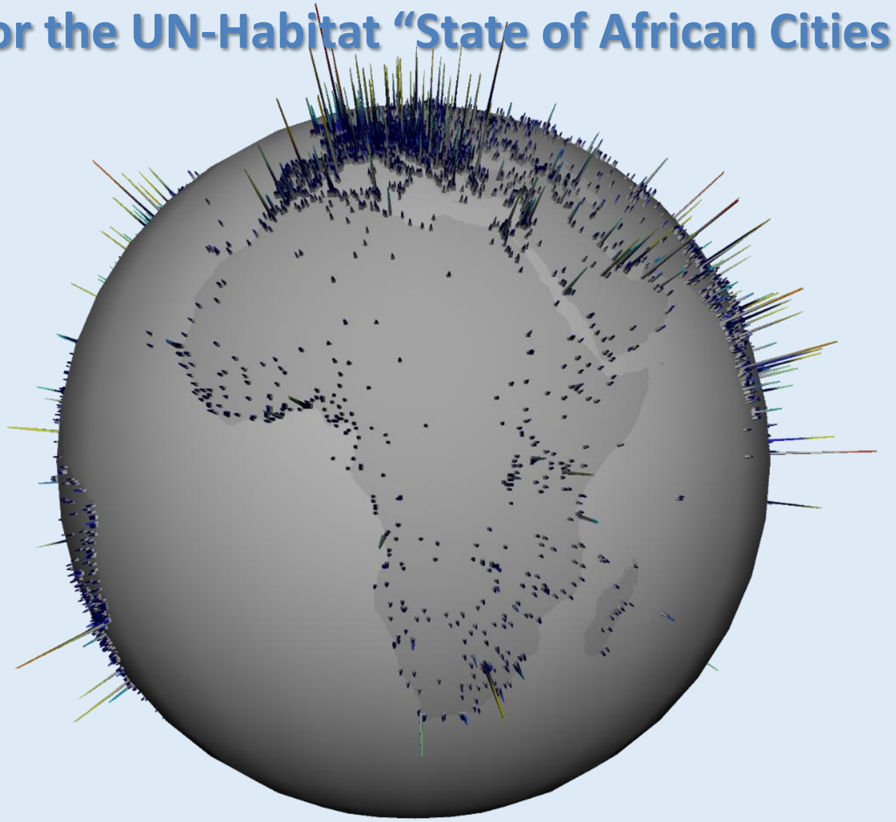
GLOCAL COMPETITOR

Initial Findings for the UN-Habitat “State of African Cities 2017” Report



Interregional Seminar - Reggio Emilia

School of Economic and Business Sciences, Wits University Johannesburg
Institute for Housing and Urban Studies, Erasmus University Rotterdam

Prof. Dr. Ronald Wall

Chair in Economic Development of the City of Johannesburg
22-06-2016

General Introduction to Foreign Direct Investment (FDI)

1. FDI concerns cross-border investment made by a firm in one country into a firm in another country e.g. headquarters, sales and marketing office, manufacturing plant, extraction unit, logistics center.

2. The general incentives of firms (FDI) is to gain access to foreign markets, optimize production and maximize profits.

3. Since 1980, FDI grew faster than trade and now accounts for the lion's share of global GNP.

4. It is the primary indicator of economic globalization i.e. a city's integration in the world economy.

5. FDI consists mainly of mergers & acquisitions and greenfield investments.

6. Greenfield FDI concerns new projects and therefore has highest impact on urban regional development.

Quote: United Nations Millennium Declaration 2000

We [the United Nations Member States] resolve to take special measures to address the challenges of poverty eradication and sustainable development in Africa, including debt cancellation, improved market access, enhanced official development assistance and increased flows of Foreign Direct Investment (FDI).

Africa and FDI

1. Sub-Saharan Africa remains the most poverty stricken region in the world (Bluhm et al 2014).

2. FDI generates employment in African countries and hereby reduces poverty (Gohou and Soumaré 2012).

3. Due to lack of domestic capital, raising finance through FDI is an essential prerequisite of growth in Africa (Asiedu 2002).

4. However this is only achieved in host countries with favorable conditions e.g. absorptive capacity, good governance, openness and adequate human capital (Borensztein 1998).

3D GIS Map of FDI into Global Destination Cities (2003 - 2014)

3D GIS Map of FDI from Global Source Cities (2003 - 2014)

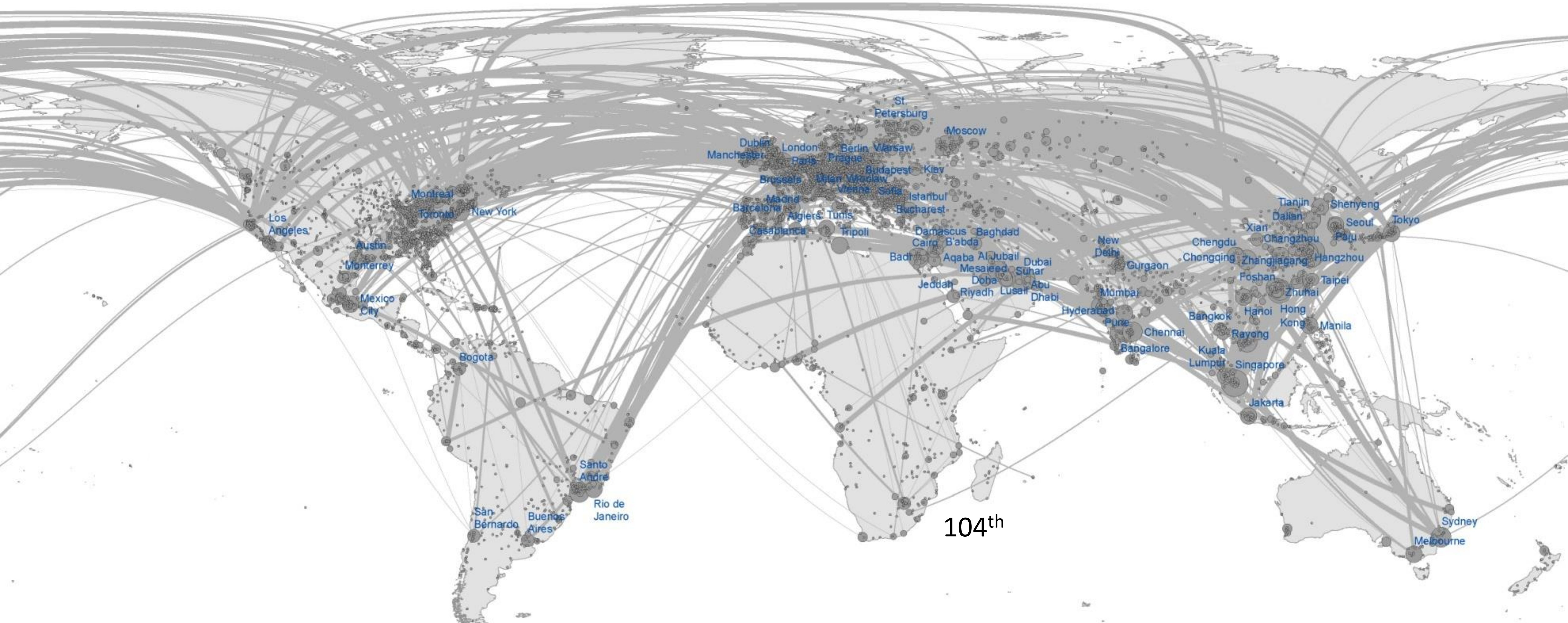
DESTINATION: Exponential Growth Rate of FDI into World Regions (2003 - 2014)

Source: State of African Cities Report (forthcoming 2017)

SOURCE: Exponential Growth Rate of FDI from World Regions (2003 - 2014)

Source: State of African Cities Report (forthcoming 2017)

GIS Map of Top 1000 Investment Linkages to Top 100 City Destinations (2003 - 2014)

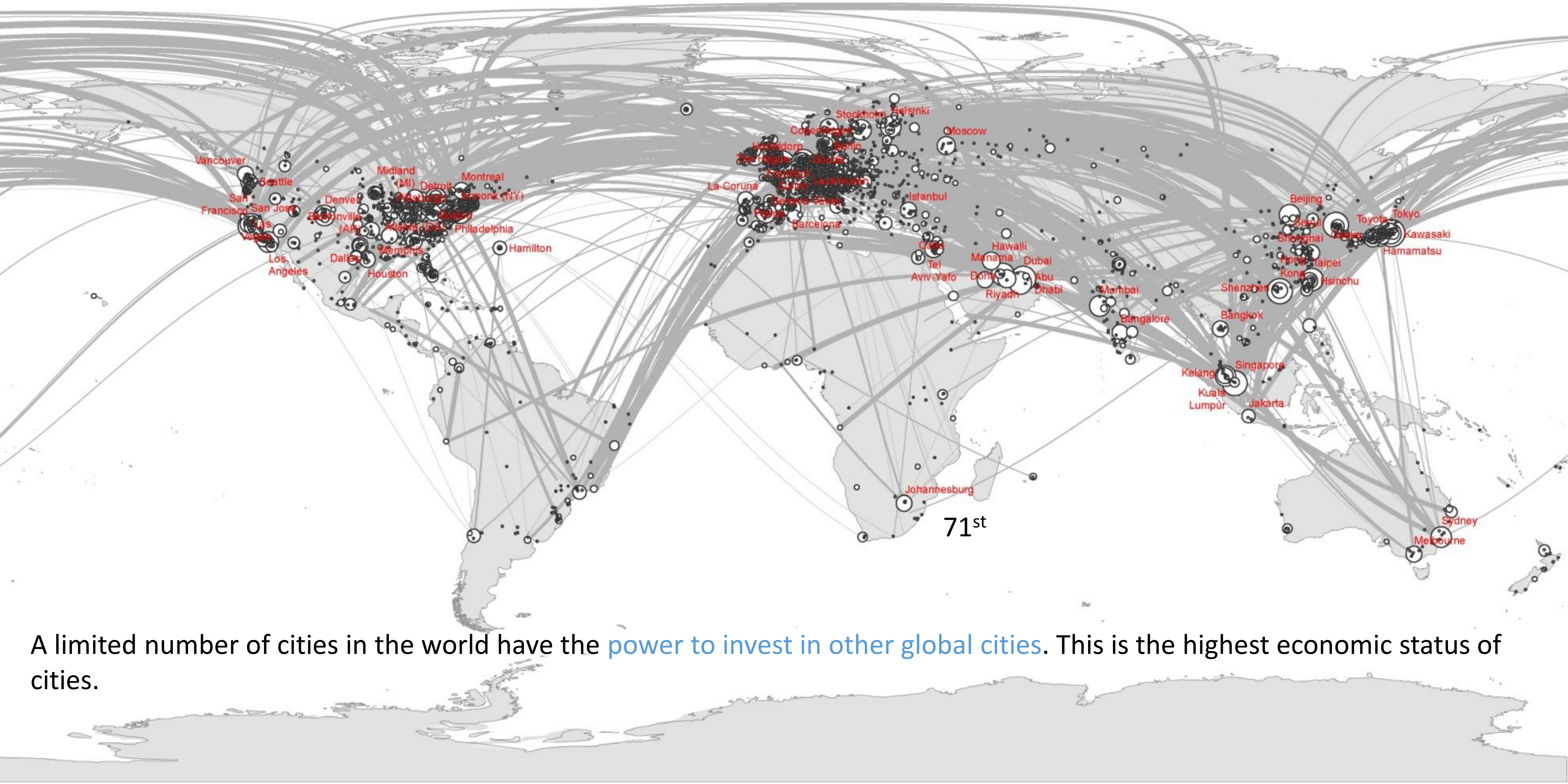


A city's development is not only determined by local urban characteristics, but increasingly by its position within regional and global flows of investment.

By understanding the interdependence of these three scales, more effective urban development policy can be formed.

Source: State of African Cities Report (forthcoming 2017)

GIS Map of Top 1000 Investment Linkages from Top 100 City Sources (2003 - 2014)



A limited number of cities in the world have the power to invest in other global cities. This is the highest economic status of cities.

Source: State of African Cities Report (forthcoming 2017)

African City Ranking by Volume of FDI (Destination and Source 2003 – 2014)

African City Ranking for Destination and Source FDI (2003 - 2014)

DESTINATION

Africa Rank	World Rank	City Destination	Total FDI (million $)
1	14	Cairo	36818
2	31	Tunis	22488
3	34	Tripoli	21924
4	79	Algiers	10596
5	87	Badr	9309
6	96	Casablanca	8607
7	104	Johannesburg	8126
8	123	Tangier	6737
9	140	Lagos	5895
10	149	Luanda	5460
11	156	Arzew	5162
12	181	Cape Town	4591
13	189	Nairobi	4349
14	192	Sekondi-Takoradi	4272
15	208	Rabat	3976
16	209	Oran	3971
17	234	Marrakesh	3569
18	265	Jijel	3087
19	274	Accra	3024
20	282	Port Elizabeth	2930
21	292	Addis Ababa	2791
22	301	Tema	2694
23	311	Marsa Alam	2610
24	315	Djibouti	2592
25	356	Nacala	2276
26	373	Damietta	2195
27	386	Dakar	2118
28	396	Alexandria	2072
29	431	Bur Said	1864
30	435	Abuja	1841

SOURCE

Africa Rank	World Rank	City Source	Total FDI (million $)
1	71	Johannesburg	12640
2	100	Cairo	8290
3	227	Casablanca	2491
4	251	Lagos	2148
5	260	Nairobi	2057
6	276	Cape Town	1947
7	295	Port Louis	1752
8	453	El Mansura	879
9	469	El Giza	816
10	481	Harare	789
11	508	Lome	727
12	511	Windhoek	722
13	632	Luanda	520
14	660	Dar es Salaam	489
15	773	Tripoli	375
16	872	Tunis	308
17	902	Abidjan	292
18	1075	Tongaat	215
19	1124	Stellenbosch	199
20	1219	Durban	168
21	1304	Dakar	151
22	1366	Addis Ababa	138
23	1498	Abuja	116
24	1543	Pretoria	110
25	1560	Midrand	107
26	1614	Agbara	100
27	1688	Gaborone	92
28	1807	Ebene	81
29	1883	Accra	74
30	2111	Maputo	58

Source: State of African Cities Report (forthcoming 2017)

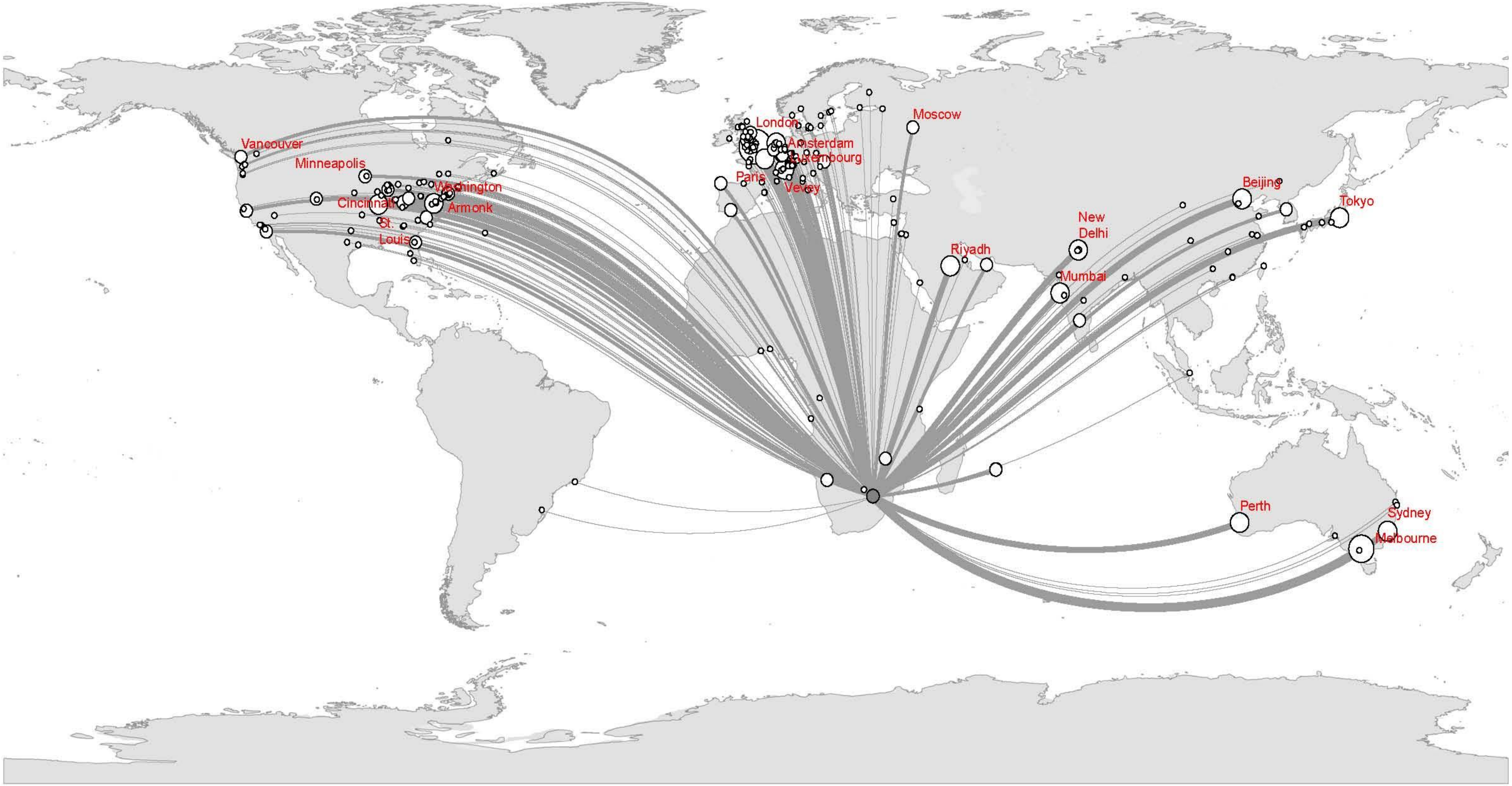
African City Ranking by Exponential Growth of FDI (Destination 2003 – 2014)

Exponential Growth Rates of FDI into African Cities

Rank	City	Country	Exponential Growth
1	Harare	Zimbabwe	192
2	Abidjan	Ivory Coast	180
3	Kigali	Rwanda	135
4	Freetown	Sierra Leone	104
5	Ouagadougou	Burkina Faso	96
6	Nairobi	Kenya	93
7	Addis Ababa	Ethiopia	89
8	Mombasa	Kenya	84
9	Kampala	Uganda	66
10	Port Harcourt	Nigeria	43
11	Cairo	Egypt	42
12	Giza	Egypt	41
13	Lusaka	Zambia	40
14	Brazzaville	Congo (DRC)	38
15	Cape Town	South Africa	27
16	**Johannesburg**	**South Africa**	**25**
17	Dakar	Senegal	25
18	Dar Es Salaam	Tanzania	23
19	Accra	Ghana	22
20	Kinshasa	Congo (DRC)	18
21	Windhoek	Namibia	17
22	Tangier	Morocco	16
23	Djibouti	Djibouti	16
24	Casablanca	Morocco	12
25	Juba	South Sudan	12
26	Maputo	Mozambique	11
27	Port Elizabeth	South Africa	5
28	Alexandria	Egypt	4
29	Pretoria	South Africa	-7
30	Luanda	Angola	-9

Source: State of African Cities Report (forthcoming 2017)

Top 20 Investor Cities into Johannesburg (2003 – 2014)



Source: State of African Cities Report (forthcoming 2017)

Top 30 Investor Countries and Cities into Johannesburg (2003 – 2014)

Top 30 Investor Countries into Johannesburg (2003 - 2014)

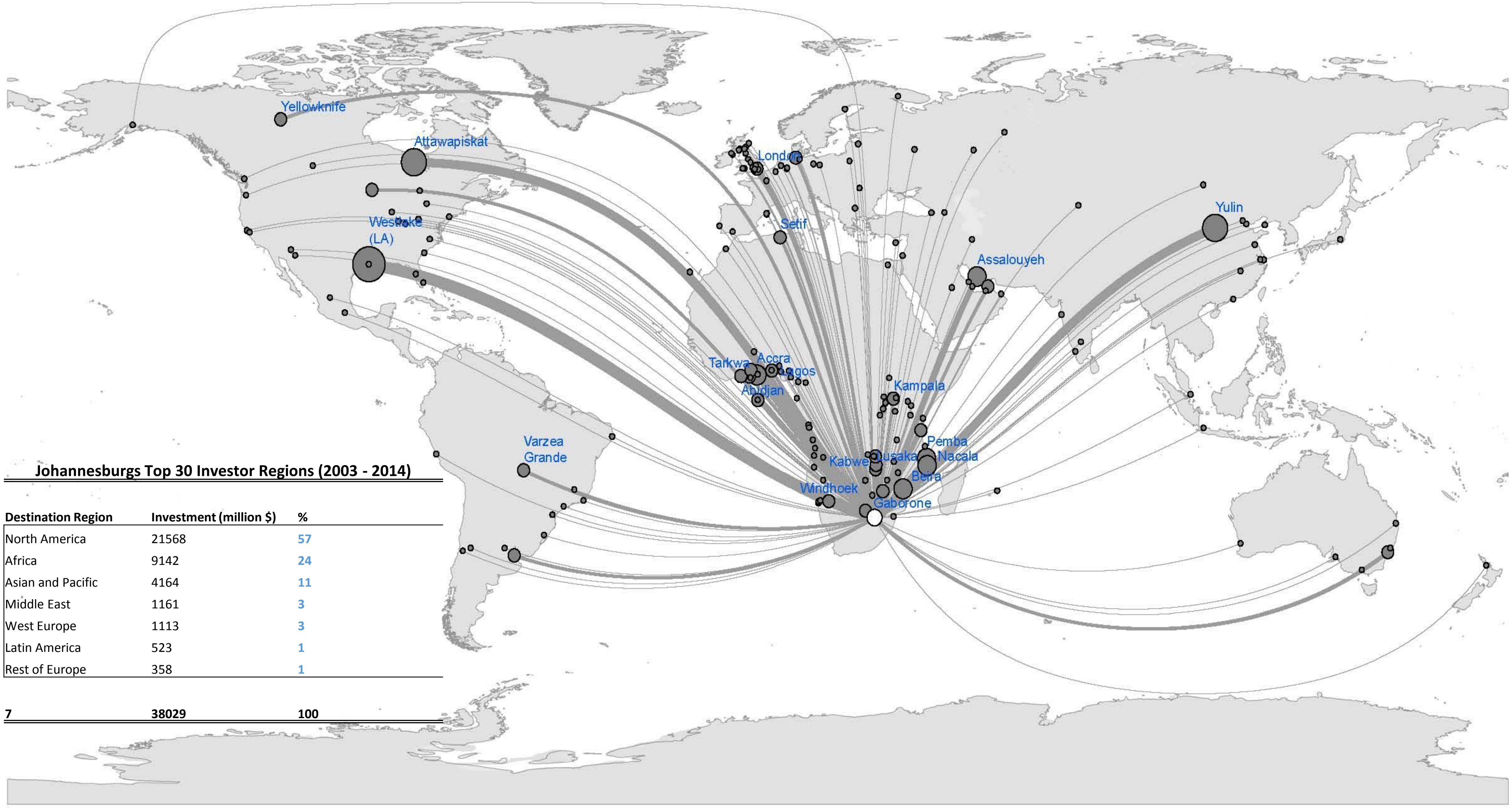
Source Country	Rank	Investment (million $)	%
UK	1	6029	22.4
United States	2	5196	19.3
Australia	3	4382	16.3
India	4	2386	8.9
Japan	5	1052	3.9
France	6	987	3.7
China	7	963	3.6
Switzerland	8	651	2.4
Luxembourg	9	637	2.4
Netherlands	10	587	2.2
Saudi Arabia	11	565	2.1
Canada	12	446	1.7
Spain	13	385	1.4
Russia	14	380	1.4
Mauritius	15	322	1.2
Sweden	16	211	0.8
Austria	17	203	0.8
Germany	18	190	0.7
South Korea	19	178	0.7
Zimbabwe	20	167	0.6
Namibia	21	165	0.6
Belgium	22	156	0.6
UAE	23	121	0.4
Italy	24	120	0.4
Ireland	25	74	0.3
Denmark	26	54	0.2
Botswana	27	51	0.2
Hong Kong	28	35	0.1
Brazil	29	28	0.1
Norway	30	28	0.1
44	**44**	**26924**	**99**

Top 30 Investor Cities into Johannesburg (2003 - 2014)

Source City	Rank	Investment (million $)	%
London	1	5382	20.0
Melbourne	2	2770	10.3
Mumbai	3	1420	5.3
Washington	4	1266	4.7
Tokyo	5	981	3.6
Paris	6	883	3.3
Perth	7	811	3.0
Sydney	8	750	2.8
New Delhi	9	641	2.4
Beijing	10	581	2.2
St. Louis	11	564	2.1
Vevey	12	537	2.0
Amsterdam	13	532	2.0
Riyadh	14	525	1.9
Luxembourg	15	440	1.6
Moscow	16	372	1.4
Armonk	17	339	1.3
Vancouver	18	335	1.2
Cincinnati	19	317	1.2
Minneapolis	20	237	0.9
Itasca	21	212	0.8
Seville	22	207	0.8
Vienna	23	200	0.7
Grevenmacher	24	197	0.7
Stamford	25	197	0.7
San Jose	26	185	0.7
Seoul	27	178	0.7
Port Louis	28	172	0.6
Columbus	29	171	0.6
Harare	30	167	0.6
232	**232**	**26924**	**80**

Source: State of African Cities Report (forthcoming 2017)

Johannesburg's Top 20 Cities it Invests in (2003 – 2014)



Johannesburgs Top 30 Investor Regions (2003 - 2014)

Destination Region	Investment (million $)	%
North America	21568	57
Africa	9142	24
Asian and Pacific	4164	11
Middle East	1161	3
West Europe	1113	3
Latin America	523	1
Rest of Europe	358	1
7	**38029**	**100**

Source: State of African Cities Report (forthcoming 2017)

Johannesburg's Top 30 Investment Countries and Cities (2003 – 2014)

Johannesburg's Top 30 Countries it Invests in (2003 - 2014)

Destination Country	Rank	Investment (million $)	%
United States	1	19016	50.0
China	2	3380	8.9
Mozambique	3	2684	7.1
Canada	4	2551	6.7
Ghana	5	2114	5.6
Iran	6	908	2.4
Zambia	7	718	1.9
Nigeria	8	680	1.8
Namibia	9	497	1.3
UK	10	467	1.2
Tanzania	11	388	1.0
Algeria	12	350	0.9
Ivory Coast	13	311	0.8
Zimbabwe	14	298	0.8
Botswana	15	294	0.8
Brazil	16	280	0.7
Uganda	17	267	0.7
Germany	18	235	0.6
Russia	19	234	0.6
Australia	20	211	0.6
India	21	206	0.5
Argentina	22	189	0.5
Congo (DRC)	23	186	0.5
UAE	24	180	0.5
Spain	25	170	0.4
Belgium	26	111	0.3
Kenya	27	109	0.3
Singapore	28	103	0.3
Hong Kong	29	102	0.3
Bahrain	30	99	0.2
61	**62**	**38029**	**92**

Johannesburg's Top 30 Cities it invest in (2003 - 2014)

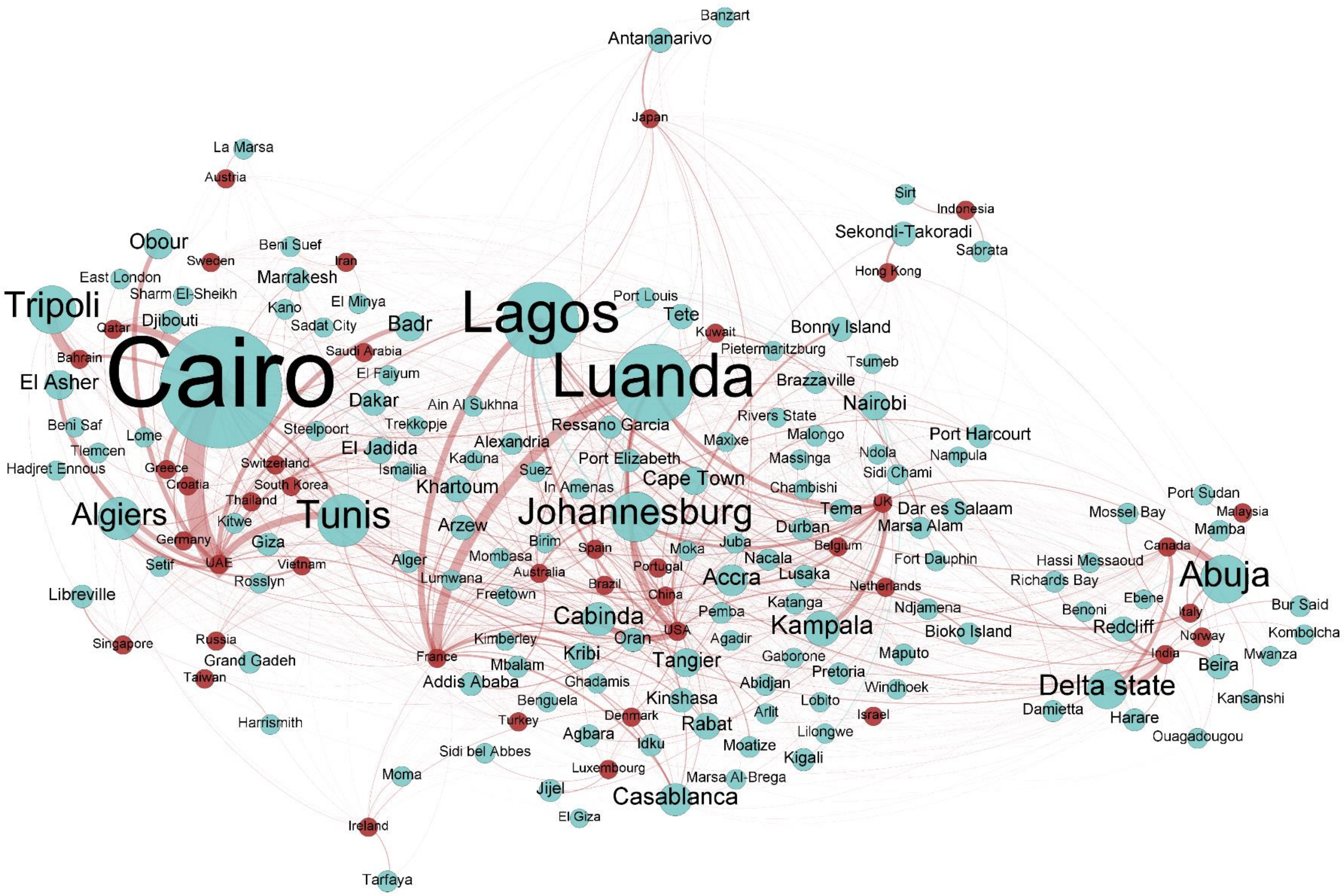
Destination City	Country	Rank	Investment (million $)	%
Westlake	United States	1	18500.0	48.6
Yulin	China	2	3000.0	7.9
Attawapiskat	Canada	3	1994.5	5.2
Accra	Ghana	4	1481.9	3.9
Assalouyeh	Iran	5	900.0	2.4
Pemba	Mozambique	6	880.2	2.3
Beira	Mozambique	7	864.9	2.3
Nacala	Mozambique	8	864.9	2.3
Yellowknife	Canada	9	498.0	1.3
Windhoek	Namibia	10	417.9	1.1
Lagos	Nigeria	11	387.4	1.0
Tarkwa	Ghana	12	357.0	0.9
Setif	Algeria	13	350.0	0.9
Abidjan	Ivory Coast	14	311.0	0.8
Varzea Grande	Brazil	15	262.3	0.7
Lusaka	Zambia	16	258.9	0.7
Gaborone	Botswana	17	253.7	0.7
Kampala	Uganda	18	249.8	0.7
London	UK	19	244.9	0.6
Kabwe	Zambia	20	229.8	0.6
Kumasi	Ghana	21	193.4	0.5
Dar es Salaam	Tanzania	22	190.1	0.5
Zvishavane	Zimbabwe	23	178.9	0.5
Dubai	UAE	24	174.9	0.5
Cloquet	United States	25	170.0	0.4
Mufulira	Zambia	26	162.2	0.4
Ruashi	Congo (DRC)	27	162.2	0.4
Buenos Aires	Argentina	28	157.3	0.4
Sydney	Australia	29	154.7	0.4
Mwadui	Tanzania	30	150.0	0.4
184		**184**	**38029**	**89**

Source: State of African Cities Report (forthcoming 2017)

Johannesburg's Position within Different Network Metrics (Weighted Indegree)

Network Centrality Scores: Inward FDI (Weighted Indegree)

Rank	City	Weighted indegree
1	Cairo	89875
2	Luanda	53426
3	Lagos	50146
4	Tunis	29258
5	Johannesburg	26924
6	Abuja	25730
7	Tripoli	25600
8	Algiers	20794
9	Delta state	17803
10	Kampala	14543
11	Cabinda	12671
12	Casablanca	11817
13	Accra	10878
14	Badr	9309
15	Obour	9309
16	El Asher	9039
17	Nairobi	8423
18	Tangier	8324
19	Cape Town	7679
20	Rabat	6872
21	Khartoum	6470
22	El Jadida	6231
23	Dakar	6146
24	Kribi	6003
25	Redcliff	5503
26	Tete	5440
27	Arzew	5162
28	Kinshasa	4934
29	Sekondi-Takoradi	4906
30	Dar es Salaam	4892

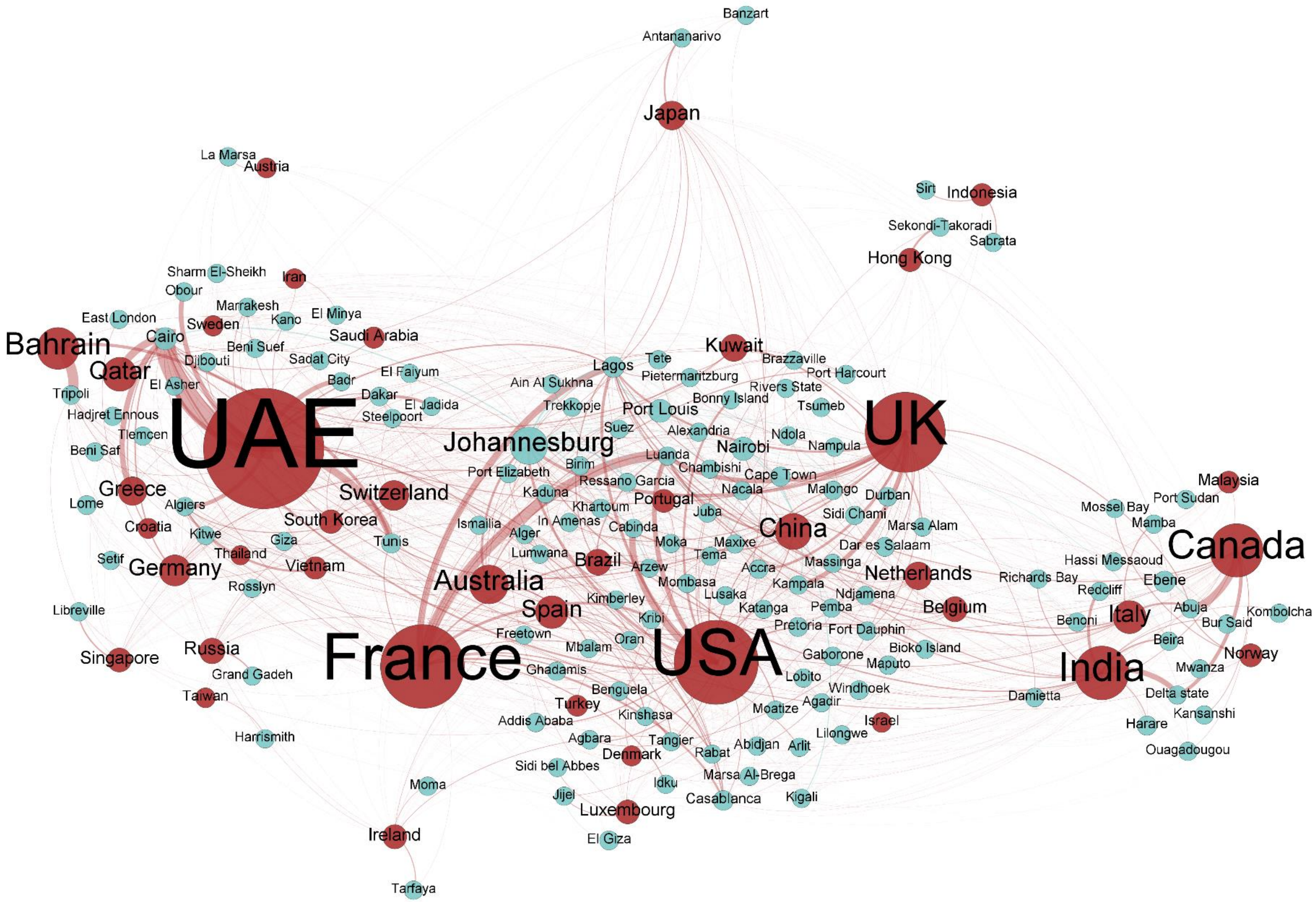


Source: State of African Cities Report (forthcoming 2017)

Johannesburg's Position within Different Network Metrics (Weighted Outdegree)

Network Centrality Scores: Outward FDI (Weighted Outdegree)

Rank	City or Country	Weighted outdegree
1	UAE	117088
2	USA	75234
3	France	75015
4	UK	70751
5	India	40509
6	Canada	39978
7	Bahrain	26821
8	Australia	23228
9	Johannesburg	21486
10	China	20178
11	Qatar	17605
12	Spain	16375
13	Italy	16354
14	Germany	14511
15	Switzerland	13000
16	Japan	11767
17	Greece	11373
18	Netherlands	10439
19	Kuwait	9939
20	Brazil	8475
21	Russia	8105
22	Belgium	7273
23	Ireland	6398
24	Singapore	6356
25	Luxembourg	6056
26	South Korea	5779
27	Nairobi	5772
28	Hong Kong	5427
29	Port Louis	5281
30	Norway	5119



Source: State of African Cities Report (forthcoming 2017)

FDI into Africa by Industrial Sector (2003 – 2014)

Aggregates	Percentage FDI	Exponential Growth
Services	19	10
Hitech	7	10
Manufacturing	39	9
Resource	36	-6
Total	**100**	

Knowledge Intensive Industries

+

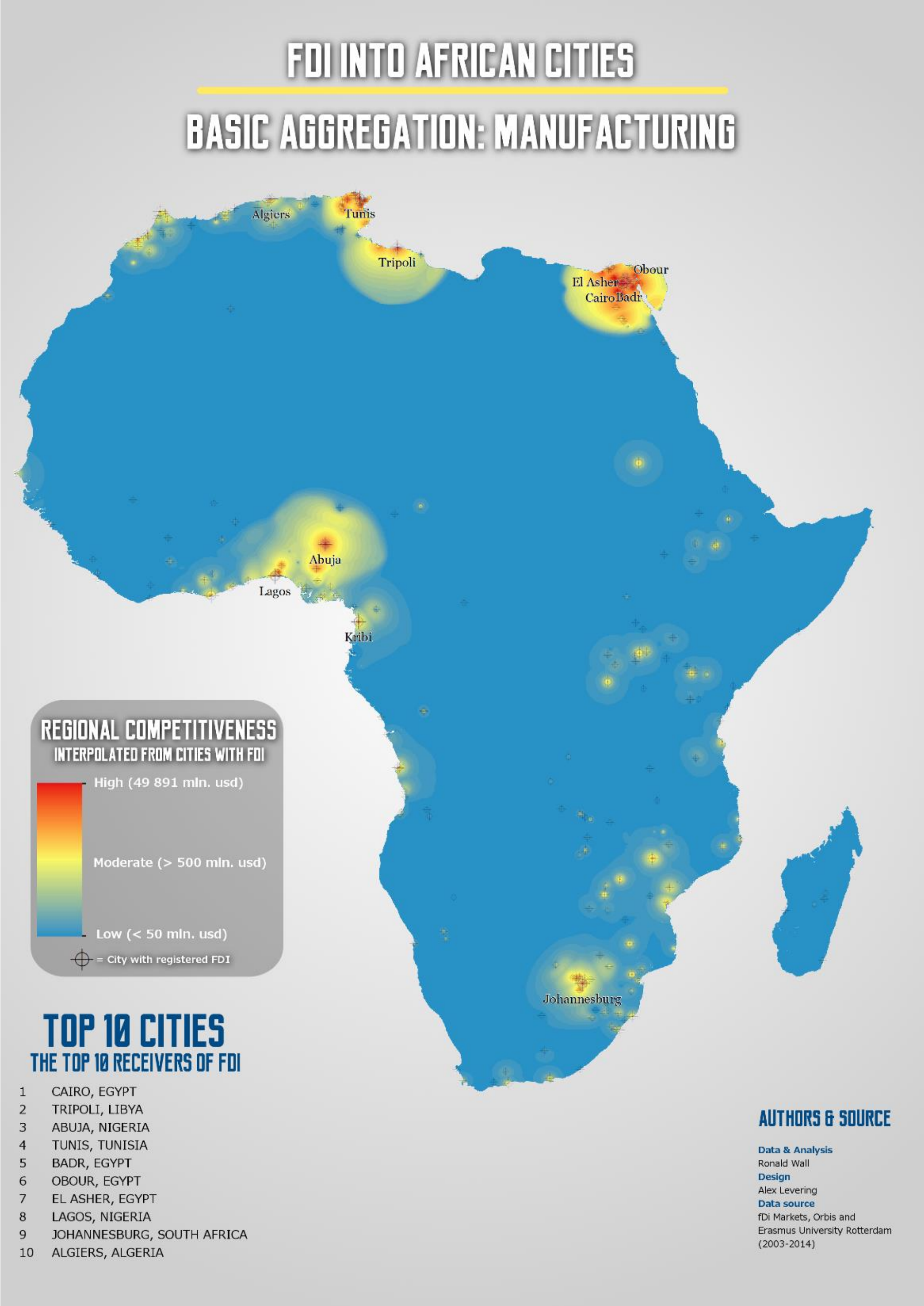
Commodities

-

Rank	Sectors	Exponential Growth
1	Healthcare	156
2	Renewable energy	72
3	Industrial Machinery, Equipment & Tools	63
4	Communications	62
5	Consumer Electronics	59
6	Medical Devices	58
7	Rubber	55
8	Financial Services	46
9	Consumer Products	42
10	Aerospace	40
11	Real Estate	39
12	Chemicals	37
13	Textiles	37
14	Non-Automotive Transport OEM	35
15	Business Services	32
16	Software & IT services	30
17	Electronic Components	30
18	Pharmaceuticals	26
19	Warehousing & Storage	25
20	Automotive Components	21
21	Transportation	21
22	Automotive OEM	19
23	Food & Tobacco	16
24	Building & Construction Materials	13
25	Beverages	-6
26	Plastics	-13
27	Coal, Oil and Natural Gas	-16
28	Metals	-18
29	Business Machines & Equipment	-32
30	Biotechnology	-34
31	Minerals	-41
32	Hotels & Tourism	-43
33	Paper, Printing & Packaging	-64

Source: State of African Cities Report (forthcoming 2017)

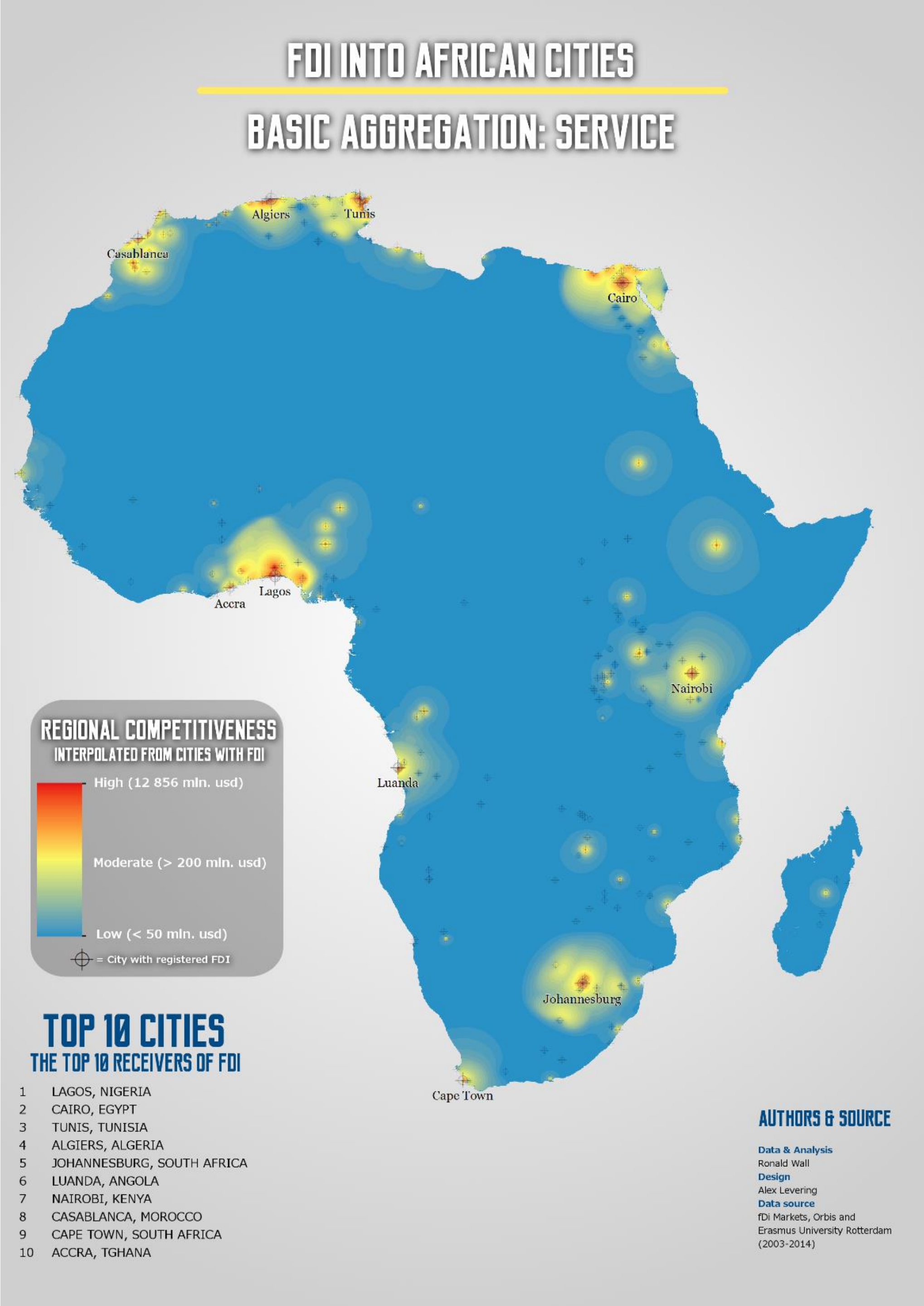
GIS Interpolation (Continental)



Johannesburg is 9th in manufacturing in Africa.

Source: State of African Cities Report (forthcoming 2017)

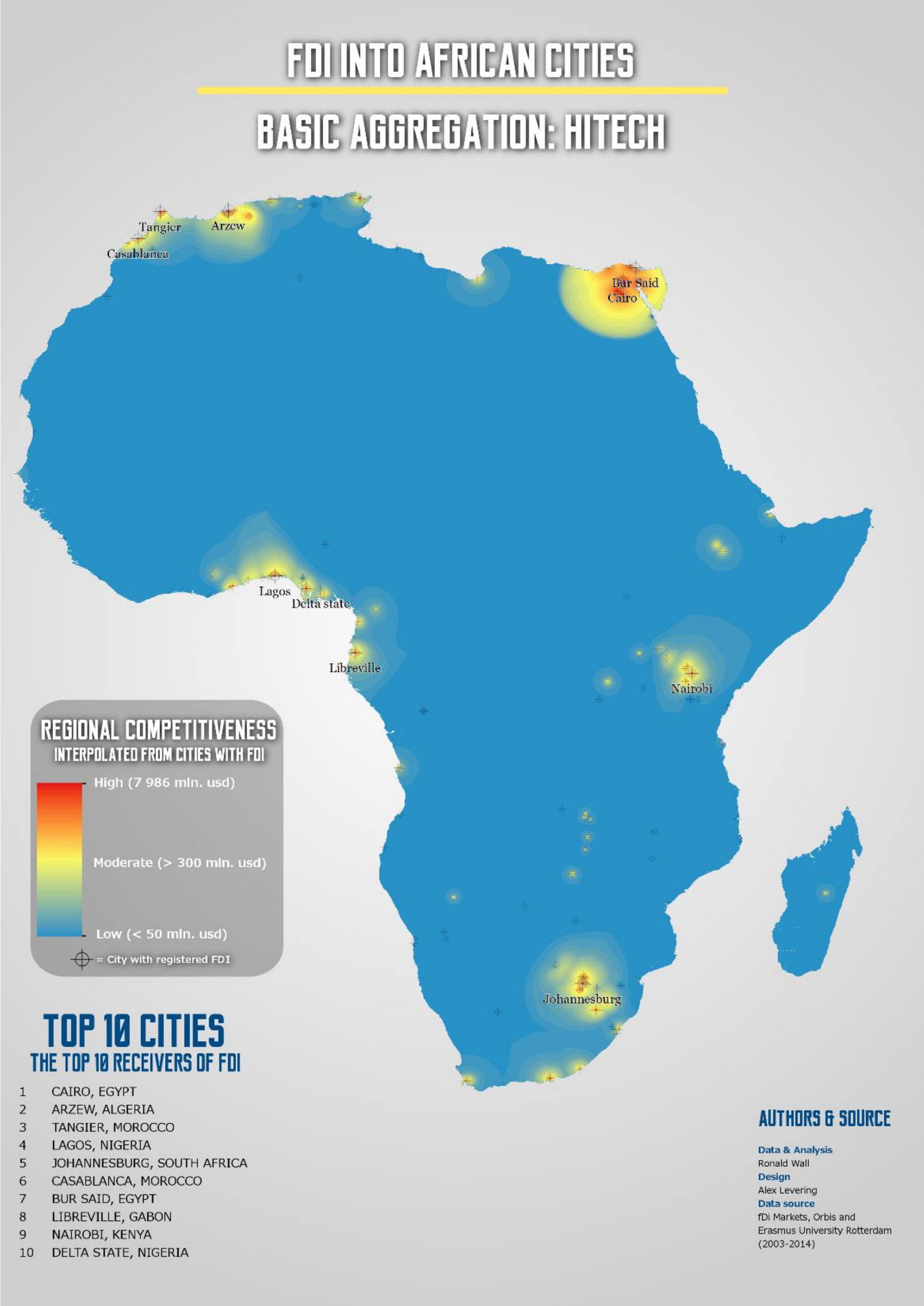
GIS Interpolation (Continental)



Johannesburg is 5th in services in Africa.

Source: State of African Cities Report (forthcoming 2017)

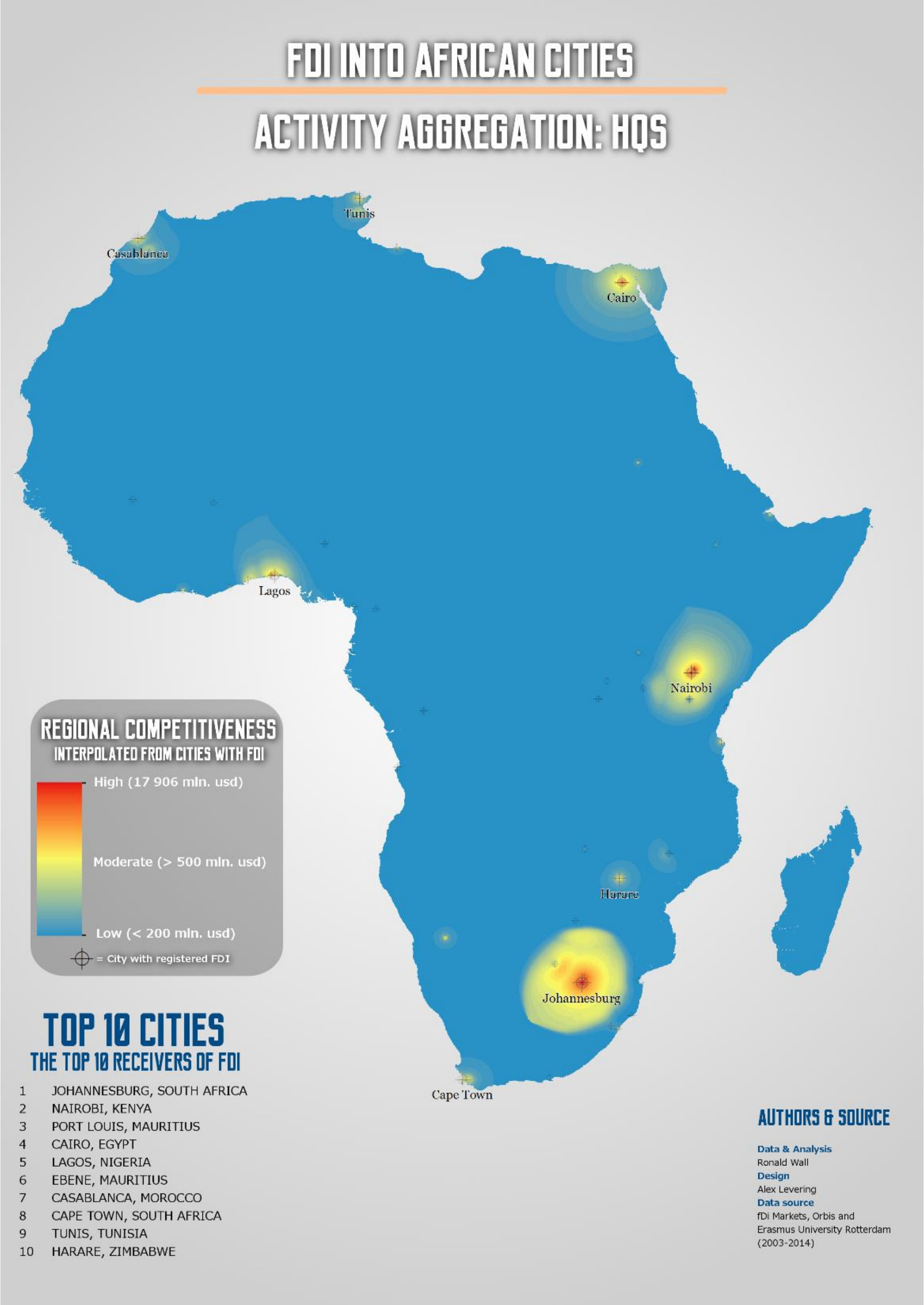
GIS Interpolation (Continental)



Johannesburg is 5^{th} in hitech in Africa.

Source: State of African Cities Report (forthcoming 2017)

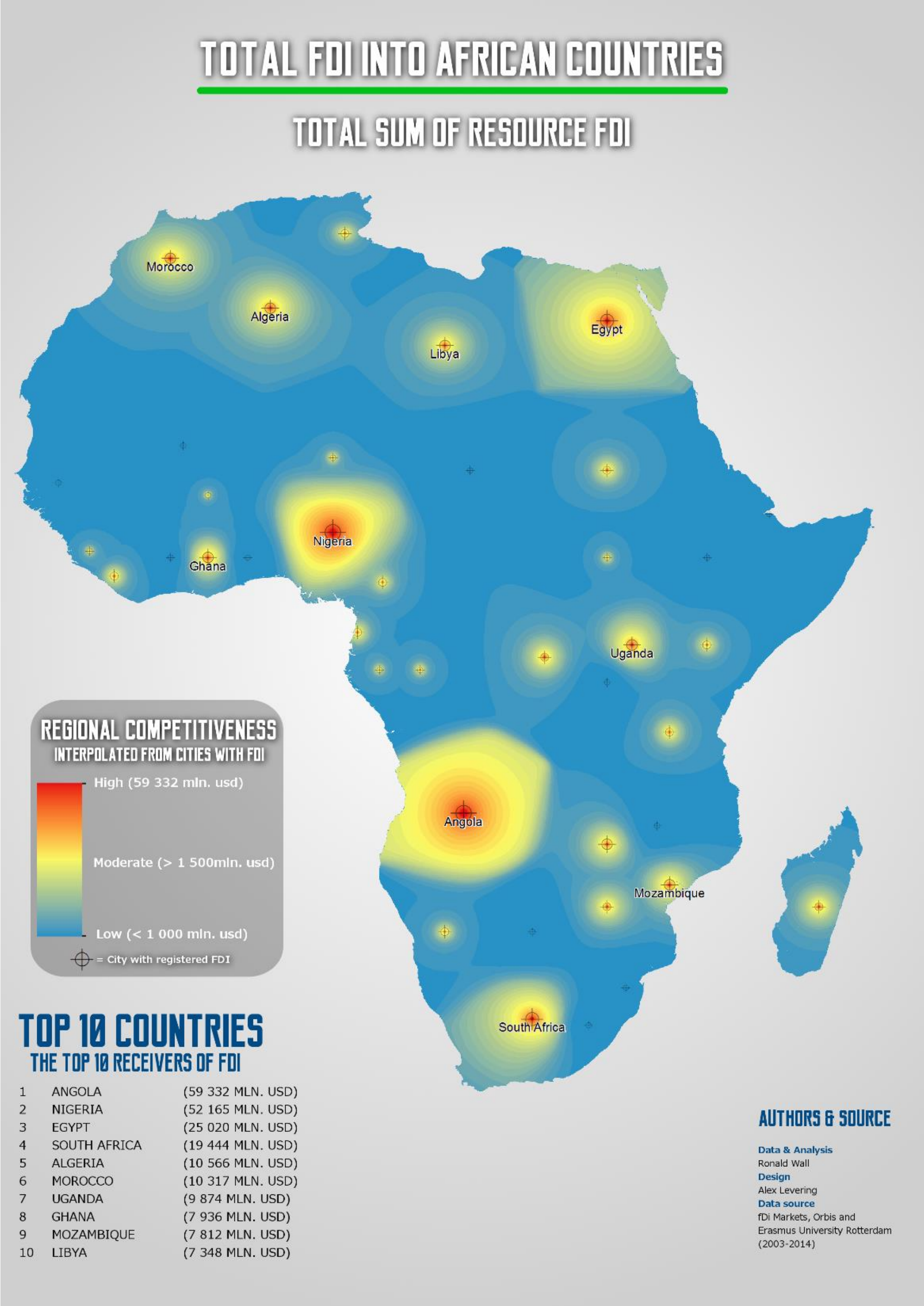
GIS Interpolation (Continental)



Johannesburg is 1st in headquarters in Africa.

Source: State of African Cities Report (forthcoming 2017)

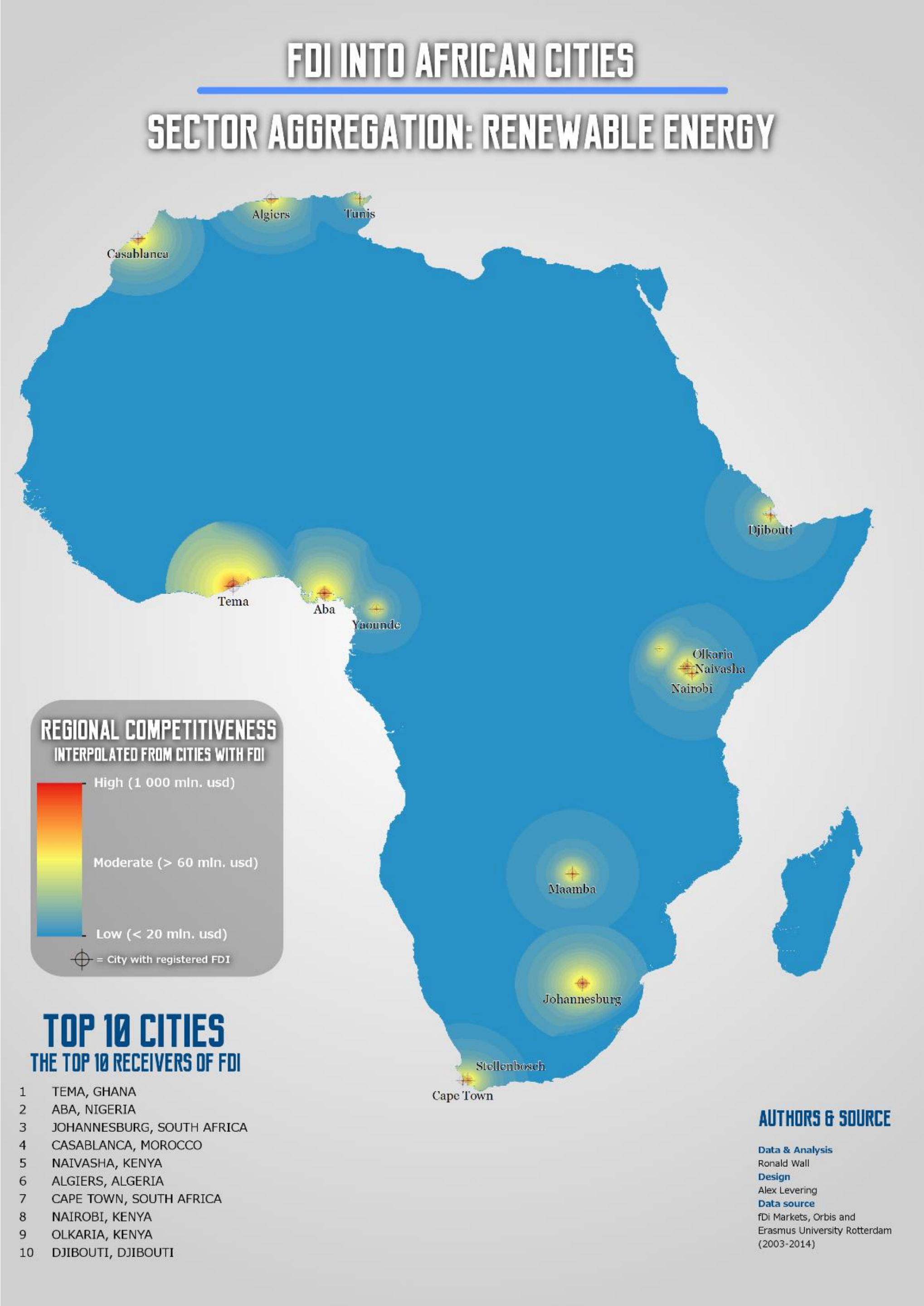
GIS Interpolation (Continental)



Johannesburg is 4th in resources in Africa.

Source: State of African Cities Report (forthcoming 2017)

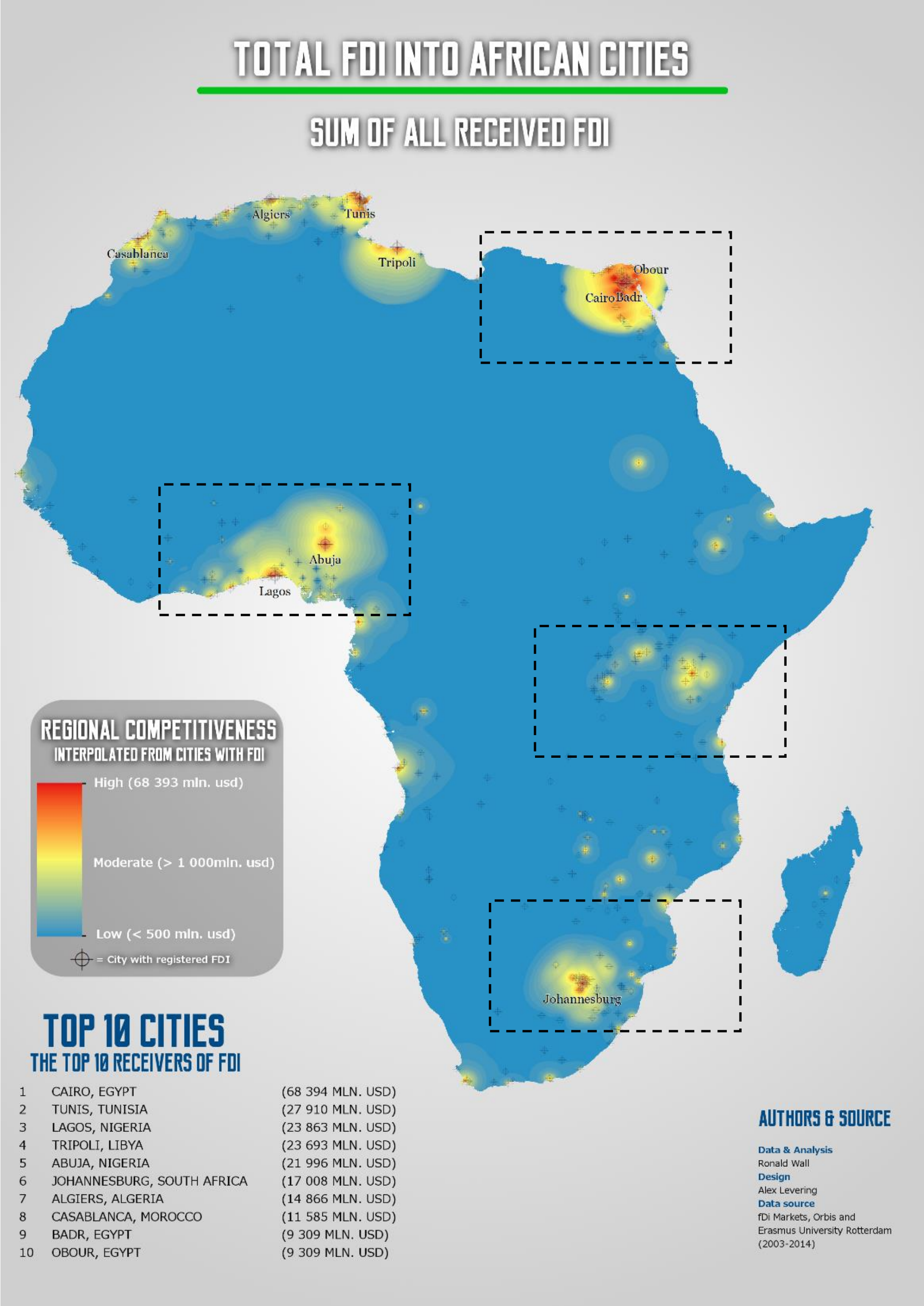
GIS Interpolation (Continental) Sub-sector



Johannesburg is 3rd in renewable energy in Africa.

Source: State of African Cities Report (forthcoming 2017)

GIS Interpolation (Continental)

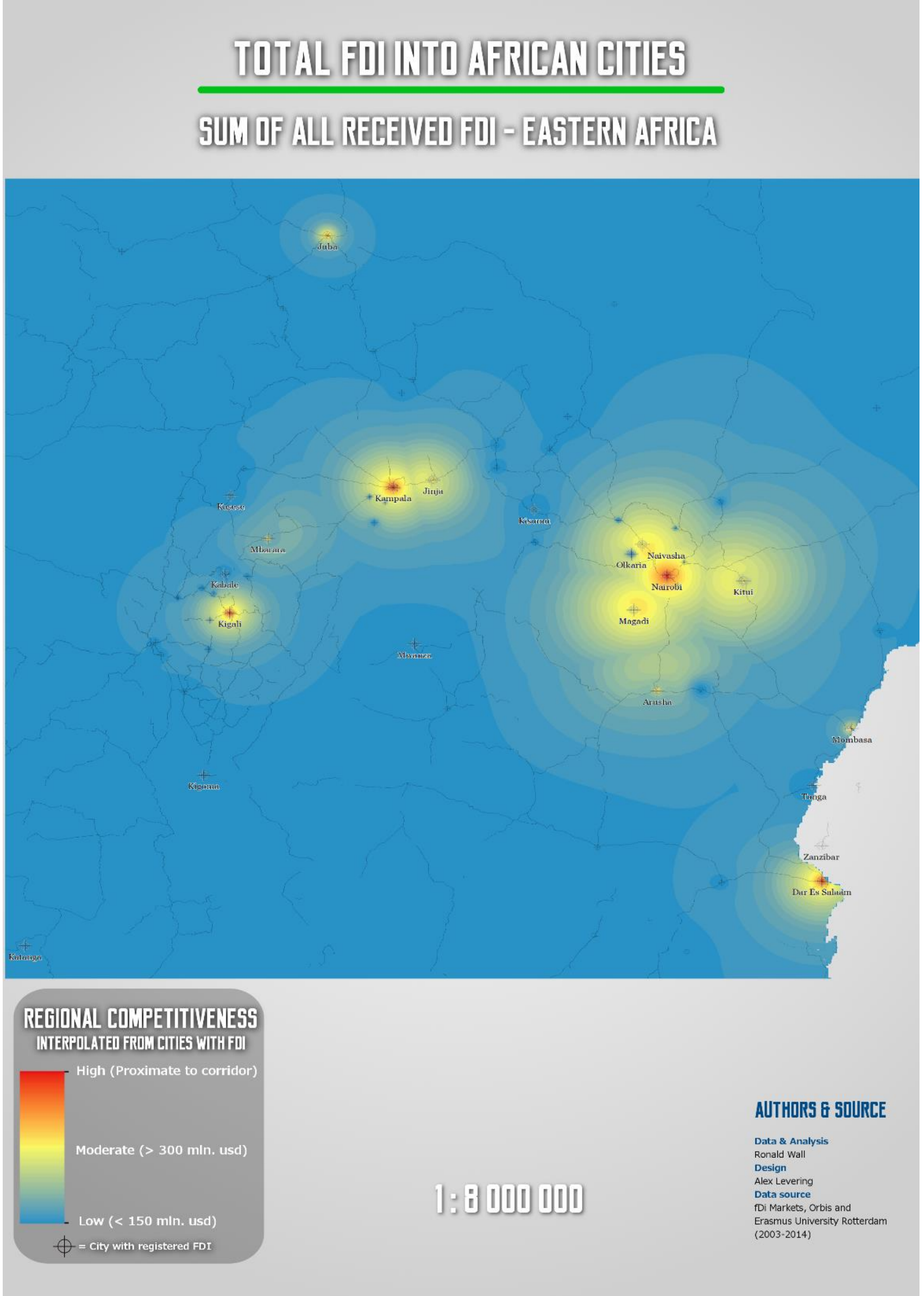


For the State of African Cities 2017 report we are studying on depth 4 case corridor regions.

Johannesburg is 6th in total FDI in Africa.

Source: State of African Cities Report (forthcoming 2017)

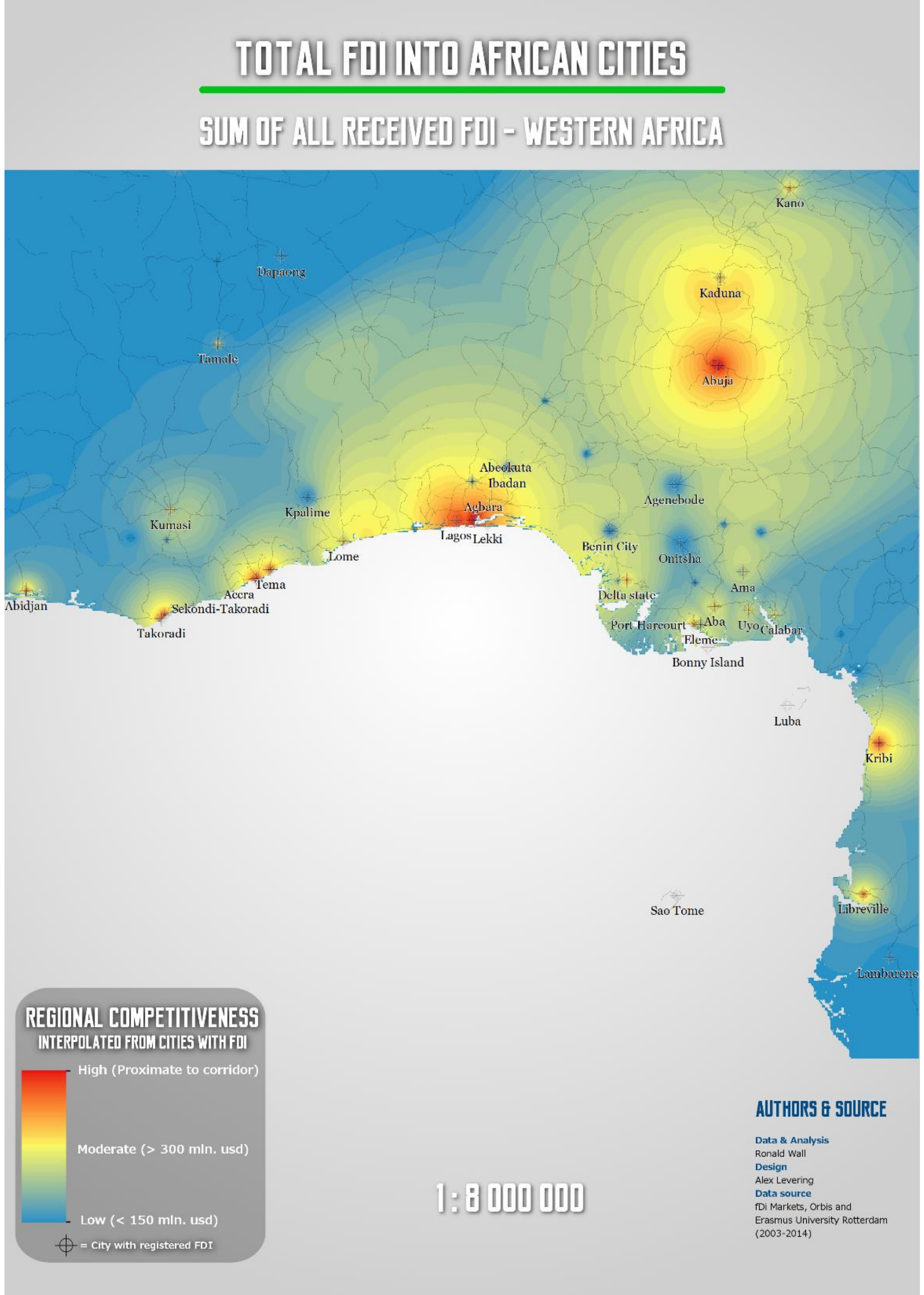
GIS Interpolation (Regional Corridor)



The Victoria Lake Corridor

Source: State of African Cities Report (forthcoming 2017)

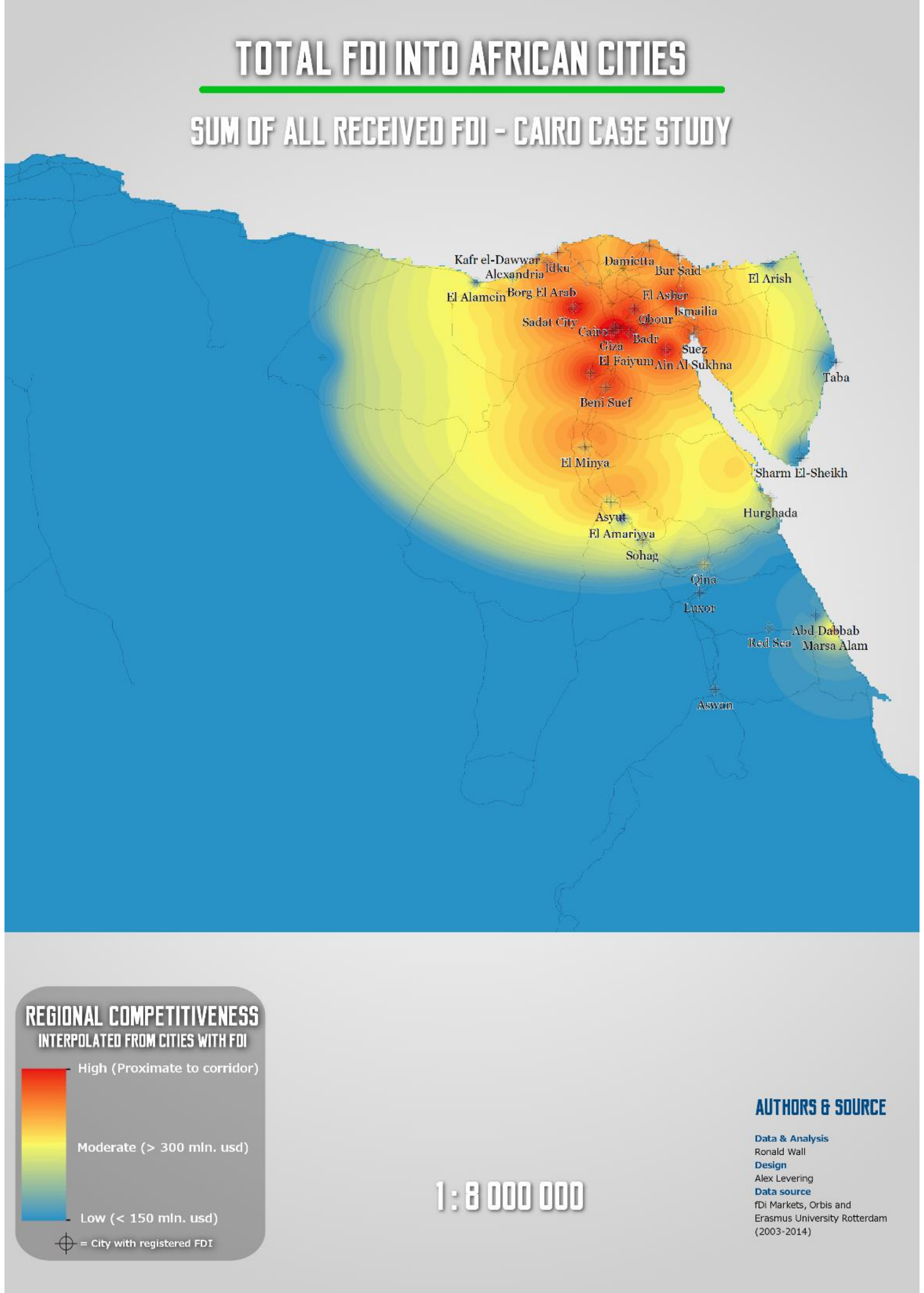
GIS Interpolation (Regional Corridor)



The Gulf of Guinea Corridor

Source: State of African Cities Report (forthcoming 2017)

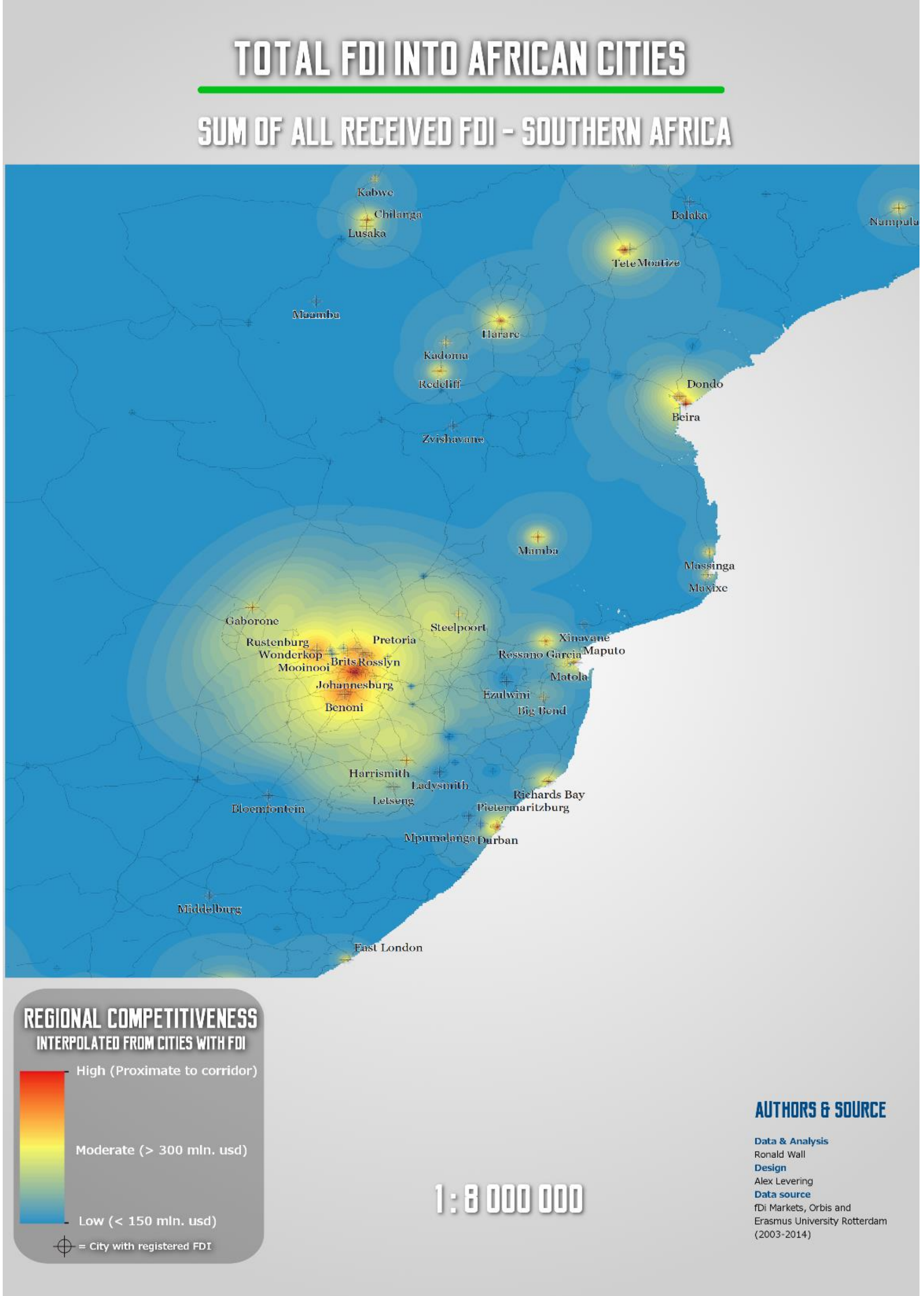
GIS Interpolation (Regional Corridor)



The Nile Corridor

Source: State of African Cities Report (forthcoming 2017)

GIS Interpolation (Regional Corridor)



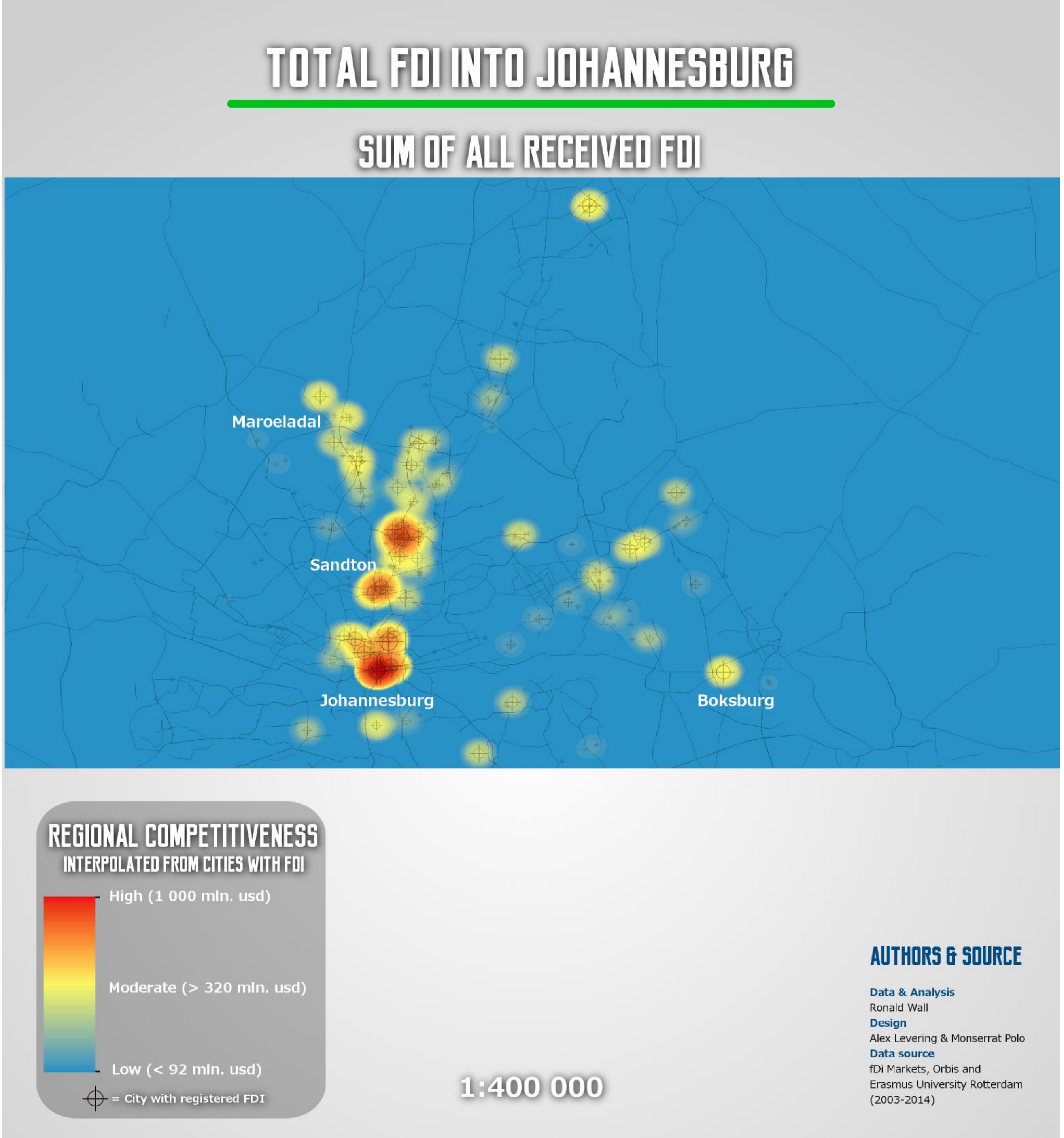
The Gauteng Maputo Corridor

How can the investment promotion of Johannesburg and Gauteng collaborate and be complementary to each other?

Should the marketed region include Durban and Maputo?

Source: State of African Cities Report (forthcoming 2017)

GIS Interpolation (District)



FDI clusters in Johannesburg SA at the Postcode Level

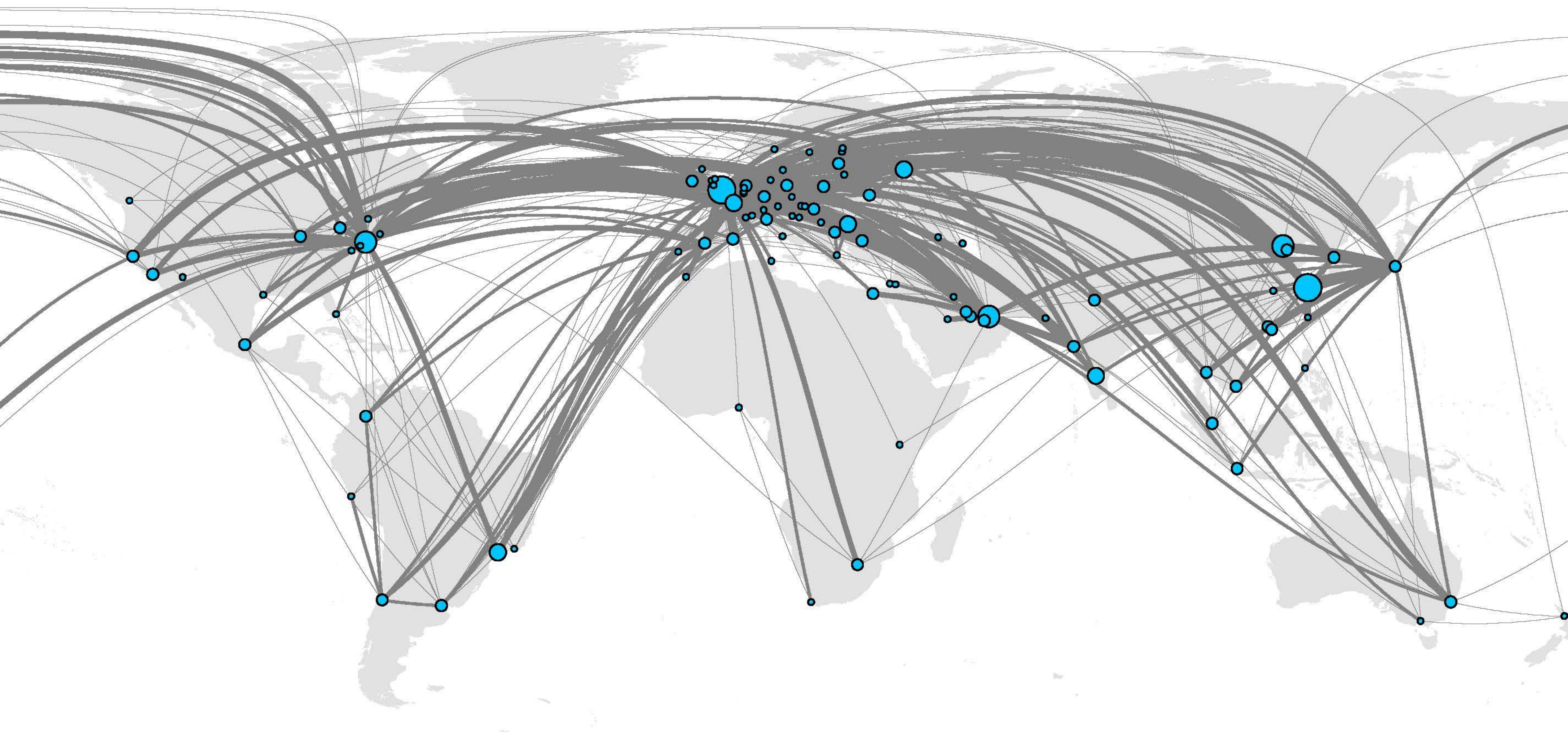
Source: SoAC Report (forthcoming 2017)

Panel Model: Determinants of FDI into Southern Africa Corridor

	total fdi	hi-tech sector	manufacturing sector	services sector	resources
technological readiness	1.32*	8.73	12.19	6.78	1.69***
	(0.54)	(8.33)	(10.49)	(7.04)	(0.33)
market size	1.29**	11.19***	12.09**	7.81**	0.78**
	(0.44)	(1.85)	(3.99)	(2.51)	(0.29)
prevalence of trade barriers	-0.30	-3.52	-0.28	0.73	-0.39
	(0.59)	(4.18)	(4.28)	(2.64)	(0.68)
innovation	0.07***	1.00**	1.21***	0.96**	0.04
	(0.02)	(0.33)	(0.35)	(0.30)	(0.02)
corruption	-0.38*	-0.47	-2.85***	-2.01*	-0.61***
	(0.15)	(0.82)	(0.34)	(0.78)	(0.15)
Constant	-4.33***	-54.65***	-70.13***	-47.07***	-2.36
	(1.10)	(7.66)	(9.67)	(9.64)	(1.50)
Observations	35	36	36	36	35
Adjusted R^2	0.77	0.75	0.77	0.79	0.80

Source: State of African Cities Report (forthcoming 2017)

Flow of Foreign Direct investment (FDI) into 126 SMART Cities (2003 – 2014)



Source: Wall and Stavropoulos, Applied Economics Letters 2016

City Smartness Explained by “City Network” and “Urban Agglomeration” Characteristics

	Characteristics	City Smartness
Network	Indegree	0.01***
		(0.00)
Urban	Population	−0.57***
		(0.05)
	GDP	0.99***
		(0.11)
	Strength of legal rights	0.24***
		(0.03)
	Gini index	−0.06***
		(0.01)
	Openness	0.51***
		(0.06)
	Area (km^2)	−0.00
		(0.00)
	Unemployment rate	−0.04***
		(0.01)
	Observations	955
	Pseudo-R^2	0.524
	Year dummies	Yes

Note(s):Robust SEs in parentheses.
* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$.

Indegree = the amount of FDI a city receives, relative to all other cities in the world.

Source: Wall and Stavropoulos, Applied Economics Letters 2016

African Cities Top 4 Competitors for FDI (2003 – 2014)

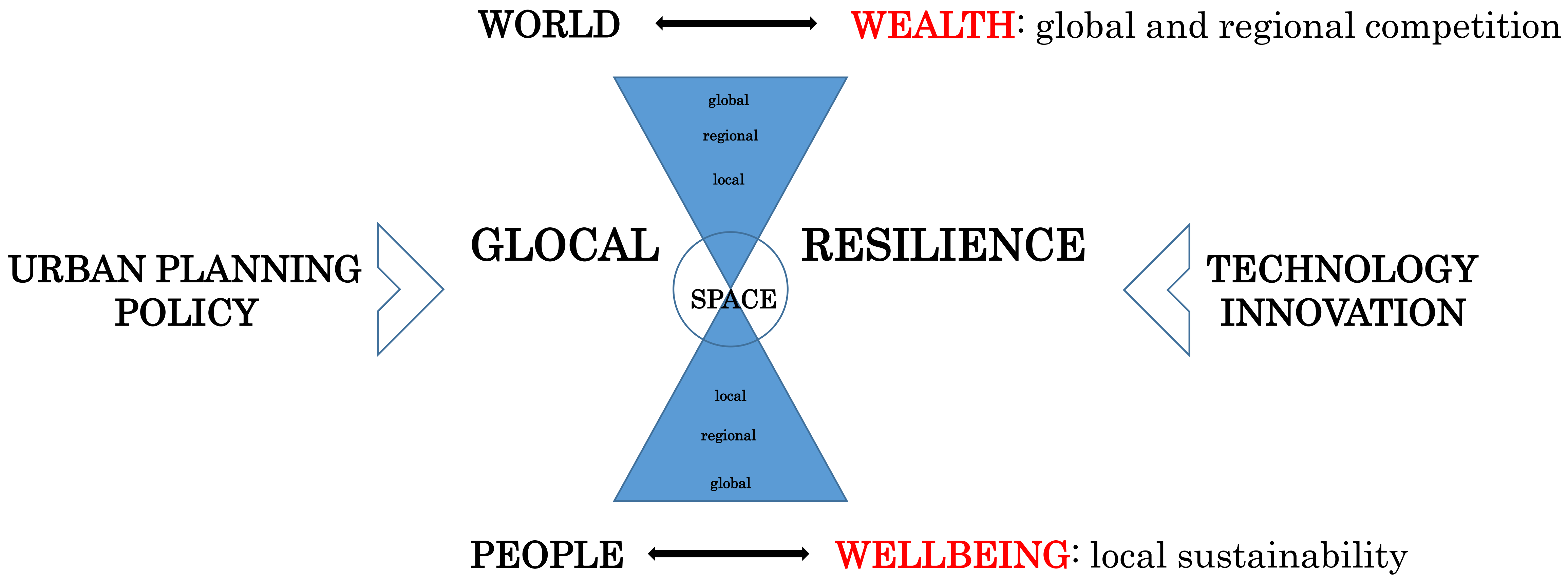
$$RDISTANCE_{ijk} = \frac{1}{2}\sum_{h=1}^{p}\left|\frac{a_{ih,k}}{\sum_{h=1}^{p} a_{ih,k}} - \frac{a_{jh,k}}{\sum_{h=1}^{p} a_{jh,k}}\right|, i \neq j \neq h$$

African Cities Top 4 Competitors for FDI (Manhattan Distance Model)

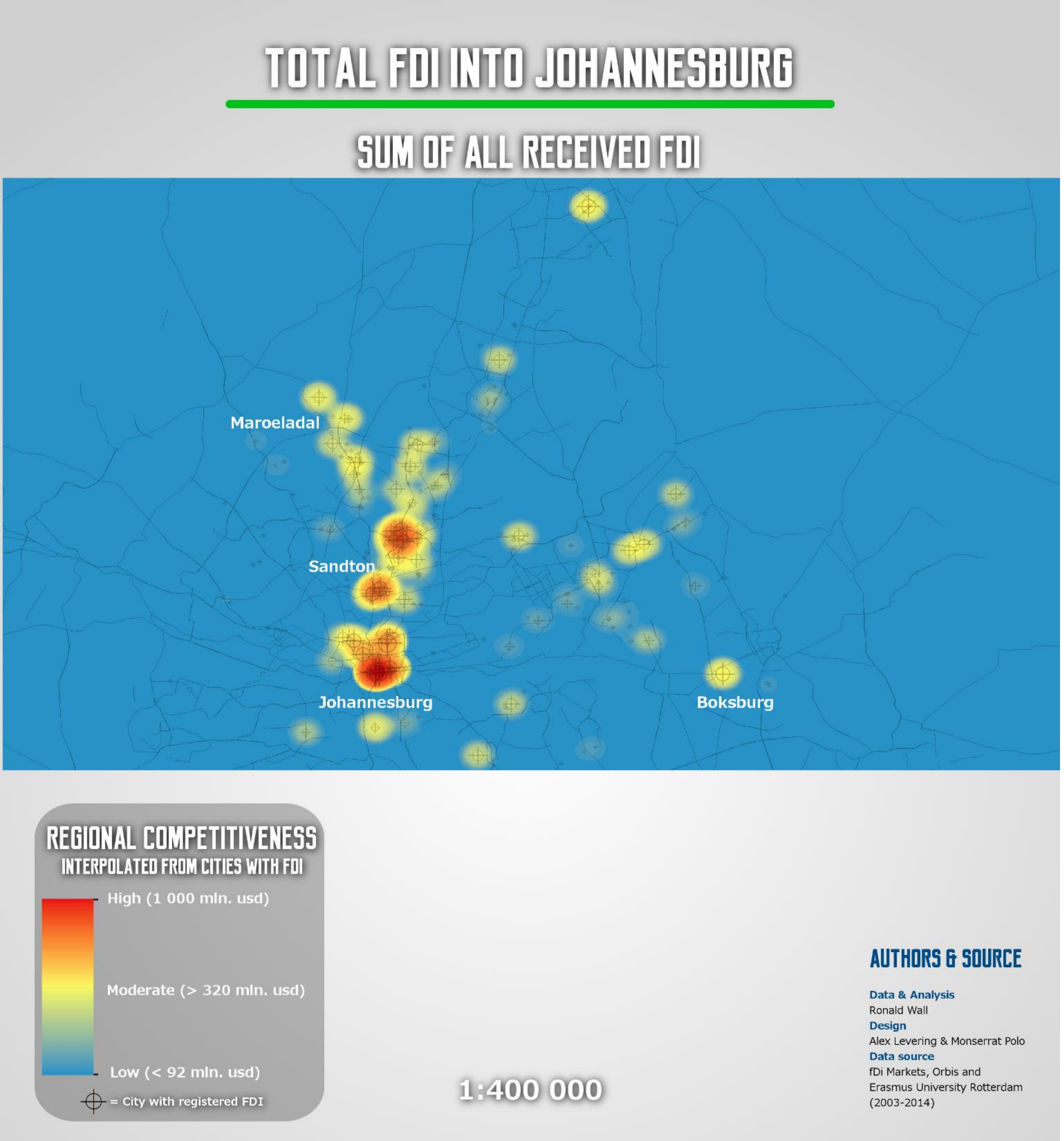
City	1st Competitor	2nd Competitor	3rd Competitor	4th Competitor
Cairo	Tunis	Tripoli	Algiers	Badr
Luanda	Djibouti	Khartoum	Marsa Alam	Dar Es Salaam
Lagos	Johannesburg	Nairobi	Dakar	Accra
Abuja	Kribi	Beira	Tete	Idku
Tangier	Marsa Alam	Djibouti	Alger	Nacala
Durban	Agadir	Calabar	Banghazi	Sharm El-Sheikh
Alexandria	El Faiyum	El Jadida	Marsa Al-Brega	Windhoek
Tunis	Tripoli	Algiers	Badr	Obour
Johannesburg	Nairobi	Kampala	Dakar	Dar Es Salaam
Casablanca	Djibouti	Marrakesh	Marsa Alam	Cape Town
Kinshasa	Setif	Port Louis	Benguela	Massinga
Marrakesh	Tlemcen	Massinga	Maxixe	Giza
Maputo	Lusaka	Agadir	Antananarivo	Banghazi
Abidjan	Brazzaville	Matola	Antananarivo	Mombasa
Algiers	Badr	Obour	El Asher	Casablanca
Kampala	Dar Es Salaam	Kigali	Harare	Mamba
Accra	Nairobi	Addis Ababa	Lusaka	Kinshasa
Cape Town	Rabat	Kano	Port Louis	Sidi Chami
Khartoum	Tete	Mamba	Mossel Bay	Richards Bay
Dakar	Tete	Khartoum	Beira	Idku
Addis Ababa	Sidi Chami	Agbara	Kaduna	Kano
Giza	Pemba	Massinga	Maxixe	Setif
Brazzaville	Matola	Mombasa	Antananarivo	Ndjamena
Windhoek	Sadat City	El Faiyum	Massinga	Maxixe
Mombasa	Matola	Brazzaville	Windhoek	Juba
Nairobi	Accra	Cape Town	Addis Ababa	Lusaka
Dar Es Salaam	Kampala	Harare	Kigali	Abidjan
Djibouti	Marsa Alam	Pemba	Nacala	Giza
Kigali	Harare	Mamba	Mossel Bay	Richards Bay
Harare	Richards Bay	Kigali	Mamba	Mossel Bay
Lusaka	Ndjamena	Antananarivo	Maputo	Gaborone

Source: R. Wall: State of African Cities Report (forthcoming 2017)

Towards Resilient Cities



Source: Wall, Resilient Cities, ETH, Zurich 2016)



1. Can FDI help transform the social, economic spatial inequality of Johannesburg?
2. How to intensify interactions between international, local and informal firms?
3. The interdependence of FDI and domestic investment?
4. How to develop investment promotion agencies (IPAs)?
5. Complementarity between Johannesburg and Gauteng province – interscalar branding?
6. Increasing sectoral specialization and knowledge intensive industries.
7. Building on mining heritage – skill-relatedness – promote African resource financing and management.
8. Boosting available skills – improve absorptive capacity.
9. Improving housing, transport, amenities, service delivery, governance, greenspace, security (SMART).
10. Rural-urban linkages – FDI in food security – periurban farming.

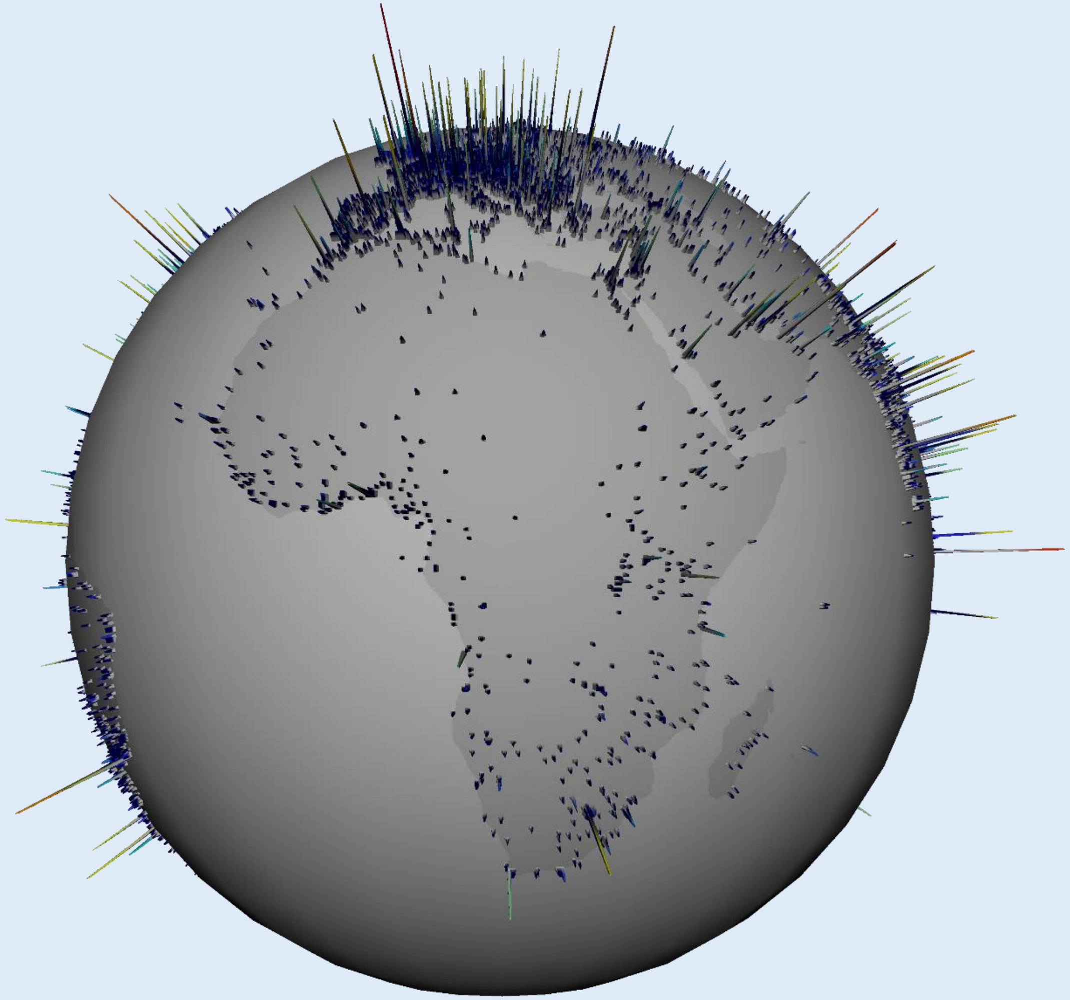
Source: State of African Cities Report (forthcoming 2017)

Key Conclusions

1. FDI can be good or bad for a city. To be affective requires good research and good governance.
2. A city needs to understand its regional and global position in FDI networks (per sector).
3. The city needs to decide which sectors of FDI it wants and set the conditions for investors.
4. A balance must be found between assuring corporate competitiveness but also the wishes of the city e.g. multilateral policy.
5. City needs to analyse who its competitors are within the sectors its wants.
6. It must then research quantitatively and qualitatively what the determinants are that attract FDI to competitors.
7. Based on this knowledge, create sustainable but competitive FDI policy, IPAs and marketing strategies (per sector).
8. To consider regional collaboration and sectoral complementarity between cities

Source: R. Wall: State of African Cities Report (forthcoming 2017)

END



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