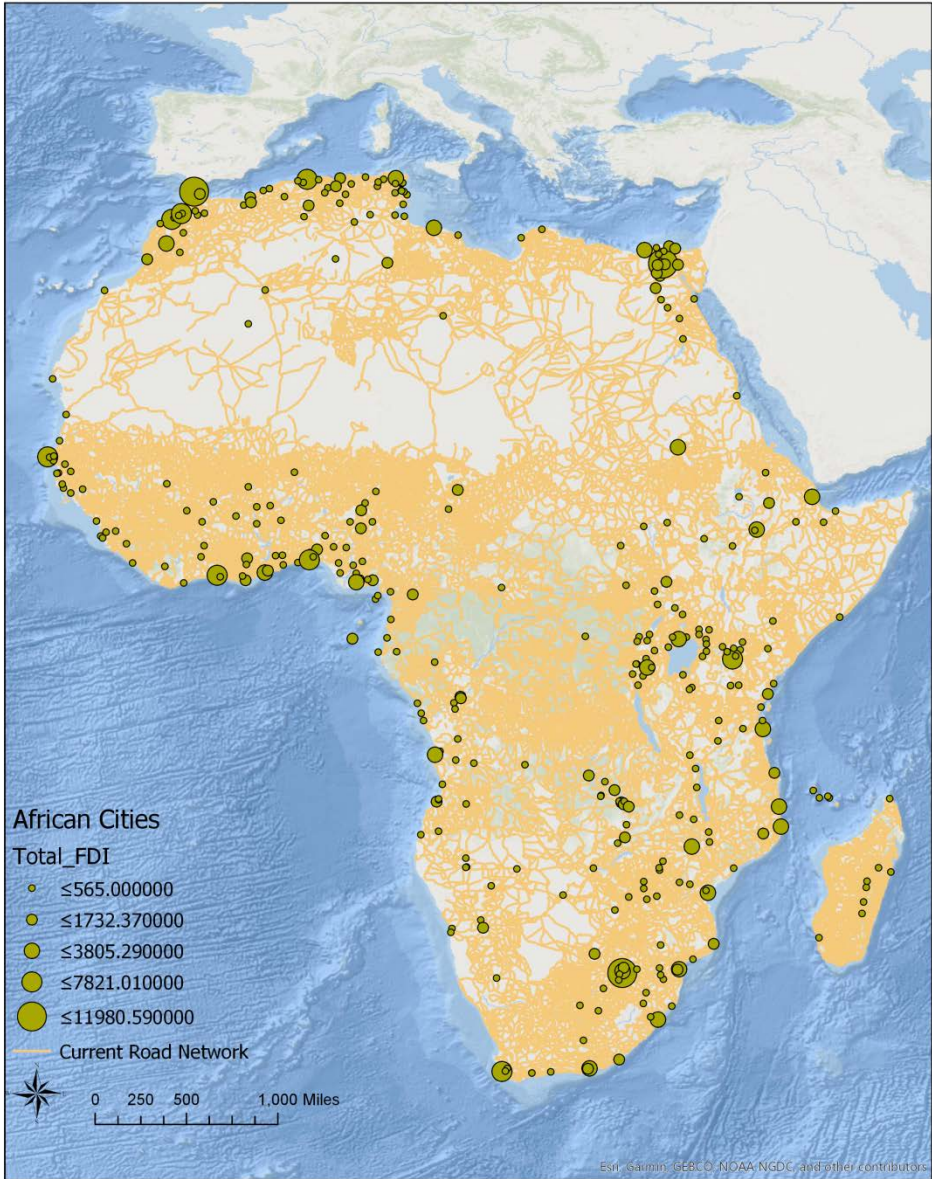
Does the **road reachability** of a city to all other African cities attract FDI?

## Theory

- 1) Africa is the least physically connected continent globally and **is a major structural constraint** to its economic development.
- 2) The **cost of trading is 70% higher in land-locked countries** particularly due to infrastructural constraints (Bond, 2016).
- 3) SDG 9.1 calls for developing infrastructure that **facilitates regional and cross-border integration** for increased economic development and the well-being of humans.

# Model 1 = the current road network (yellow links) and FDI in cities (green nodes)

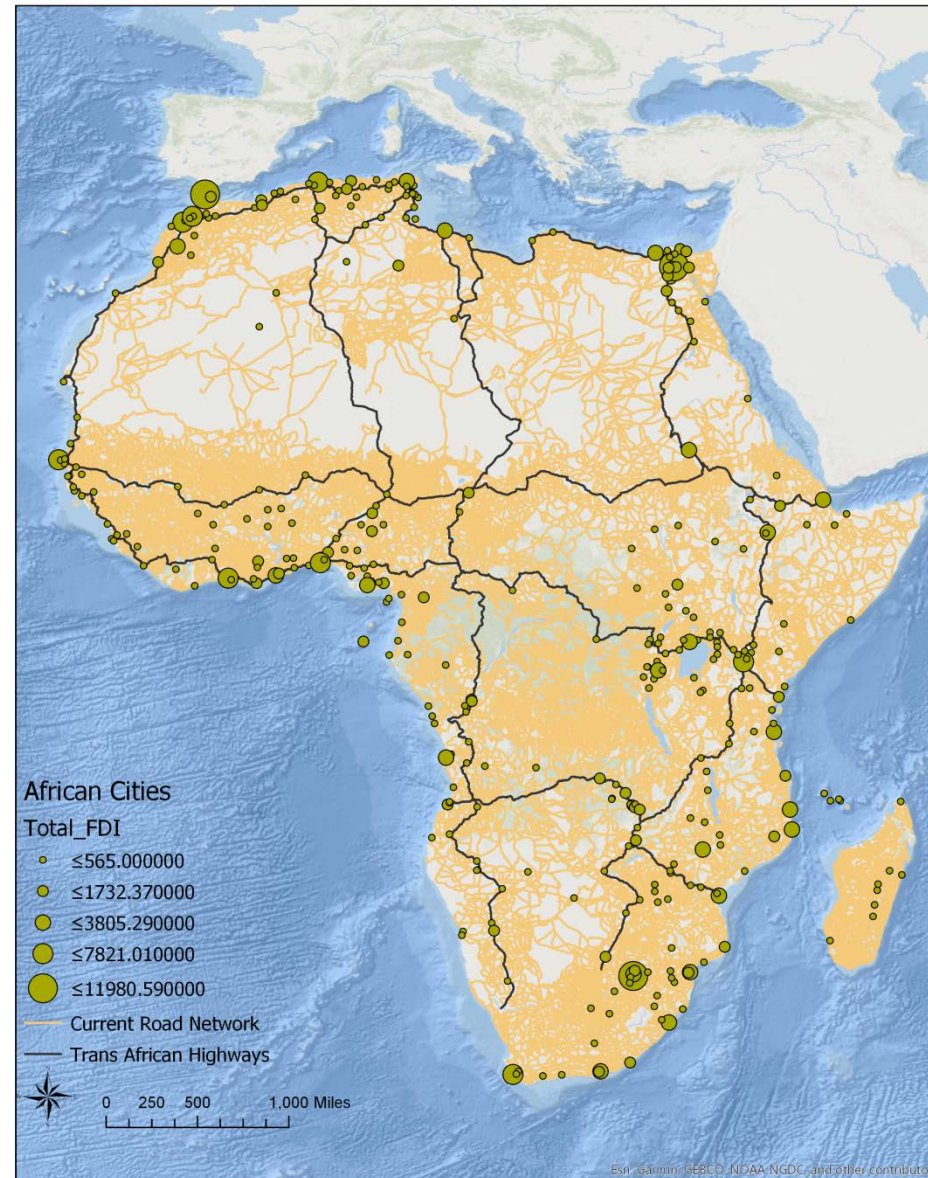
Model 1



Source: Waikinda, Wall and Mashoodi 2018

## Model 2 = Model 1 plus Trans African Highway to capital cities (black links)

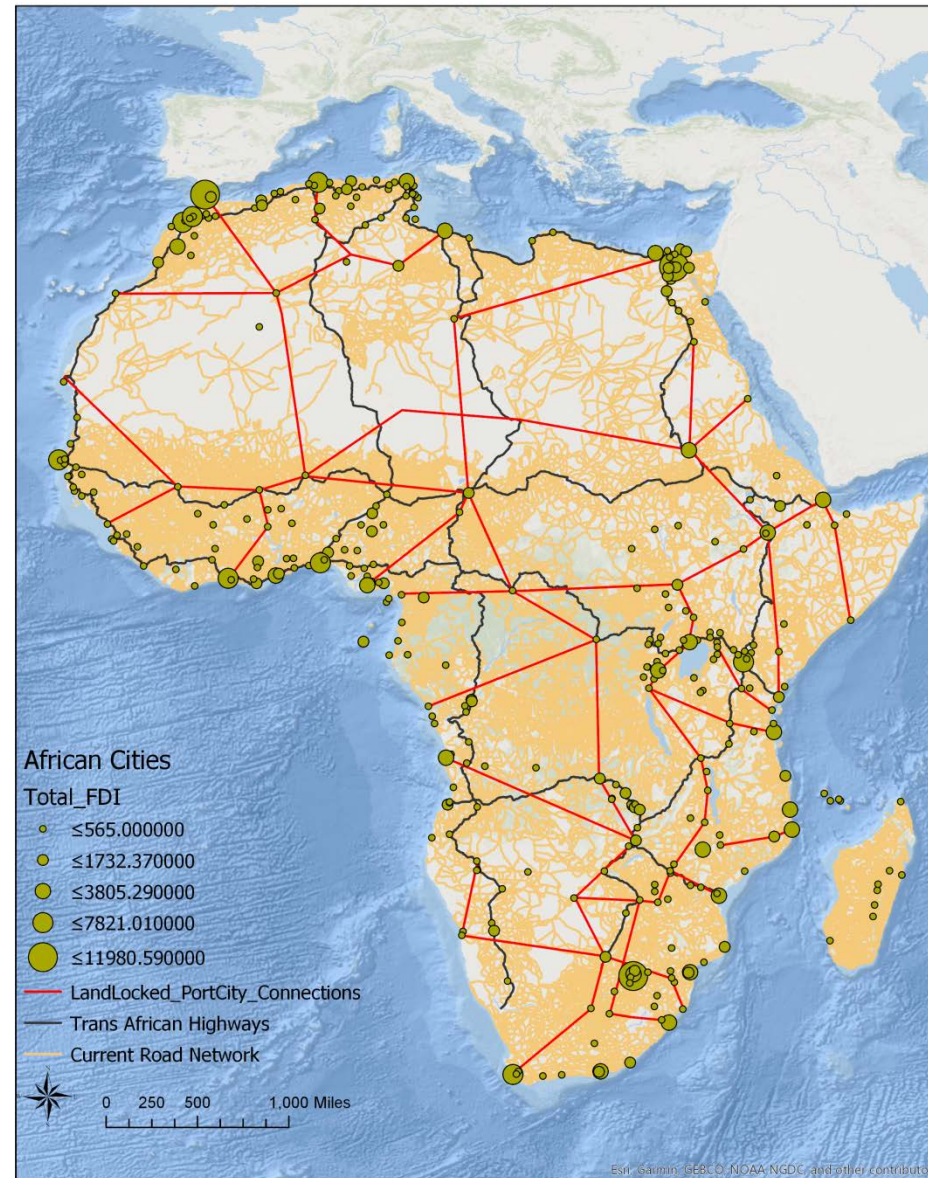
Model 2



The combined 1969 Trans-African Highway Network (TAHN) and 2018 African Continental Free Trade Area Agreement (ACFTA) can be potentials to boost regional integration and economic performance. (Richaud, Sekkat, et al., 1999, Shepherd, 2016)

# Model 3 = Model 2 plus extra connections between landlocked cities and ports (red links)

Model 3



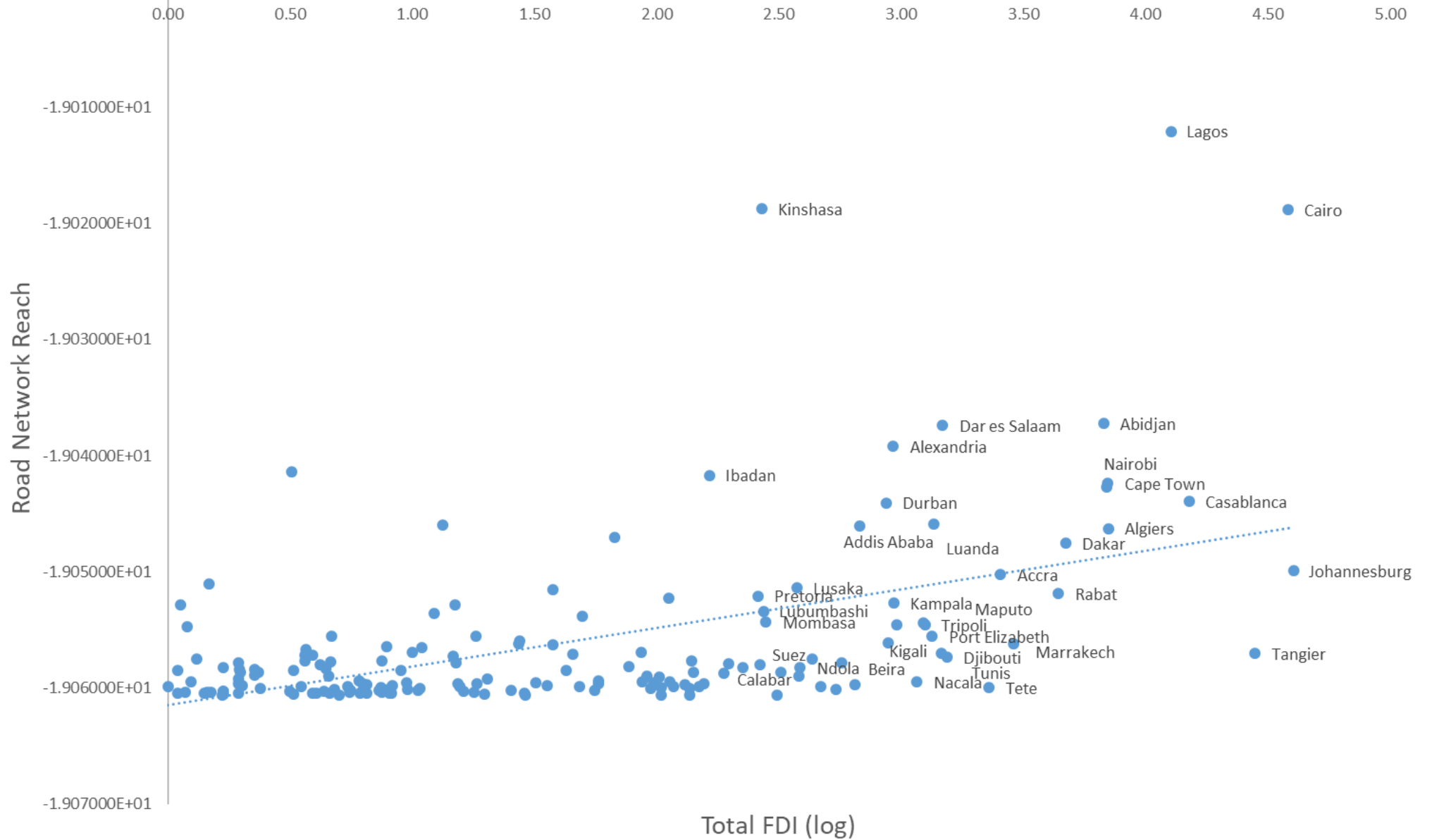


# Results of the three calculations on African city road integration and FDI

VARIABLES (Y = FDI log)	Current situation		Completed TAH		Extra connections	
	Model 1a	Model 1b	Model 2a	Model 2b	Model 3a	Model 3b
Reach of Existing Road Network (r = 10 000km)	155.5*** (-22.42)	106.1*** (-25.54)				
Reach of Existing and TAH (r = 10 000km)			155.7*** (-22.45)	106.2*** (-25.57)		
Reach of Existing, TAH and Extra (r = 10 000km)					156.0*** (-22.5)	106.5*** (-25.63)
Population City (log)		0.317*** (-0.107)		0.317*** (-0.107)		0.317*** (-0.107)
GDP country (log)		-0.114 (-0.124)		-0.114 (-0.124)		-0.114 (-0.124)
Communication Level Country (log)		0.0703 (-0.104)		0.0703 (-0.104)		0.0703 (-0.104)
Inflation Country (log)		0.0518 (-0.158)		0.0518 (-0.158)		0.0518 (-0.158)
Central Africa (dummy variable)		-0.655 (-0.402)		-0.655 (-0.402)		-0.655 (-0.402)
Eastern Africa (dummy variable)		-1.066*** (-0.317)		-1.066*** (-0.317)		-1.066*** (-0.317)
Southern Africa (dummy variable)		-0.31 (-0.272)		-0.31 (-0.272)		-0.31 (-0.272)
Western Africa (dummy variable)		-1.155*** (-0.307)		-1.155*** (-0.307)		-1.155*** (-0.307)
Constant	2,963*** (-427.4)	2,022*** (-486.7)	2,967*** (-428)	2,025*** (-487.4)	2,974*** (-429)	2,030*** (-488.6)
Observations	325	325	325	325	325	325
R-squared	0.189	0.266	0.189	0.266	0.189	0.266

Multinationals seek cities that have a greater regional market reach that extends the borders of its country.

# Scatterplot of Total FDI versus Existing Road Reach



Lago, Cairo, Dar es Salaam, Abidjan and Nairobi have very high reachability into the African continent, which explains their high levels of FDI attraction.

## QUESTIONS ON REGIONAL INTEGRATION

1. Should African cities/countries co-invest in developing weak parts of the road network?
2. Should the development of the network be prioritized at the national, regional or continental scale?

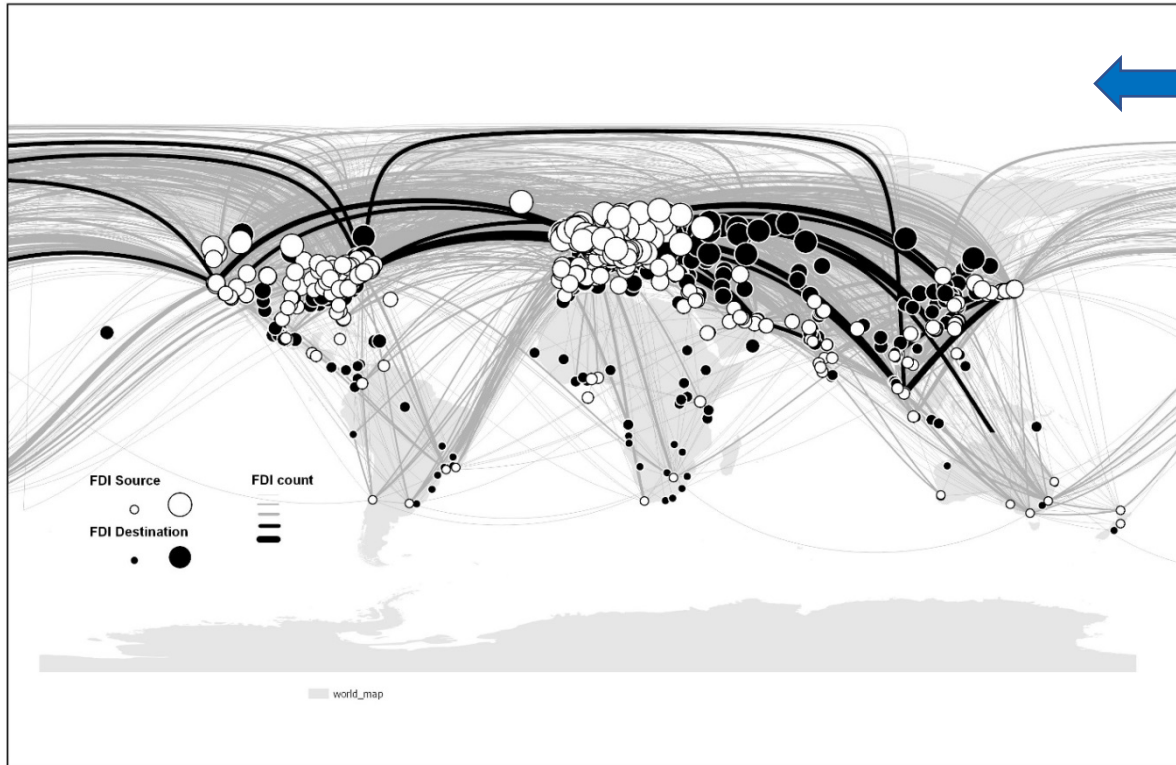
What is the impact of city and country level **FDI on income inequality** globally and in Africa?

## Theory

- 1) Since the 1960s, global **income inequality has risen exponentially** (McCormick & Wahba, 2003; Gregorio & Lee, 2002; Piketty, 2015).
- 2) Income inequality partly results from the **retained earnings and investments** of multinational corporations, and **premium rents and incomes** generated in locations (Alveredo, et al. 2018).
- 3) Most studies on income inequality are at the **country level**. Because of rapid urbanization the focus should also be at the **city level** (Kanbur, 2016).

# Multilevel analysis - same FDI but aggregated at the city and country level (2005 – 2016)

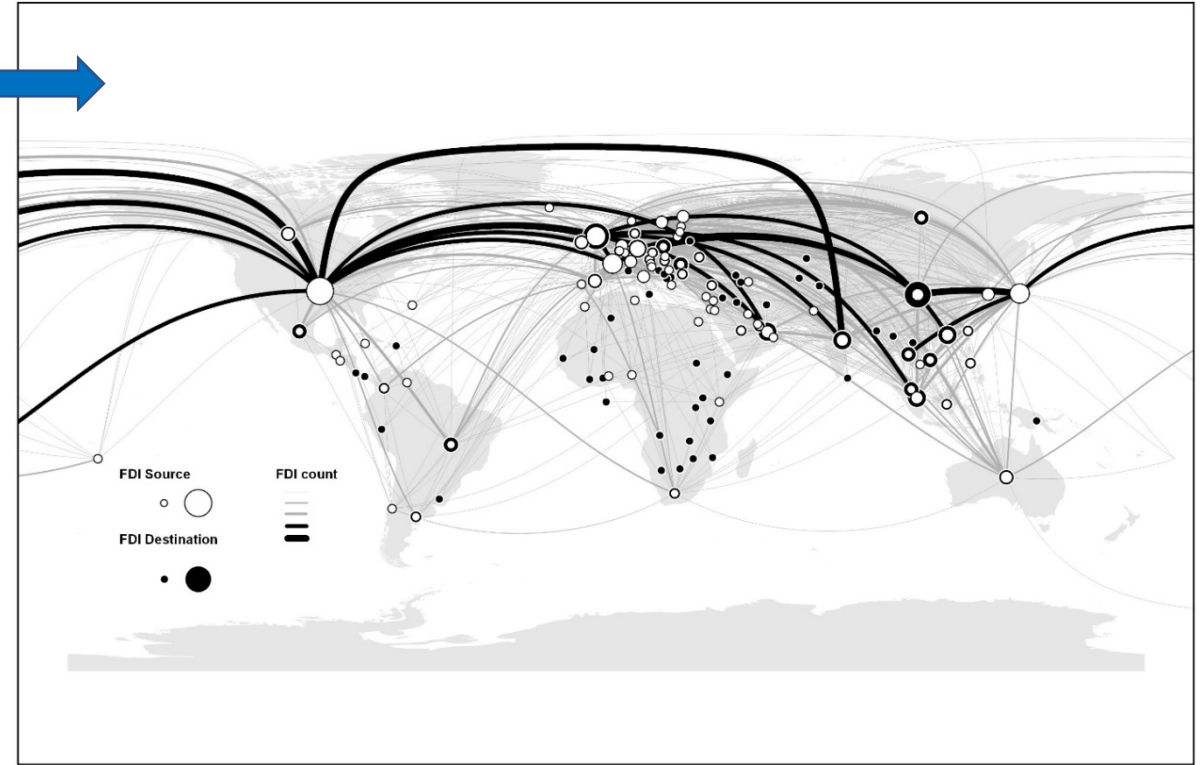
Interregional (cities within a country)



city level aggregation (for FDI and Gini)

125 destination cities (black nodes) and 800 source cities (white nodes)

Intraregional (cities across countries)



country level aggregation (for FDI and Gini)

80 destination countries (black nodes) and 42 source countries (white nodes)

# Direct, indirect and total effects of FDI measures on income inequality

<b>City gini &lt;-</b>	Direct effect	Indirect effect	Total effect
<b>City FDI Value</b>	-0.566*** (0.147)	-0.016 (0.029)	<b>-0.582***</b> (0.149)
City FDI Count	0.084 (0.193)	-1.179*** (0.286)	-1.095*** (0.314)
City FDI Distance	0.177 (0.193)	0.070 (0.049)	0.247 (0.198)
<b>Country gini &lt;-</b>	Direct	Indirect	Total
<b>Country FDI Value</b>	0.1939 (0.254)	0.305*** (0.078)	<b>0.499**</b> (0.256)
Country FDI Count	-4.217*** (0.441)	0.473* (0.246)	-3.743*** (0.453)
<b>Country FDI Distance</b>	3.051*** (0.394)	-0.649*** (0.125)	<b>2.402***</b> (0.404)

1. We see that **City FDI Value** reduces city inequality, but **Country FDI Value** increases country level inequality. This shows that FDI favours major cities at the city level (*interregional*), but for cities within countries **the distribution of FDI is highly uneven** (*intraregional*).
2. It is seen that **Country FDI Distance** increases FDI. This is likely because **large multinationals invest at great distances** utilizing technologies that do not create inclusive growth for local economies. Smaller firms tend to **invest more regionally** and with more accessible technologies.
3. In Africa these results are **more pronounced**.

# The effect of FDI on income inequality growth in African countries

VARIABLES	Model 1 Gini growth	Model 2 Gini growth
<b>Total FDI</b>	0.0346 (-0.04)	<b>-1.083***</b> (-0.42)
Absorptive Capacity	-0.140*** (-0.04)	-0.136** (-0.1)
<b>Total FDI * Absorptive Capacity</b>		<b>-0.0615*</b> (-0.03)
Human Capital		-0.0305*** (-0.01)
Quality of Institutions		-0.298* (-0.17)
<b>Total FDI * Quality of Institutions</b>		<b>0.240***</b> (-0.08)
Trade as % of GDP		0.0114* (-0.01)
Central Africa	0.0502 (-0.83)	-0.57 (-0.8)
Eastern Africa	0.712 (-0.59)	0.656 (-0.78)
Western Africa	-0.471 (-0.43)	-1.112 (-0.69)
Southern Africa	0.382 (-0.57)	0.207 (-0.87)
Constant	-0.287** (-0.42)	1.84*** (-1.27)
Observations	129	106
Number of countries	27	25
R-squared	0.2989	0.4806

Robust standard errors in parentheses

\*\*\* p<0.01, \*\* p<0.05, \* p<0.1

Baseline dummy = Northern Africa

In Africa FDI has no significant effect on inequality. More of it is likely to increase inequality (Model 1).

However, if we include the interaction between technological absorptive capacity and FDI, then the effect of FDI significantly reduces inequality in Africa (Model 2).

Similarly the interaction between institutional quality and FDI allows FDI to decrease inequality in Africa (Model 2).

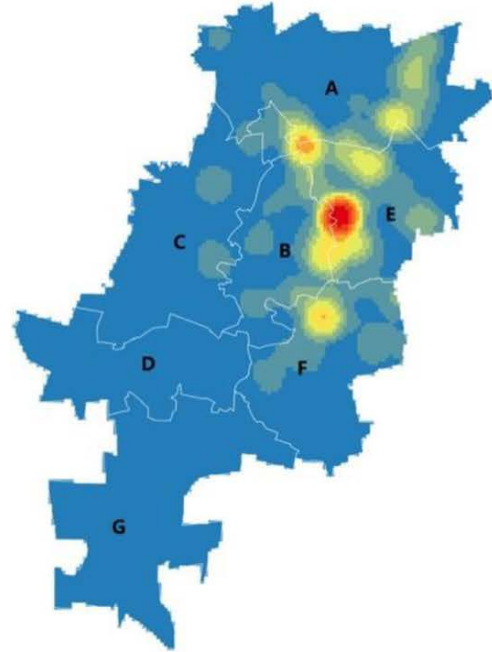


# The spatial inequality of FDI clusters in cities

London is the **aspirant city** of Johannesburg.

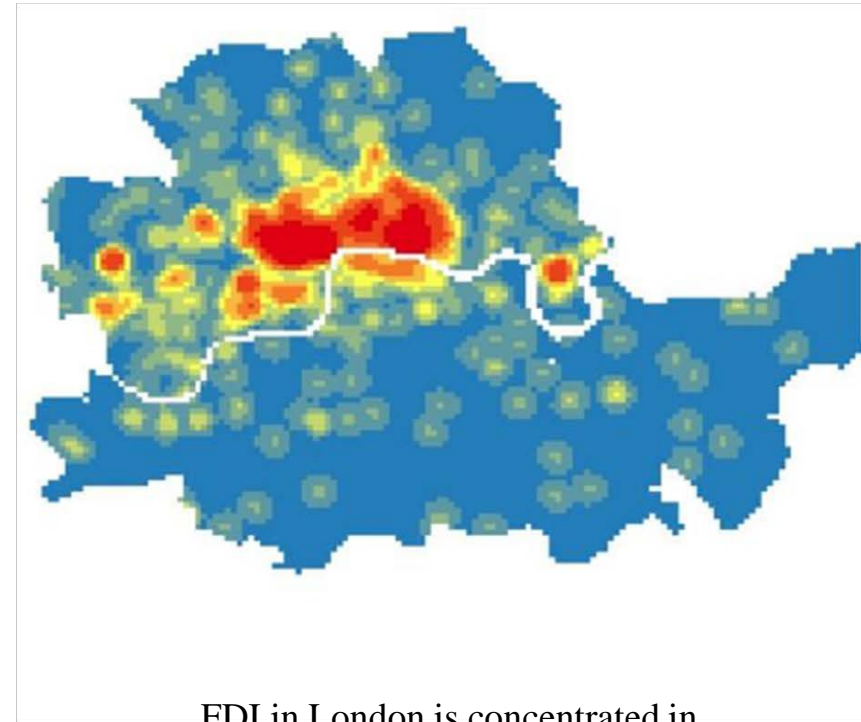
- Least competitive city for FDI sectors.
- Strong historical influence in language and culture.

Johannesburg



FDI in Johannesburg clusters in the wealthy northern suburbs, far from the CBD (district F), far from the largest populations, and hereby reinforcing the Apartheid spatial inequality.

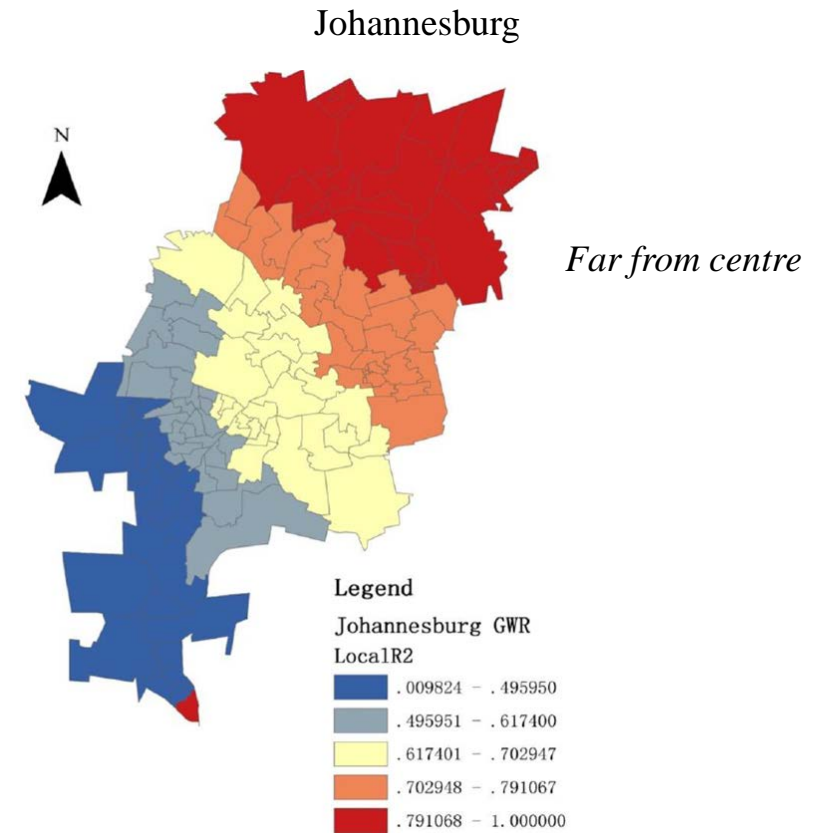
London



FDI in London is concentrated in the wealthy CBD, but closer to the population majority. It is also much more dispersed across the city. It therefore reduces spatial inequality.

# The spatial determinants of FDI clusters in Johannesburg

Variables	DV: FDI density	Coefficient	T-Statistic	Robust_t	Robust_Pr	VIF
	Intercept	-0.059	-0.704	-1.255	0.212	-----
Cultural Amenities	Number of art centres and museums	-0.092	-1.003	-0.502	0.617	1.839
	Number of educational amenities	-0.009	-0.416	-0.408	0.684	1.638
Recreational Amenities	Density of amusement projects	0.296***	2.662	2.009	0.047***	1.719
	Number of eatery facilities	0.033***	7.165	4.016	0.0001***	5.617
	Park size	0**	-2.509	-1.679	0.096*	1.584
	Density of lodging facilities	-0.196***	-3.242	-2.39	0.018**	4.272
	Number of playgrounds	-0.041	-0.926	-0.632	0.529	1.676
	Density of shops	-0.023	-0.669	-0.396	0.692	3.886
Control Variables	Number of local company	-0.0001***	-3.655	-2.243	0.027**	2.974
	Number of local company turnover	0***	6.535	3.318	0.001***	2.417
	Density of banks	-0.103	-1.923	-2.383	0.019**	1.777
	Density of bus stops	0.459***	4.841	3.978	0.0001***	4.631
	Total population	0	0.040	0.115	0.908	1.112
	Average annual income	0.000	0.877	1.188	0.237	1.468
	Percentage of bachelor degree holders	0.697	1.004	0.975	0.331	3.969
Number of obs = 135						
F(15,102) = 24.749870						
Prob>F = 0.000***						
R-squared = 0.757266						
Adj R-squared = 0.726669						
Joint Wald Statistic = 274.430407						
Pron>(chi-squared) = 0.000***						
Koenker (BP) Statistic = 83.498987						
Prob(>chi-squared) = 0.000***						



Distribution of R2 in Johannesburg

Positive effects on FDI clusters are **amusement centres**, **restaurants**, **large parks**, **local company turnover** and **density of public transport**.

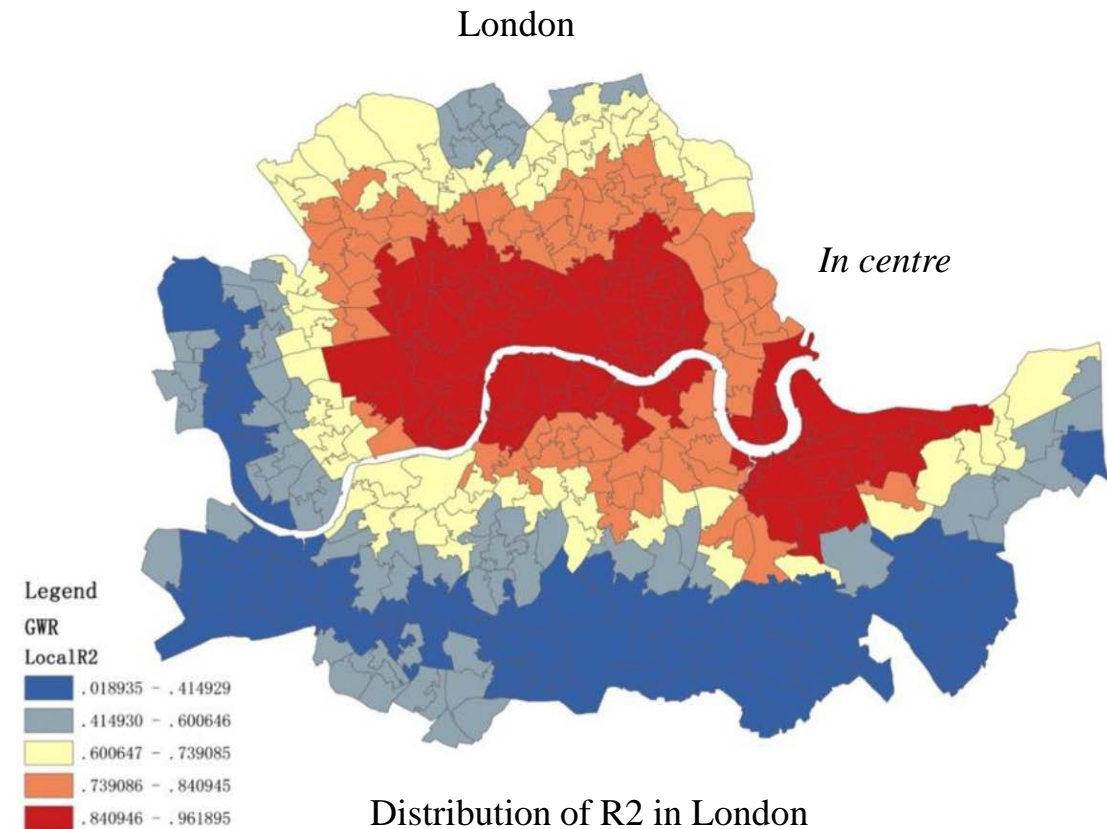
Negative effect on FDI clusters are **density of hotels** and **density of local firms**.

# The spatial determinants of FDI clusters in London

Variables	DV: FDI Density	Coefficient	t-Statistic	Robust_t	Robust_Pr	VIF
	Intercept	-0.655	-0.597	-0.880	0.379	1.684
Cultural Amenities	Number of art centres and museums	1.409***	2.432	1.708	0.089*	2.177
	Number of educational amenities	1.733***	6.873	1.890	0.060*	2.414
Recreational Amenities	Density of amusement projects	-2.011***	-3.975	-1.420	0.157	1.151
	Density of shops	0.301***	5.870	3.439	0.001***	2.354
	Density of eatery facilities	0.203***	4.380	1.748	0.081*	1.400
	Density of playgrounds	-0.078	-0.151	-0.167	0.868	3.403
	Density of lodging facilities	0.081	0.946	0.636	0.525	1.400
	Park size	0	-0.721	-1.327	0.185	2.177
Control Variables	Density of local company turnover	0	1.938	1.116	0.265	2.141
	Density of bus stops	-0.157	-1.915	-1.540	0.125	6.483
	Total road length	0.077	1.425	1.665	0.097*	2.057
	Population density	-0.011	-1.606	-1.682	0.093*	2.112
	Number of local companies	0.001***	3.156	1.062	0.289	2.896
	Density of banks	-0.256	-1.261	-0.790	0.430	1.533
Number of obs = 356 F(15,102) = 69.029 Prob>F = 0.000*** R-squared = 0.739 Adj R-squared = 0.728 Joint Wald statistics = 208.438 Prob(>chi-squared) = 0.0000* Koenker (BP) Statistic = 159.257 Prob(>chi-squared) = 0.000000***						

Positive effects on FDI clusters are proximity to **art centres and museums**, **educational institutions**, **density of shops**, **restaurants** and **local companies**.

Negative effect on FDI clusters are proximity to **amusement centres**.



# STATEMENTS AND QUESTIONS ON INVESTMENT FOR INCLUSIVE GROWTH

1. What kind of policy is required to ensure a fairer distribution of investment to more cities within a country?
2. What kind of policy is required to ensure a fairer distribution of investment to more neighborhoods within a city?

## MY FUTURE AFRICAN CITY

Because African urbanity is emergent, its cities have the unique opportunity to **overcome** socio-economic inequality and environmental degradation.

This means **avoiding** the social, economic, technological, agricultural and environmental faults of the developed world's cities.

Not only will this **boost** the economic growth and inclusiveness of its cities and environments, but will set the **example** to the world.

# L'état des villes africaines 2018

La géographie de l'investissement africain

Ronald Wall

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# The State of African Cities 2018

The geography of African investment



# THANKS FOR YOUR ATTENTION