THE GEOGRAPHY OF FDI IN THE SOUTHERN MEDITERRANEAN

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Background paper prepared for the workshop "Measuring FDI and its impact", 5-6 March 2019, Tunis

This draft background note has been prepared for the regional seminar "Measuring FDI and its impact", taking place on 5-6 March 2019, in Tunis. The seminar is part of the EU-OECD Programme on Promoting Investment in the Mediterranean launched in October 2016, which aims at supporting the implementation of sound investment policies and effective institutions in the Southern Mediterranean region (MED region).

The objective of this paper is to support the policy dialogue on how to make investment more inclusive at the local level. The paper provides an analysis of FDI trends in Southern Mediterranean cities. It also identifies FDI competitors of MED in reference to Global, European, African and Middle Eastern cities. The paper briefly explores how the geography of FDI in MED cities relates to territorial income disparities.

The opinions expressed and arguments employed herein are solely those of the author and do not necessarily reflect the official views of the OECD.

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EU-OECD PROGRAMME ON PROMOTING INVESTMENT in the Mediterranean

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Context and objectives

Foreign direct investment (FDI) is fundamental to rapidly evolving international economic integration (globalisation). It enables steady and extensive links between economies. Under the right policy conditions, FDI can support local enterprise development and promote the competitive position of both host (destination) and home (source) economy (OECD, 2015). Furthermore, FDI reassures the transfer of knowledge and technology between economies. It also creates the opportunity for host economies to promote their products and services more widely in international markets. Additionally, FDI has a positive effect on international trade development, and is an important source of capital for a range of home and host economies. The significant growth of FDI over the past years, and its international universality reveal an increase in the monetary size and number of FDI transactions, plus a rising diversification of enterprises across economies and sectors (OECD, 2015).

The geographical distribution of FDI is determined by the value-added activities of MNEs, because the locational advantage of different places influences the location decisions of the firm (Dunning, 1998). In turn, this affects the development of human resources, employment, technological progress and trade. FDI is considered an important engine for economic growth in recipient countries and is said to be more beneficial than other forms of capital such as loans or stock. Although strictly speaking FDI only concerns capital movements, it also serves as a facilitator of employment, higher productivity, competition and technology spill-overs and facilitate higher economic growth and development (Asiedu, 2002).

Almost all FDI research is carried out at the country level. Unique to this study is that it explores FDI flows from source cities to destination cities. This is important because the world is urbanizing fast, and the role of cities in the world economy are increasingly important (Alderson and Beckfield 2004; Wall, 2016). Furthermore, drawing conclusions from country level analysis is too general to advise cities (Fu, 2016). This is because almost all FDI flows to cities, and the distribution the cities in a country is very uneven (as will be shown in this study). Therefore, if we aim to achieve urban sustainability, it makes sense to explore FDI to cities, to reveal regional differences and hereby address specific territorial disparities.

This report sheds light on the geography of FDI in the Southern Mediterranean (MED) region, which includes cities in Algeria, Egypt, Jordan, Lebanon, Libya, Morocco, The Palestinian Authority and Tunisia. More specifically the report provides an analysis of FDI trends in MED cities. Firstly, it reveals the source and destination of FDI at the global scale, within Africa, and within the MED region. Secondly, the report identifies city FDI competitors of MED in reference to Global, European, African and Middle Eastern cities. This is followed in the third part, by an examination of how FDI in MED cities relates to socio-economic outcomes i.e. employment, wages, income inequality and knowledge-based industries.

The FDI data used in this report has been mainly sourced from the Financial Times' fDi Markets database and concerns 'greenfield' investments, whereby parent companies start up entirely new ventures in foreign countries by developing new operational facilities from the ground up. The reason for focusing on greenfield FDI (and excluding mergers and acquisitions) in this report, is not only that greenfield project investment is a strong indicator of the attractiveness of a region or city, but also because the data can uniquely be aggregated at sectoral, country and city levels. The data covers the period 2003-2018 and

had to be completed for missing values and cross-matched with other databases e.g. ORBIS, geocoded for geographic coordinates and aggregated to spatial scales e.g. global, world regions, countries and cities. The data covers 11045 unique world cities, among which 150 are MED cities.

The structure of the rest of the report is as follows: The first chapter provides an analysis of the strength of FDI attraction of Southern Mediterranean cities. The second chapter highlight the FDI competitors of key Southern Mediterranean cities. Chapter three reviews the relationship between the geography of FDI and income inequality in MED countries. The last chapter offers some conclusions on how FDI into MED countries can help in building sustainable cities and support balanced territorial development.

I. The strength of FDI attraction of Southern Mediterranean cities

This chapter explores the geography of FDI in MED cities at the global, European, African, Middle Eastern and MED scale. Each scale reveals different inward FDI strengths, networks, FDI sources and FDI destinations, and distributions of MED cities across the world. To attract FDI, cities need to have social, economic, environmental and political qualities. FDI does not randomly go to cities, but investors seek out (benchmark) cities with the right qualities (Wall and Burger, 2012). In the case of European cities, FDI is positively and significantly attracted by city GDP, air accessibility, road accessibility, internet infrastructure, percentage of highly educated citizens, proximity to a top university, being a capital city, and entertainment density. FDI in Europe is significantly and negatively deterred by high average salaries per employee, high corporate tax and high start-up costs. It is arguable that MED cities could in future attract more FDI by improving their location factors, similarly to European cities.

Summary of findings on strength of FDI attraction:

- Compared to other regions of the world, the MED region has a strong potential to improve its ability to attract investment. It is striking that the region receives much FDI from the Middle East/GCC and Europe, but compared to other parts of the world, this can be vastly improved.
- It is expected that economies with regional proximity such as MED countries compete with each other over attracting foreign investment. The MED area could however benefit more from the gains associated with regional integration. Only 20% of total FDI received by southern Mediterranean cities originated from within the region. In Asia and the Pacific, this ratio is three times higher.
- MED cities prove to be strong investors into sub-Saharan African cities. They receive however very little FDI back from these cities. Because Africa is the world region with the second highest growth of inward investment and is one of the largest sources of African investment, it is essential that MED policymakers develop ways to attract more African investment into the region.
- Cairo is the only top 20 global city. The top destinations of global FDI into MED are Cairo (1st), Tripoli (2nd), Johannesburg (3rd), Algiers (4th), Al Aqabah (5th), Casablanca (6th), Beirut (7th), Tunis (8th), Lagos (9th) and Amman (10th).
- Regionally, most FDI clusters are found in the Nile and Atlas corridors.

1.1. City strengths within the global FDI network

In Table 1, we see the distribution of total FDI between world regions over the period of 2003-2018. It is seen that Southern Mediterranean (MED) receives 28.2% of its investment from the Middle East. This is its strongest source region. Next, it receives the second most FDI (17.2%) from its own region (MED). At third place it receives 2.9% of FDI from the Rest of Europe, and 1.8% from West Europe. Lastly, we see that MED receives 2.7% of the world total FDI compared to 40% for Asia and the Pacific captures. It is also clear that MED only receives 0.6% investment from Africa, while Africa receives 32.3 % of its investment from MED. Similarly, MED only receives 4.7% of its FDI from Europe, while it invests 11.3% of Europe's total FDI. Clearly, there is a better balance between how much MED invests in the Middle East (24.4%) and how much it receives form the Middle East (28.2%).

Table 1. Distribution of FDI between World Region's (2003-2018)

Row Labels	Africa	*Southern Mediterranean*	Asia and Pacific	Latin America	Middle East	North America	Rest of Europe	West Europe
Africa	38.2	0.6	10.5	2.1	3.5	34.0	3.3	7.8
Southern Mediterranean	32.3	17.2	10.4	0.5	24.4	4.0	1.3	10.0
Asia and Pacific	3.2	0.6	62.9	4.3	5.2	10.1	5.4	8.3
Latin America	4.4	0.6	14.7	45.8	2.3	19.1	3.1	10.0
Middle East	3.7	28.2	26.4	1.6	20.0	3.6	7.4	9.2
North America	2.4	0.9	42.4	10.7	6.2	7.0	6.5	23.9
Rest of Europe	0.8	2.9	23.4	2.3	3.8	3.3	49.4	14.2
West Europe	2.9	1.8	27.7	8.9	4.8	13.9	17.6	22.5
WORLD TOTAL	**3.3**	**2.7**	**40.3**	**7.9**	**6.0**	**10.7**	**11.5**	**17.6**

Source: Author's calculations based on the Financial Times' fDi Markets database.

Table 2 (Panel A) shows the rank strength of the top 30 FDI cities, out of 11045 world cities. Shanghai, Singapore, London, Beijing, Dubai, Hong Kong, New York are the main attractors of FDI - and 19 out of 30 cities are Asian. Cairo is the only Southern Mediterranean (MED) city in the top 20 list, ranking at the 17th position. Also seen is the monetary value of the investments, as well as the countries that the cities are located in. In this, China clearly claims the highest share of FDI destinations.

Table 2. Global FDI rank: Top world and top MED cities

Panel A: Global FDI Rank – Top 30 World Cities

City	Country	Region	FDI (million $)	World Rank
Shanghai	China	Asia and Pacific	225532.67	1
Singapore	Singapore	Asia and Pacific	191452.47	2
London	United Kingdom	West Europe	138823.96	3
Beijing	China	Asia and Pacific	104397.11	4
Dubai	UAE	Middle East	96487.89	5
Hong Kong	Hong Kong	Asia and Pacific	87095.64	6
New York	United States	North America	66272.00	7
Bangalore	India	Asia and Pacific	61013.10	8
Guangzhou	China	Asia and Pacific	60210.60	9
Ho Chi Minh City	Vietnam	Asia and Pacific	54134.48	10
Tianjin	China	Asia and Pacific	54036.63	11
São Paulo	Brazil	Latin America	54019.58	12
Paris	France	West Europe	53659.74	13
Suzhou	China	Asia and Pacific	47700.88	14
Chongqing	China	Asia and Pacific	47409.33	15
Sydney	Australia	Asia and Pacific	47177.01	16
Cairo	Egypt	Africa	46979.01	17
Moscow	Russia	Rest of Europe	45031.09	18
Dublin	Ireland	West Europe	41279.06	19
Al Jubail	Saudi Arabia	Middle East	40986.18	20
Toronto	Canada	North America	40618.27	21
Nanjing	China	Asia and Pacific	38457.42	22
Madras	India	Asia and Pacific	37849.43	23
Shenzhen	China	Asia and Pacific	37662.43	24
Kuala Lumpur	Malaysia	Asia and Pacific	35541.85	25
Abu Dhabi	UAE	Middle East	34985.66	26
Darwin	Australia	Asia and Pacific	33476.16	27
Melbourne	Australia	Asia and Pacific	33322.02	28
Jakarta	Indonesia	Asia and Pacific	32858.40	29
Manila	Philippines	Asia and Pacific	32761.28	30
TOTAL CITIES				**11045**

Panel B: Global FDI Rank – Top 30 MED cities

City	Country	Region	FDI (million $)	AMED Rank
Cairo	Egypt	Africa	46979.01	1
Tripoli	Libya	Africa	22627.10	2
Algiers	Algeria	Africa	12073.65	3
Al 'Aqabah	Jordan	Middle East	11960.80	4
Casablanca	Morocco	Africa	11153.51	5
Beirut	Lebanon	Middle East	9797.45	6
Tunis	Tunisia	Africa	9401.42	7
Amman	Jordan	Middle East	7557.05	8
Rabat	Morocco	Africa	4771.01	9
Marrakech	Morocco	Africa	4436.59	10
Arzew	Algeria	Africa	3607.40	11
Damietta	Egypt	Africa	3499.40	12
Alexandria	Egypt	Africa	3444.05	13
Giza	Egypt	Africa	3203.83	14
Marsa Alam	Egypt	Africa	2788.90	15
Port Said	Egypt	Africa	2680.01	16
Suez	Egypt	Africa	2441.19	17
Kenitra	Morocco	Africa	2343.73	18
6th of October City	Egypt	Africa	2039.50	19
Tetouan	Morocco	Africa	1716.36	20
In Amenas	Algeria	Africa	1641.20	21
Relizane	Algeria	Africa	1610.00	22
Rosetta	Egypt	Africa	1525.10	23
Setif	Algeria	Africa	1471.50	24
El Faiyum	Egypt	Africa	1470.30	25
Jijel	Algeria	Africa	1448.30	26
Agadir	Morocco	Africa	1083.30	27
Ain el-Sokhna	Egypt	Africa	1000.00	28
Tlemcen	Algeria	Africa	994.70	29
El Minya	Egypt	Africa	931.80	30
TOTAL CITIES				**150**

Source: Author's calculations based on the Financial Times' fDi Markets database.

Figure 1 (Panel A) shows the world map with the distribution of FDI across cities for the total period of 2003-2018. The blue nodes are the roughly 13 000 cities that received FDI during this period. The bigger the node, the more FDI it has received. The legend shows how the node size relates to the amount of FDI in million $. It is clear from the map that the Global North received an uneven amount of FDI, even though the Global South has most of the world's population. North America, Europe and Pacific Asia hold the lion's share of investment. Africa received the least investment in terms of volume, but in terms of growth it is the 2nd fastest growing FDI continent after North America. The grey lines show the FDI relationships between cities. The thicker the line, the more FDI taking place

between two cities.[1] In these lines, we see that most FDI is between North America, Europe and Asia. Africa receives a much smaller share of top investment. In the map we see the top 20 FDI city destinations (red labels). The strongest cities are in Asia Pacific, such as Shanghai 1st and Singapore 2nd. London is 3rd and Paris 13th. Cairo is the only Southern Mediterranean city in the top 20 league (17th position).

Foreign investment into MED cities is concentrated along the coast, and more sparsely distributed than in Europe (Appendix Map A). Figure 1 (Panel B) shows the top 50 rank strength of MED cities. Cairo, Tripoli, Algiers, Al Aqabah, Casablanca are the top 5 destinations of FDI in the region. It is seen that most FDI tends to cluster in the Nile Corridor and Atlas Corridor. The grey lines also show that a lot of FDI into the MED region is coming from the Middle East. Also the Irish (A), UK (B), Randstad-Rhine-Flemish (C), Swiss-German (D), Northern Italian (E) and East European (F) superclusters of FDI are indicated. In Table 2 (Panel B), the top 30 Southern Mediterranean cities in the global FDI network are seen. Egypt and, to a lower extent, Algeria and Morocco are the prime FDI regions in the Southern Mediterranean, holding many attractive cities. Furthermore, as indicated, 27 of the top 30 cities are in Africa.

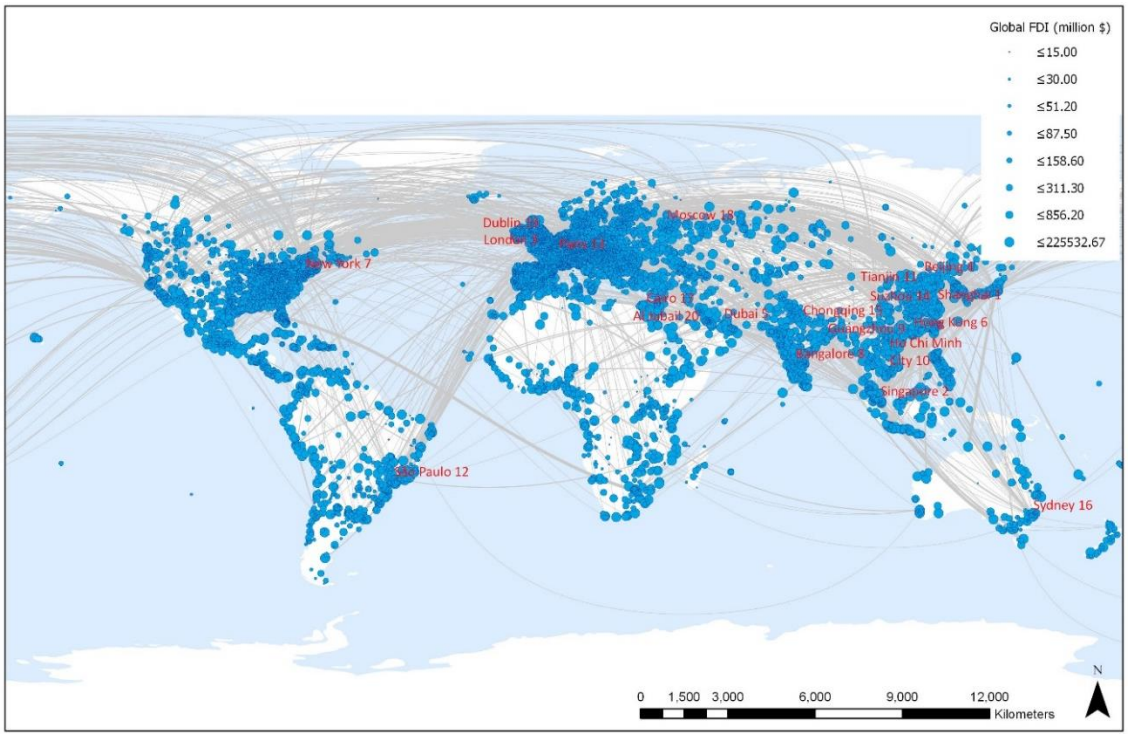
1.2. City strength within MED-Europe FDI network

In the next analysis, we look at only FDI flows from the world into 5554 cities of the MED-Europe region, and how cities in this region are ranked. In Figure 2 the blue nodes represent the FDI attracted by destination cities, while the yellow nodes show the cities that are the sources of the investment. The bigger the nodes the more investment transmitted over the period 2003-2018. MED is included with West Europe and the Rest of Europe, to form a megaregion, to understand the relative strength of MED cities within this megaregion. The map clearly shows that a disproportionate amount of investment is sourced from North America and Pacific Asia. However, as indicated in Table 1, Europe is the biggest investor into itself (22.5%). Latin America and Africa are not strong investors in the region. Only Johannesburg plays a relatively strong role.

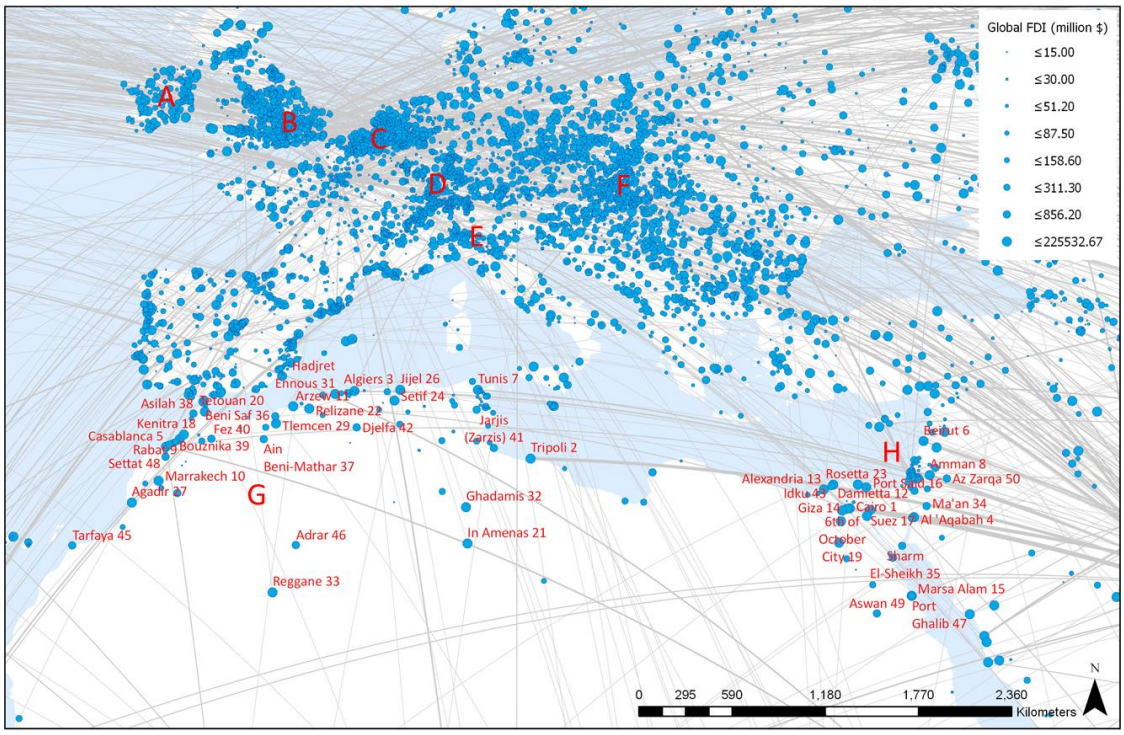
[1] Showing all the FDI relationships (roughly 200 000) would make the map entirely grey. For this reason, the map only show the top 5000 relationships, which form the backbone of the global economy.

Figure 1. Global FDI – Top 20 World City Destinations

Panel A. World Scale



Panel B. Southern Mediterranean scale



Source: Author's elaboration based on the Financial Times' fDi Markets database.

Figure 2 zooms-in on the MED-European region. It shows the relative top 50 strength of MED cities in comparison to European ones. The blue nodes are the destinations of FDI, while the yellow ones reveal the city sources of FDI. Cairo holds the 3rd position within the network of FDI to Europe, considering that it has the 17th position within the global network. Tripoli has the 12th position in this context, followed by Algiers (28th), Al Aqabah (29th), Casablanca (32nd), Beirut (37th), Tunis (39th) and Amman (49th).

Middle Eastern cities are the biggest investors in the MED-European region. 42 of the 50 cities are based in Europe, with the strongest being London (1st), Paris (2nd), Moscow (4th), Dublin (5th), Bucharest (6th), Saint Petersburg (7th), Amsterdam (8th), Warsaw (9th), Madrid (10th), Barcelona (11th), Istanbul (13th), Budapest (14th) and Birmingham (15th). For the full list and additional information see Appendix Table A.

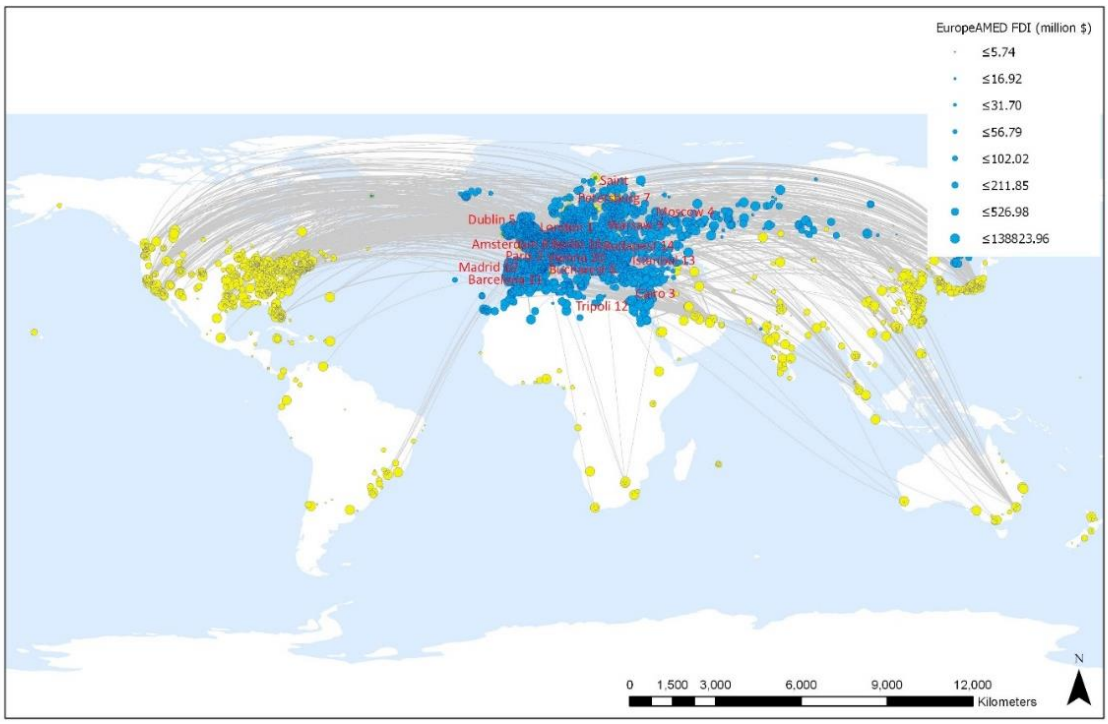
1.3. City strength within MED-Africa FDI network

Figure 3 shows the strengths of Southern Mediterranean cities relative to cities in Africa. Many sources in Europe invest in Africa, however as seen in Table 1, the biggest investor into this megaregion is Africa itself (38.2%), followed closely by the Southern Mediterranean region (32.3%). Europe, in fact, only invests 6% into this megaregion. As seen in Table 1, the region of MED invests most in Africa (32.3%), then secondly into the Middle East (24.4%), then into itself (17.2%). Its strength in Africa and the Middle East should be promoted in future. However, as discussed earlier, MED should focus on attracting more FDI from Africa.

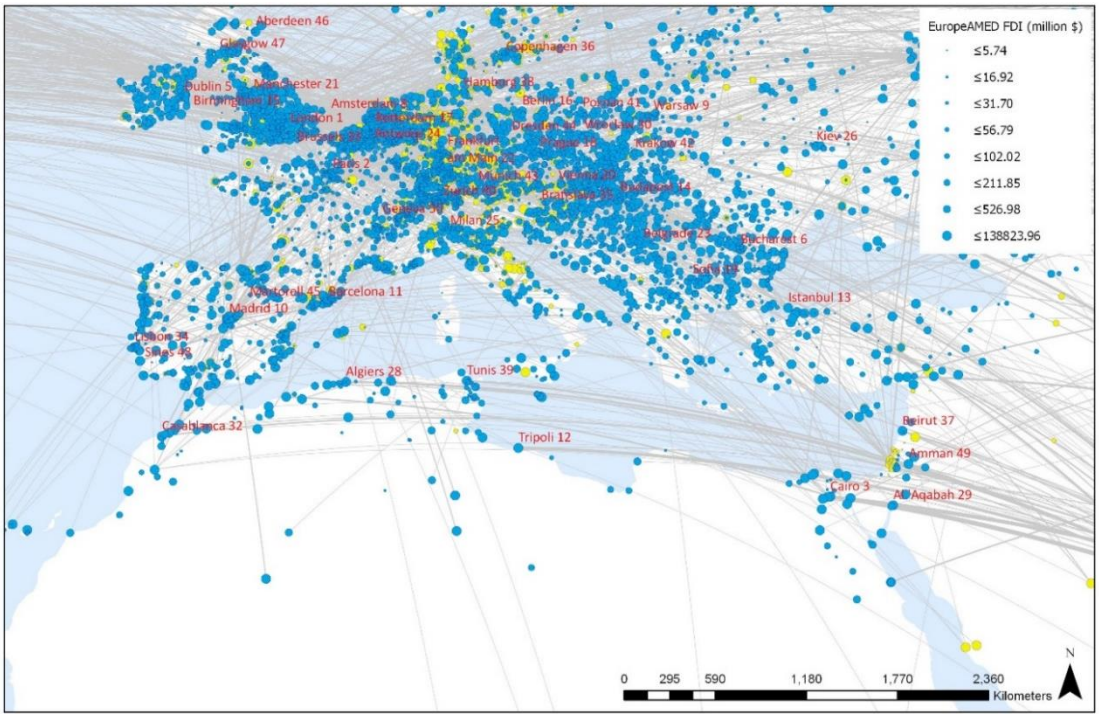
The top destinations of global FDI into the 577 cities of the MED-Africa region are Cairo (1st), Tripoli (2nd), Johannesburg (3rd), Algiers (4th), Al Aqabah (5th), Casablanca (6th), Beirut (7th), Tunis (8th), Lagos (9th) and Amman (10th). Eight of these top destinations are in the Southern Mediterranean region. See Appendix Table B for the complete top 30 ranking. The rank of MED cities within the MED-Africa region is seen in more detail in Figure 3. Once again, we see the prominence of the Nile Corridor and Atlas Corridor.

Figure 2. FDI to MED-Europe – Top 20 MED-Europe City Destinations

Panel A. **World Scale**



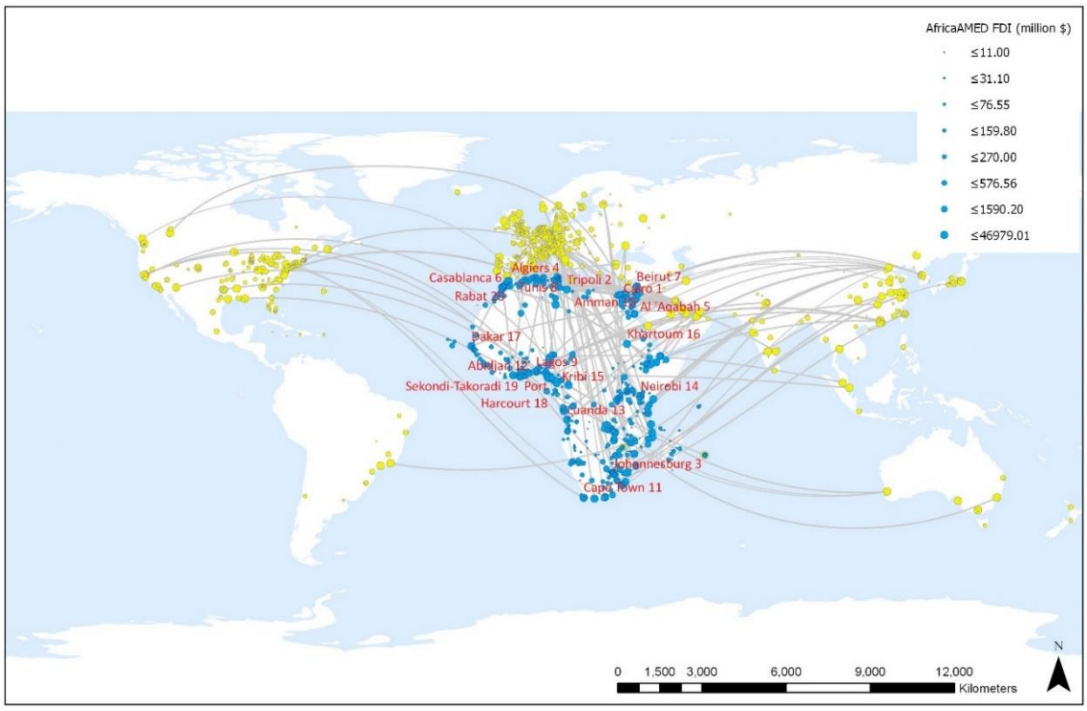
Panel B. Southern Mediterranean scale



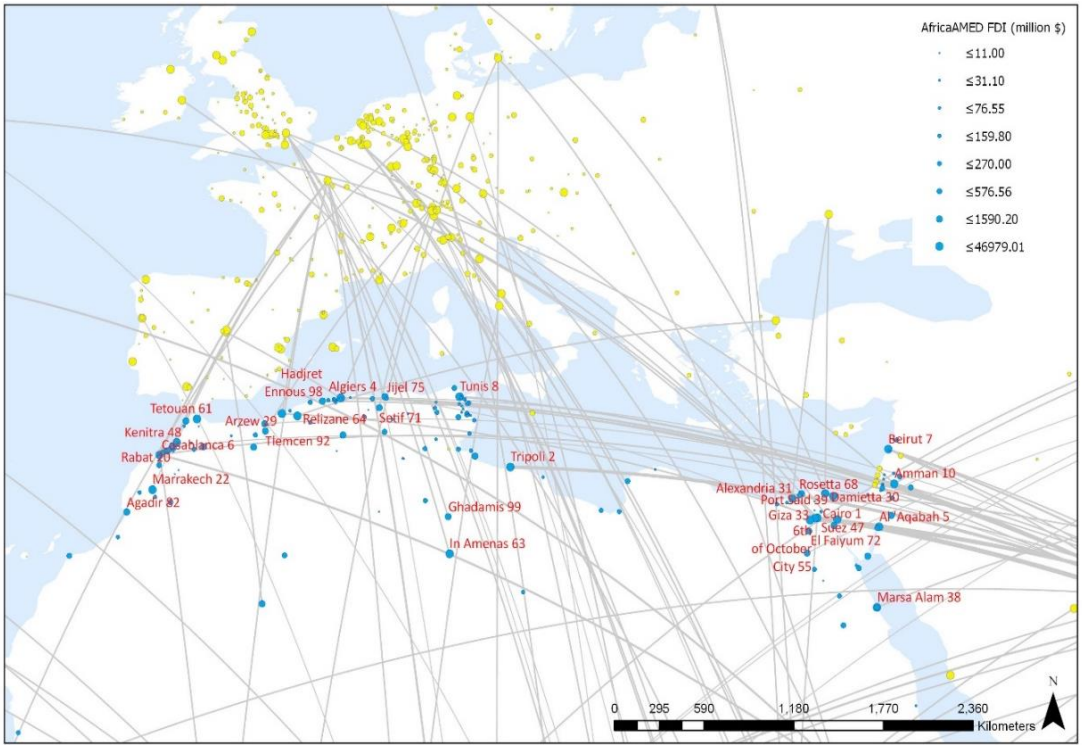
Source: Author's elaboration based on the Financial Times' fDi Markets database.

Figure 3. FDI to MED-Africa – Top 20 MED-Africa City Destinations

Panel A. World Scale



Panel B. Southern Mediterranean scale



Source: Author's elaboration based on the Financial Times' fDi Markets database.

1.4. City strength within MED-Middle East FDI network

Like the previous studies, we now look at the strength of the MED region relative to that of the Middle East (Figure 4). This megaregion is comprised of 323 destination cities (blue nodes). The yellow nodes illustrate the sources of FDI into the region. Dubai is the primary recipient of FDI (1st), followed by Cairo (2nd), Al Jubail (3rd), Abu Dhabi (4th), Jubail (5th), Ad Dawah (6th), Tripoli (7th), Riyadh (8th), Suhar (9th), and Jeddah (10th).

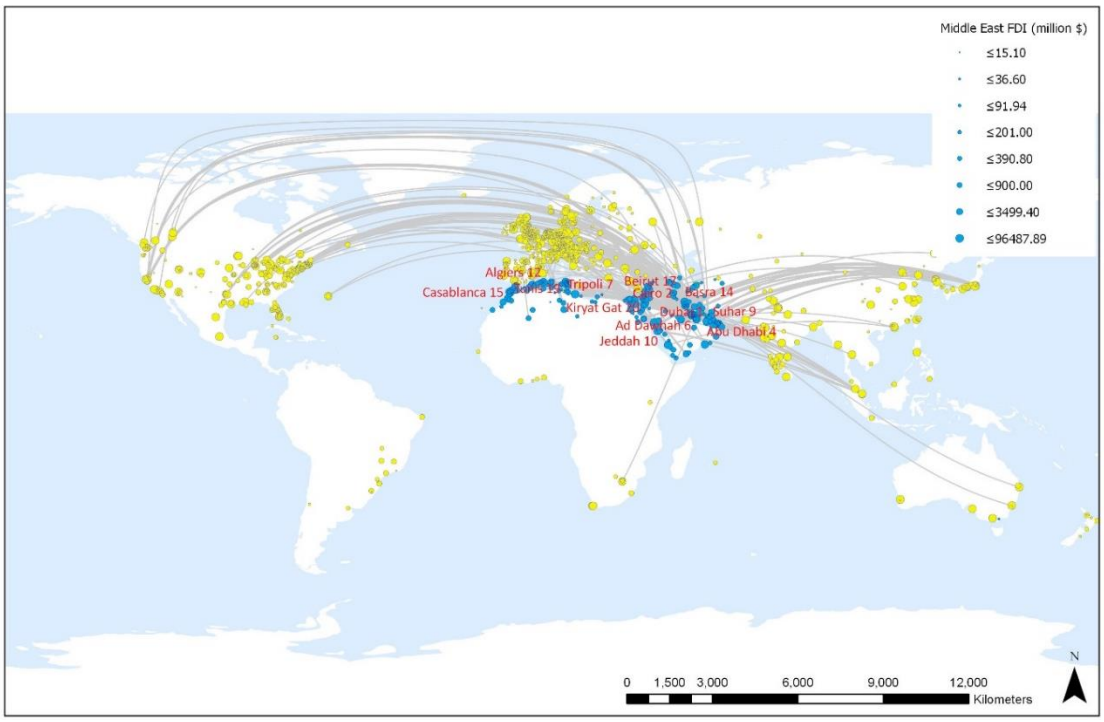
Eight of the top 10 cities are in the Middle East, revealing the investment attraction power of this region. In fact, only 8 MED cities are found in the top 30 list of the MED-Middle East megaregion (see Appendix Table C). This is geographically verified in Figure 4, in which the major clustering of FDI cities are found between Alexandria and Muscat. As seen in Table 1, the MED region invests 41.6% FDI into the MED-Middle East region. The Middle East invests 48.2% into the megaregion. North America invests 7.1% into the region, while Europe invests 13.3% into the megaregion. Europe is twice as strong an investor as North America. Other regions invest quite moderately.

1.5. City strength within Southern Mediterranean FDI network

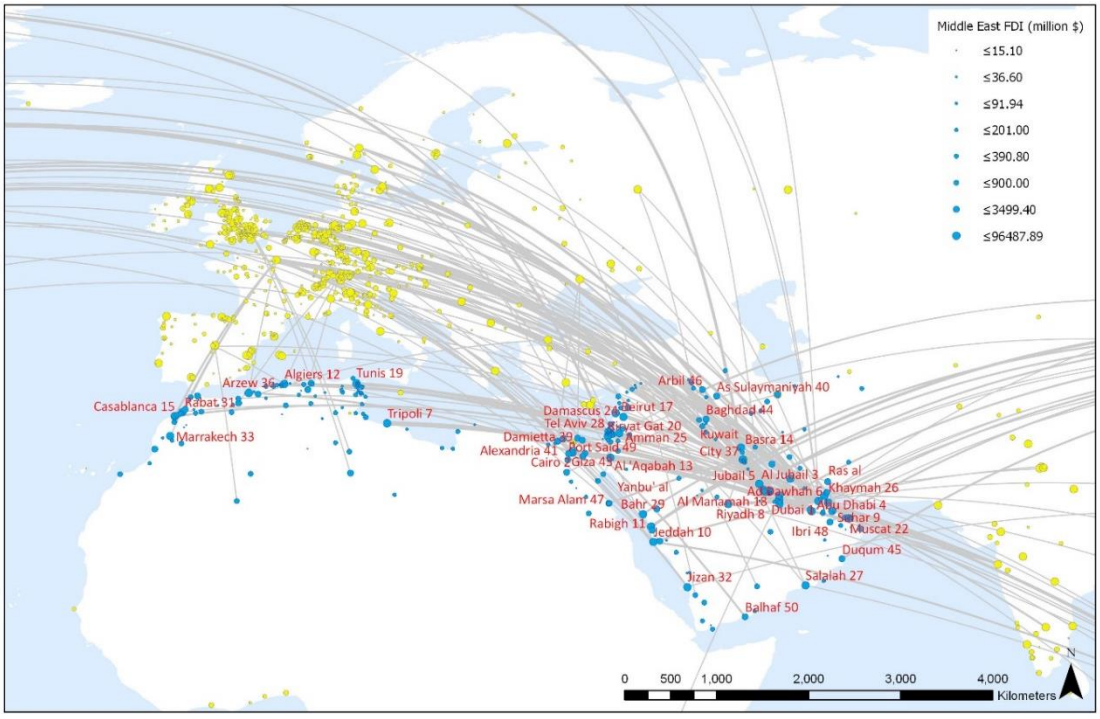
In the next study, we investigate the strength of MED cities only within their own region (out of 150 cities). Cairo (1st), Tripoli (2nd), Algiers (3rd), Al Aqabah (4th), Casablanca (5th), Beirut (6th), Tunis (7th), Amman (8th), Rabat (9th) and Marrakech (10th) are the top FDI attractors in the Southern Mediterranean region (Figure 5). It is also seen that 12 of the top 30 cities are in Egypt, and 7 of the cities are in Algeria, and 6 in Morocco. Furthermore, the full list of all 150 cities is provided in Appendix Table D. This list provides the rank of all 150 cities at the global, European, African, Middle Eastern, and Southern Mediterranean scales. The list is also colour coded to identify country clusters. MED receives the second most FDI (17.2%) from its own region (MED). At third place it receives 2.9% of FDI from the Rest of Europe, and 1.8% from West Europe.

Figure 4. FDI to MED-Middle East – Top 20 MED-Middle East City Destinations

Panel A. World scale



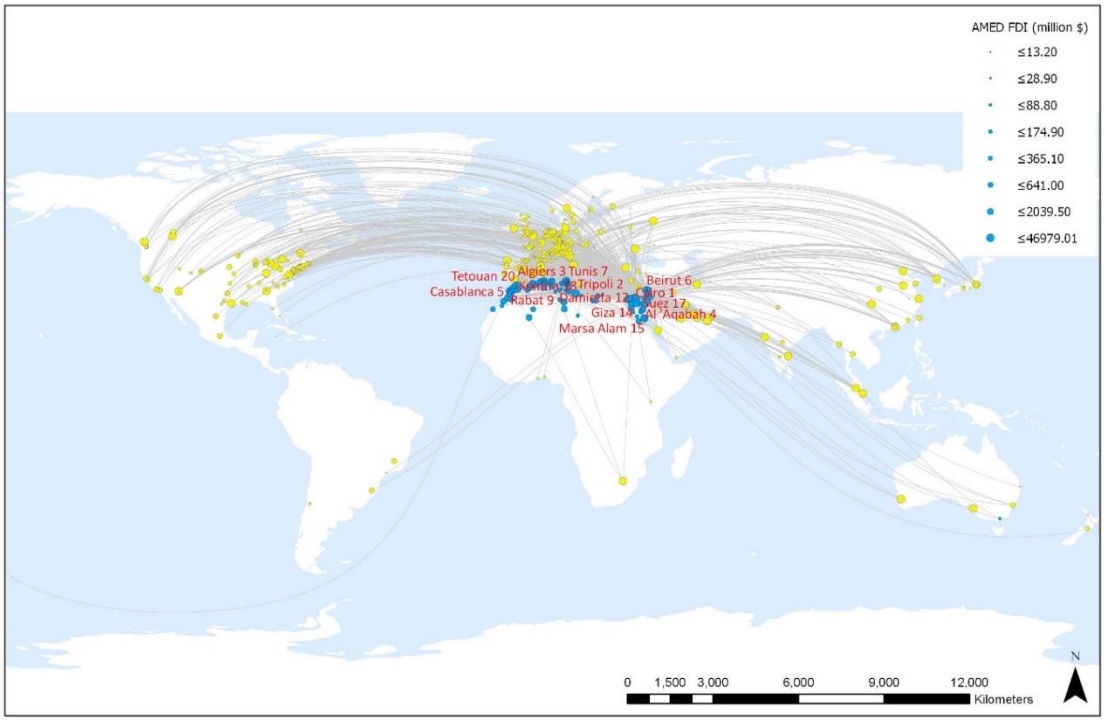
Panel B. Southern Mediterranean scale



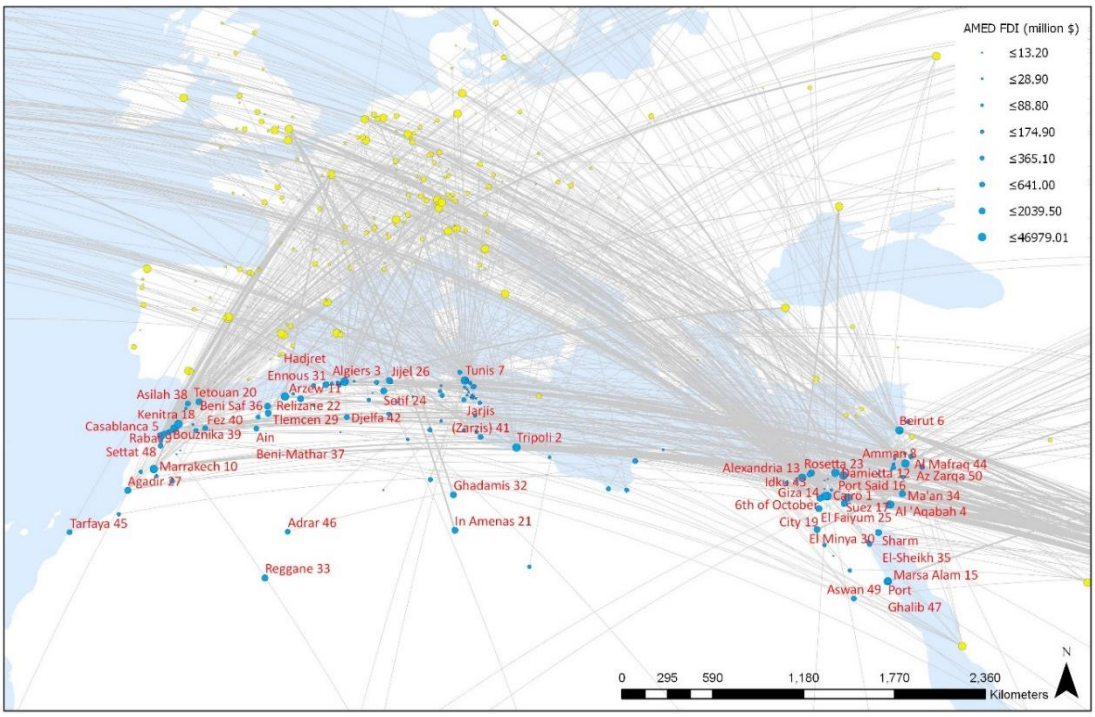
Source: Author's elaboration based on the Financial Times' fDi Markets database.

Figure 5. FDI to Southern Mediterranean– Top 20 MED City Destinations

Panel A. World scale



Panel B. Southern Mediterranean scale



Source: Author's elaboration based on the Financial Times' fDi Markets database.

II. FDI competitors of key Southern Mediterranean cities

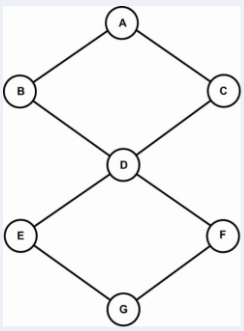
This chapter explores the competition strength of MED cities in terms of attracting FDI. All cities are in fierce competition for attracting FDI, but it remains unclear which territories compete for which sectors of investments (Burger et al. 2012). These 'place wars' take place at local, regional, national, continental and global scales (Alderson and Beckfield 2004). Most competition studies assume that cities compete equally and ignore to identify the diversity of territorial competition (Phelps and Wu, 2009).

FDI competition of eight key Southern Mediterranean cities

Table 3 shows the competitors of each of the eight key Southern Mediterranean cities based on a methodology described in Box 1. The top 10 competitors of each city are shown at 5 geographic scales (global, Europe-MED, Africa-MED, Middle East-MED, and MED). Before getting into the details, some overall findings of MED cities are the following. The MED cities all have quite different FDI sector compositions that they compete for. However, interestingly is that for all real estate and hotels and tourism are the top FDI sectors. Next, some MED cities compete very locally, while others compete more regionally, and a few are competing at the global scale. Also, some compete in Africa, while others do not.

Box 1. Calculating city competition within FDI networks

A method to calculate city competition within FDI networks has been developed based on the diagram below. In this diagram, a hypothetical model of 7 cities (A – G) is shown. In the case of City A and City G both receive their investments from different cities. City A gets it from City B and City C, while City G receives investment from City E and City F. For this reason they are 0% competitors. In the case of City B and City C, we see that they both get their investments from City A and City D. Therefore, they are 100% competitors. In the case of City A and City D, we see that City A only gets its FDI from City B and City C, while City D get it from City B, City C, City E and City F. Therefore they have a 50% market overlap for investment. Besides this property, to be 100% competitors, the cities would also have to attract the same sectors of FDI (e.g. healthcare, energy, financial services and biotech), with the same monetary values for each sector.



Parameters

- Cities A and G are linked to different cities = 0% market overlap.
- Cities B and C are linked to the same cities = 100% market overlap.
- Cities A and D are partly linked to the same cities = partial overlap.
- Cities must attract identical sectors of FDI (type and monetary values) to be 100% competitors of each other.

More formally, the relative Manhattan distance, also known as the relative Sørensen or relative city block distance, measures the relative distance or dissimilarity in niche between two species i and j for a particular urban function k, here expressed as the non-overlap in geographical markets between two cities i and j. More formally (1):

$$RDISTANCE_{ijk} = 1 - \left[\sum_{h=1}^{p} MIN \left(\frac{a_{ih,k}}{\sum_{h=1}^{p} a_{ih,k}}, \frac{a_{jh,k}}{\sum_{h=1}^{p} a_{jh,k}} \right) \right], i \neq j \neq h, \quad (1)$$

which can be rewritten as (2),

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

in which aih,k is the strength of the urban linkage (e.g., the number of business interactions) between cities i and h for urban function k, and ajh,k is the strength of the urban linkages between cities j and h for urban function k. Linkages between cities i and j are excluded, as are linkages that remain within a city, in order to measure genuine competition between the cities under consideration and not urban complementarities. The distance measure is relative because it gives the absolute difference between the cities divided by their absolute sum. In other words, in standardizing the absolute difference to sample totals, the total non-overlap of the geographical markets for the two cities i and j is converted into a percentage non-overlap for the geographical markets of two cities. This allows for a comparison of the cities based on the relative distribution of urban linkages across space. The degree of similarity between two cities or the competition coefficient can then be expressed as (3):

$$COMPETITION_{ijk} = 1 - RDISTANCE_{ijk} \quad (3)$$

The competition coefficient COMPETITIONijk typically ranges between 0 and 1. If the competition coefficient equals zero, the geographical markets of cities i and j are totally different and the intensity of competition between the two cities is at a minimum. If the competition coefficient equals one, the geographical markets of cities i and j completely overlap and the intensity of competition between the two cities is at a maximum.

As an example, Casablanca's top three global competitors are Muscat, Vientiane and Da Nang. Part of the reason for this is seen in Figure 1, in which the similarity of FDI sectors determines their level of competition. This is explained in more detail further on. In the case of Algiers at the global scale, we see that its top three competitors are Al Aqabah, Tunis and Belgrade. These are entirely different competitors to those of Casablanca. This proves that cities are not competing equally for the same FDI sectors, which is verified by comparing the top sectors of Casablanca and Algiers (Figure 6). In the case of Casablanca, we see that these four cities compete strongest for a certain combination of FDI sectors and monetary values of these sectors. In descending order, these sectors are, Real Estate, Hotels & Tourism, Financial Services, Automotive, Business Services, Chemicals, Transportation, Metals and Communications etc. See diagram for all sectors. If these were 100% competitors of each other, then the radar shapes would perfectly overlap, and you would only see one shape. However, they are not perfect competitors, but the strongest available. In Figure 2, we see the sectors that Algiers and its competitors compete in. These are in order, Real Estate, Renewable Energy, Hotels & Tourism, Financial Services, Metals, Chemicals, Warehousing etc. See Figure 6 for complete list. The competitors and their sectors, for the other six Southern Mediterranean case cities are seen in Appendix A -

Appendix F. These will not be explained further but can be explored by the reader interested in these cities.

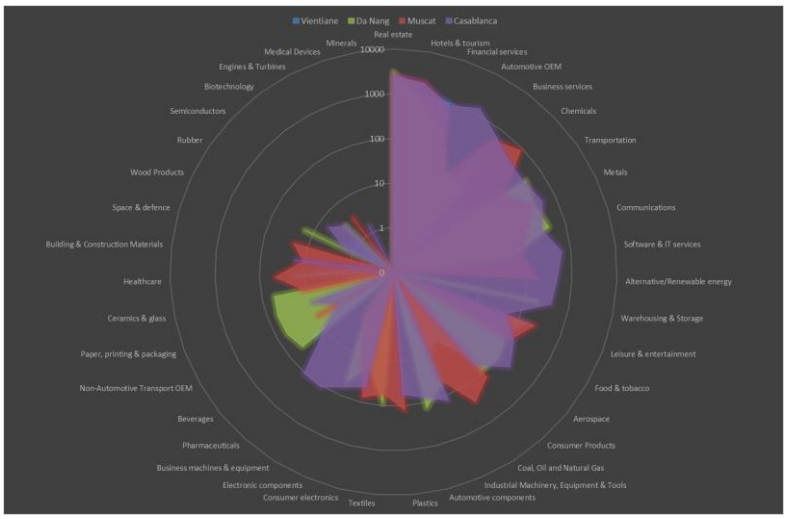
Table 3. Top 10 Competitors of Key Southern Mediterranean Cities – 5 Geographic Scales

Geographic Scale	Competitor Rank	Algiers	Amman	Beirut	Bethlehem	Cairo	Casablanca	Tripoli	Tunis
Global	1	Al 'Aqabah	Luanda	Damascus	Az Zarqa	Tripoli	Muscat	Al 'Aqabah	Beirut
Global	2	Tunis	Milton Keynes	Tunis	Bouznika	Riyadh	Vientiane	Riyadh	Damascus
Global	3	Belgrade	Tunis	Lusail	Hidra	Bucharest	Da Nang	Algiers	Lusail
Global	4	Riyadh	As Sulaymaniyah	Muscat	Aley	Warsaw	Panama City	Bucharest	Amman
Global	5	Beirut	Al Muharraq	Vientiane	Halhul	Al 'Aqabah	Milton Keynes	Tunis	Da Nang
Global	6	Damascus	Lusail	As Sulaymaniyah	Jenin	Algiers	Derby	Lusail	Milton Keynes
Global	7	Lusail	Maputo	Al Muharraq	Khan Yunis	Ho Chi Minh City	Valencia	Damascus	Baghdad
Global	8	Sofia	Baghdad	Luanda	Gaza	Sofia	Luanda	Beirut	Luanda
Global	9	Luanda	Da Nang	Da Nang	Banha	Belgrade	Edinburgh	Warsaw	Al Muharraq
Global	10	As Sulaymaniyah	Krakow	Al-Khobar	Bordj bou Arreridj	Tunis	Minsk	Belgrade	As Sulaymaniyah
Europe-SM	1	Al 'Aqabah	Milton Keynes	Milton Keynes	Az Zarqa	Tripoli	Milton Keynes	Al 'Aqabah	Beirut
Europe-SM	2	Tunis	Tunis	Tunis	Bouznika	Bucharest	Derby	Algiers	Amman
Europe-SM	3	Belgrade	Krakow	Krakow	Hidra	Warsaw	Valencia	Bucharest	Milton Keynes
Europe-SM	4	Beirut	Skopje	Skopje	Aley	Al 'Aqabah	Edinburgh	Tunis	Riga
Europe-SM	5	Sofia	Riga	Riga	Halhul	Algiers	Minsk	Beirut	Marsa Alam
Europe-SM	6	Milton Keynes	Giza	Marsa Alam	Jenin	Sofia	Zagreb	Warsaw	Krakow
Europe-SM	7	Amman	Zagreb	Zagreb	Khan Yunis	Belgrade	Rabat	Belgrade	Rabat
Europe-SM	8	Derby	Marsa Alam	Amman	Gaza	Tunis	Glasgow	Sofia	Belgrade
Europe-SM	9	Marsa Alam	Derby	Derby	Banha	Beirut	Riga	Giza	Algiers
Europe-SM	10	Krakow	Burton upon Trent	Burton upon Trent	Bordj bou Arreridj	Amman	Vilnius	Amman	Derby
Africa-SM	1	Al 'Aqabah	Luanda	Luanda	Az Zarqa	Tripoli	Luanda	Al 'Aqabah	Beirut
Africa-SM	2	Tunis	Tunis	Tunis	Bouznika	Al 'Aqabah	Nairobi	Algiers	Amman
Africa-SM	3	Beirut	Maputo	Maputo	Hidra	Algiers	Maputo	Tunis	Luanda
Africa-SM	4	Luanda	Dakar	Dakar	Aley	Tunis	Rabat	Beirut	Maputo
Africa-SM	5	Maputo	Giza	Marsa Alam	Halhul	Beirut	Marsa Alam	Giza	Marsa Alam
Africa-SM	6	Amman	Marsa Alam	Amman	Jenin	Amman	Dakar	Amman	Rabat
Africa-SM	7	Dakar	Tete	Tete	Khan Yunis	Accra	Djibouti	Luanda	Algiers
Africa-SM	8	Djibouti	Rabat	Marrakech	Gaza	Johannesburg	Marrakech	Marsa Alam	Giza
Africa-SM	9	Marsa Alam	Pemba	Pemba	Banha	Casablanca	Cape Town	Dakar	Dakar
Africa-SM	10	Nacala	Djibouti	Djibouti	Bordj bou Arreridj	Luanda	Kigali	Pemba	Nacala
Middle-East-SM	1	Al 'Aqabah	Tunis	Tunis	Az Zarqa	Tripoli	Muscat	Al 'Aqabah	Beirut
Middle-East-SM	2	Tunis	As Sulaymaniyah	As Sulaymaniyah	Bouznika	Riyadh	Al-Khobar	Riyadh	Damascus
Middle-East-SM	3	Riyadh	Al Muharraq	Al Muharraq	Hidra	Al 'Aqabah	Rabat	Algiers	Lusail
Middle-East-SM	4	Beirut	Lusail	Lusail	Aley	Algiers	Baghdad	Tunis	Amman
Middle-East-SM	5	Damascus	Baghdad	Baghdad	Halhul	Tunis	Tel Aviv	Lusail	Baghdad
Middle-East-SM	6	Lusail	Arbil	Arbil	Jenin	Beirut	Marsa Alam	Damascus	Al Muharraq
Middle-East-SM	7	As Sulaymaniyah	Giza	Marsa Alam	Khan Yunis	Amman	Al Seeb	Beirut	As Sulaymaniyah
Middle-East-SM	8	Al Muharraq	Marsa Alam	Amman	Gaza	Al Manamah	Kuwait City	Al Muharraq	Marsa Alam
Middle-East-SM	9	Amman	Al-Khobar	Al-Khobar	Banha	Damascus	As Sulaymaniyah	Giza	Rabat
Middle-East-SM	10	Marsa Alam	Al Seeb	Al Seeb	Bordj bou Arreridj	Muscat	Marrakech	Amman	Al-Khobar
SM	1	Al 'Aqabah	Tunis	Tunis	Az Zarqa	Tripoli	Rabat	Al 'Aqabah	Beirut
SM	2	Tunis	Giza	Marsa Alam	Bouznika	Al 'Aqabah	Marsa Alam	Algiers	Amman
SM	3	Beirut	Marsa Alam	Amman	Hidra	Algiers	Marrakech	Tunis	Marsa Alam
SM	4	Amman	Rabat	Marrakech	Aley	Tunis	Beirut	Beirut	Rabat
SM	5	Marsa Alam	Beirut	Rabat	Halhul	Beirut	Giza	Giza	Algiers
SM	6	Rabat	Ain el-Sokhna	Giza	Jenin	Amman	Amman	Amman	Giza
SM	7	Giza	Tlemcen	Algiers	Khan Yunis	Casablanca	6th of October City	Marsa Alam	Tetouan
SM	8	Tetouan	Ghadamis	Tlemcen	Gaza	Rabat	Tunis	Rabat	Al 'Aqabah
SM	9	6th of October City	Hadjret Ennous	Tetouan	Banha	Giza	Tlemcen	Tlemcen	Tlemcen
SM	10	Agadir	Reggane	Agadir	Bordj bou Arreridj	Marsa Alam	Ma'an	Tetouan	Agadir

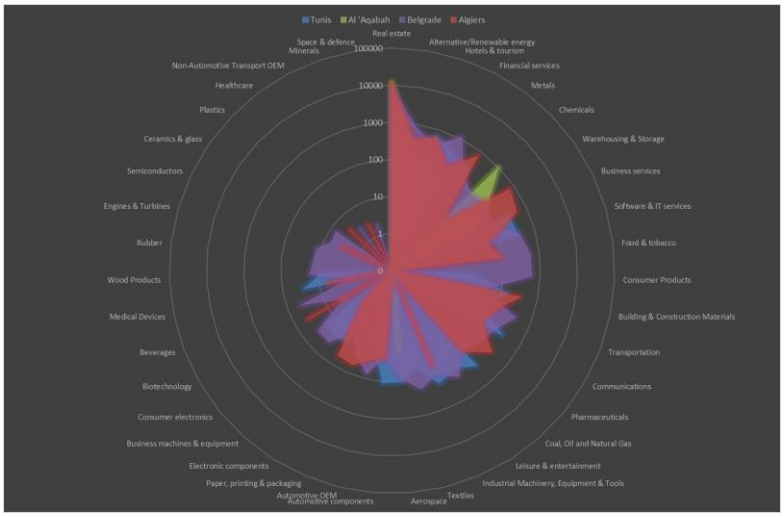
Source: Author's elaboration based on the Financial Times' fDi Markets database.

Figure 6. Casablanca and Algiers Top Three Competitors for FDI

Panel A. Casablanca



Panel B. Algiers



Source: Author's elaboration based on the Financial Times' fDi Markets database.

Top ten city competitors of the eight MED cities

In this next section we see the geographic distribution of the top 10 global competitors of each of the 8 Southern Mediterranean cities (yellow nodes). Besides this, we also see which the main investor cities are (blue nodes), that invest into these cities. Remember that it is the investment sectors of these investor cities that define the competitiveness between the competitor cities. See Figure 6, and Appendix Figures A – F, to follow the sectors they are competing for. Also seen are the investment linkages taking place between investor cities and competitor cities (grey lines).

Casablanca

In the instance of the top 10 competitors of Casablanca, we see at the global level that Casablanca has no competitors within the MED region (Figure 7 Panel A). It competes at the global level, hereby revealing its global prominence. It competes with Panama City, Muscat, Da Nang and Vientiane. Its only competitor in the Global South is Luanda. The cities labelled in blue are the biggest investors into the ten competitors. Many powerful cities in Pacific Asia, Europe, Middle East and North America, invest in these competing cities. These investor cities are the ones that Casablanca should improve its investment promotion and marketing with, to attract more future investment. This means exploring the location factors and policies that make these competitors so attractive for FDI.

Figure 7 Panel B is a zoom-in into Casablanca's proximate region. It is more clearly seen that there are 5 competitors in Europe (Valencia, Milton Keynes, Derby, Edinburg and Minsk), and 1 in the Middle East (Muscat). Bonn, Brussels, Paris, London, Dubai and Abu Dhabi are strong regional investors for Casablanca to take note of. Interestingly Casablanca tends to compete particularly in North Europe. The sectors that Casablanca and its competitors compete for can be seen in Figure 1 (previously discussed).

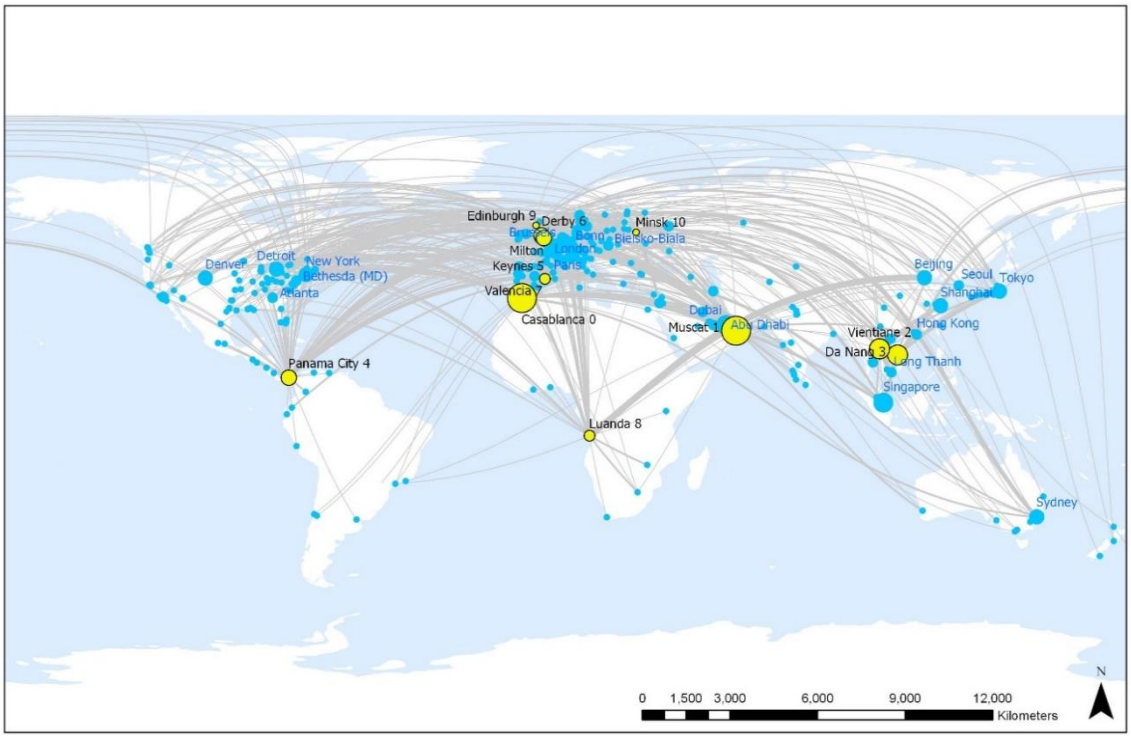
Algiers

In the case of Algiers, we see that its top 10 competitors are not really at the global level, as it is for Casablanca (Figure 8 Panel A). The exception is Luanda, a competitor which it shares with Casablanca. Therefore, it is evident that Algiers clearly competes at the regional scale. This is because all its top 10 competitors are within its proximate region (Figure 8 Panel B). Nonetheless, Algiers and its competitors do receive investment from powerful global cities, but particularly from Europe and the Middle East. The influence of Pacific Asia and North America is less, than in the case of Casablanca. This means that the focus of Algiers might need to be on improving its future FDI attraction from its proximate region.

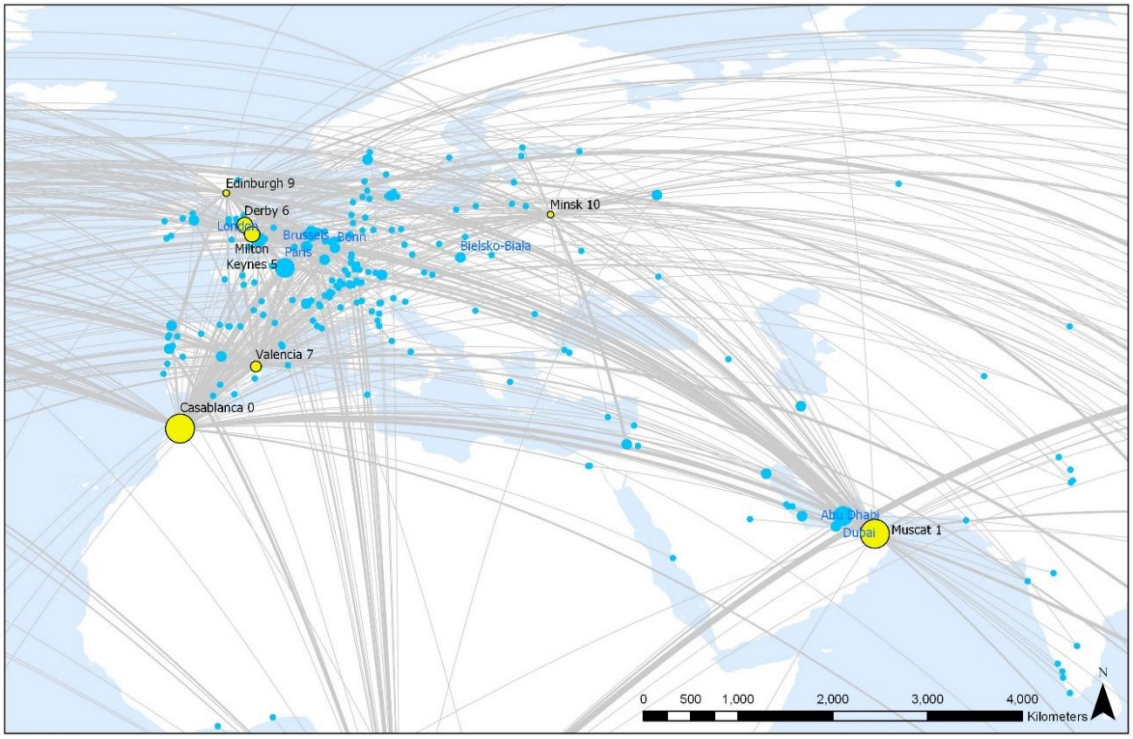
Unlike Casablanca, The competitors of Algiers in Europe are not in Northern Europe, but in South-Eastern Europe Figure 8 Panel B). However, its investor cities are clearly from top North European cities like London, Paris, Amsterdam, Zurich, Vienna and Vilnius. Madrid, Athens and Istanbul are Southern European investor cities of influence. In the Middle East, Dubai, Abu Dhabi, Al Manamah, Ad-Dawhah, and Kuwait City have strong investor influence over it. The sectors that Algiers and its competitors compete for can be seen in Figure 6 (previously discussed).

Figure 7. Top Ten Competitors of Casablanca

Panel A. Top Ten Competitors of Casablanca (yellow) and their Investing Cities (blue)



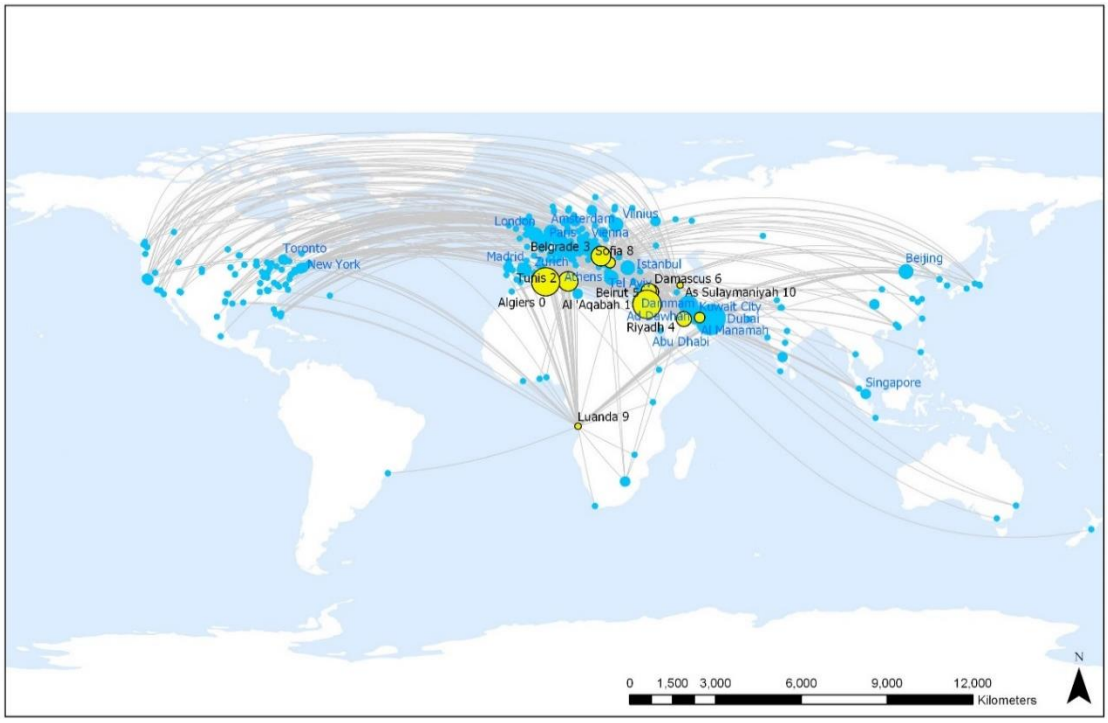
Panel B. Top Ten Competitors of Casablanca: Zoom-in



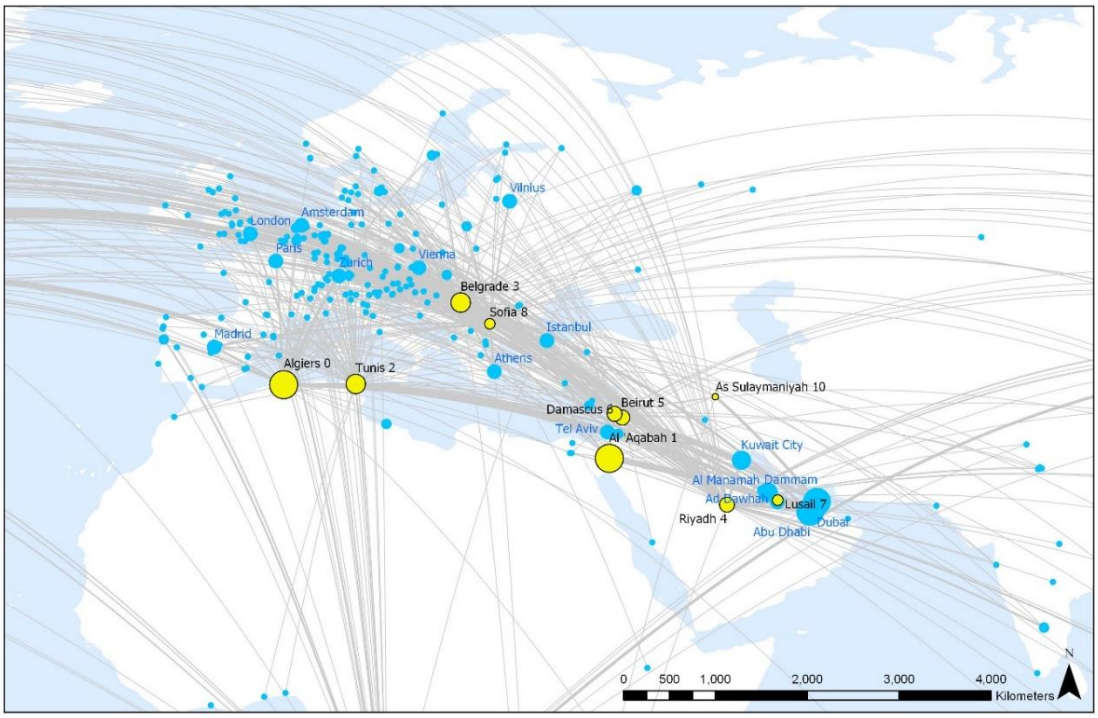
Source: Author's elaboration based on the Financial Times' fDi Markets database.

Figure 8. Top Ten Competitors of Algiers

Panel A. Top Ten Competitors of Algiers (yellow) and their Investing Cities (blue)



Panel B. Top Ten Competitors of Algiers: Zoom-in



Source: Author's elaboration based on the Financial Times' fDi Markets database

Amman

Of the 8 Southern Mediterranean cities, Amman (Appendix Map D) is the only one that has two competitors in Africa (Luanda and Maputo). It is striking that Luanda is often a competitor of the 8 MED cities. Luanda's competitive strength (in declining order) is in Real Estate, Financial Services, Hotels and Tourism, Beverages, Warehousing and Storage, Automotive, Metals and Chemicals. The only other distant competitor of Amman is Da Nang, a powerful economic city in Vietnam. Da Nang competes (in declining order) in Real Estate, Hotels and Tourism, Communications, Transportation, Metals, Financial Services, Warehousing and Storage, Automotive, Aerospace, Consumer Products, Textiles and Food and Tobacco. Amman has no top 10 competitors in North America and Latin America. In all maps, it is interesting that Latin America has hardly any influence over cities in the Southern Mediterranean, or their competitors.

Amman and its competitors receive a lot of investment from distant investor cities (Beijing, Seoul, Tokyo, Hefei, Singapore, Sydney, New York, Atlanta, Bridgeport and Denver). It this sense, it is more an international competitor, like Casablanca, than Cairo. In the next map (Appendix Map E), we see that Amman's only MED competitor is Tunis. Its competitors are more concentrated in the Middle East (Lusail, Al Muharraq, Baghdad and As Sulaymaniyah). Its only European competitors are Milton Keynes and Krakow (Poland). Amman's European regional investor cities are Porto, London, Amsterdam, Paris, Helsinki, and Budapest. In the Middle East these are Kuwait City, Al Manamah, Dubai, and Abu Dhabi. The sectors that Amman and its competitors compete for are, in diminishing order, Real Estate, Hotels and tourism, Financial Services, Energy, Industrial Machinery, Renewable Energy, Communications, Metals etc (Appendix Figure B).

Beirut

Beirut (Appendix Map F), like Amman, competes with Da Nang (Vietnam), and like Casablanca it competes Vientiane (Laos). Beirut also competes with Luanda (Angola). Besides these three distant competitors, Beirut's is truly a local-regional competitor (Appendix Map G). Its true local Southern Mediterranean competitor is Damascus, and in North Africa it is Tunis. In the Middle East Beirut's competitors are Lusail, Muscat, Al Muharraq, Al-Khobar and As Sulaymaniyah. Strikingly, Beirut has no European competitors. Only a few European investor cities invest in Beirut and its competitors (London, Paris, Brussels and Porto). The sectors that Beirut and its competitors compete for can be seen in Appendix Figure C. These sectors are, in diminishing order, Real Estate, Hotels and Tourism, Financial Services, Metals, Business Services, Communications, Software and IT, Energy and Leisure and Entertainment.

Bethlehem

Bethlehem (Appendix Map H) has no international competitors, as well as no global, distant investor cities. It is therefore the most locally competitive of all 8 Southern Mediterranean cities. At a closer scale (Appendix Map I), we see that seven of its 10 competitors are located very close to it (Gaza, Aley, Jenin, Halhul, Banha, Az Zarqa, and Khan Yunis). Only three competitors are found in Northern Africa (Bouznika, Bordj bou Arreridj, and Hidra). We see that all Bethlehem's competitors are smaller, less know cities. It is very clear that Bethlehem is the most locally competitive of all 8 Southern Mediterranean cities. Similarly, it is seen that Bethlehem and its competitors receive investment, from particularly very local investor cities (Cairo, Beirut and Amman). In the Middle East it receives FDI from Jeddah, Kuwait City, Ad Dawhah and Dubai. From Europe, FDI comes from Paris, Nurnberg, Albaret-le-Comtal and Ankara. The sectors that

Bethlehem and its competitors compete for can be seen in Appendix Figure D. These sectors are, in diminishing order Real Estate, Electronic Components, Financial Services, Textiles, Automotive Components. It is also very clear in this radar diagram that Bethlehem only compete in a handful of sectors, when compared to the other 7 Southern Mediterranean cities. The magnitudes of these investments are also much less than the other cities.

Cairo

Cairo (Appendix Map B) is less internationally competitive than Casablanca and only has one competitor in Asia (Ho Chi Minh City). It does not have top 10 competitors in Latin America, North America, and Africa. Cairo is more a regional competitor. However, its investor cities are global powerful cities like San Jose, New York, Singapore, Kuala Lumpur, Seoul and Tokyo. In Appendix Map C a zoom-in is seen. Also different to Casablanca, is that Cairo's competitors are not in Northern Europe, but focused in Eastern Europe (Warsaw, Belgrade, Bucharest, Sofia). In the Middle East its top 10 competitor is Riyad. Cairo's other competitors are situated in the MED region (Tripoli, Algiers, Tunis and Al Aqabah). Where Casablanca's investors are mostly international, we see Cairo more centred in Europe (London, Amsterdam, Paris, Zurich, Vienna, Stockholm and Athens), or the Middle East (Kuwait City, Ad Dawah, Abu Dhabi). Interestingly, its investor cities are like those of Algiers.

The sectors that Cairo and its competitors compete for are mostly in services and are, in diminishing order, Real Estate, Energy, Financial Services, Hotels and Tourism, Software and It Services, Communications, Food and Tobacco etc (Appendix Figure A). The reason that Casablanca has more global competitors is likely because it is more integrated in manufacturing global value chains, i.e. there is more vertical FDI taking place. In Cairo foreign investors are more interested in the huge services domestic market (horizontal FDI).

Tripoli

Tripoli (Appendix Map J), like Bethlehem, has no distant international competitors. Its competitors are all located in the proximate region. Nonetheless, it is quite international in terms of the investor cities investing into it. These are San Jose, Los Angeles, New York, Singapore and Bangalore. This might explain why Libya is the second biggest attractor of FDI in the Southern Mediterranean region (Table 3). Also, it is a beautiful historic city, devastated by recent war, therefore it is likely that a lot of investment goes to this city for redevelopment. This is supported by the fact that its biggest investment sector by far is Real Estate. Looking closer (Appendix Map K), we see that Tripoli's main competitors are in the Southern Mediterranean region (Algiers, Tunis, Beirut, Damascus and Al Aqabah), and Middle East (Riyad and Lusail). It also has three of its top 10 competitors in East Europe (Warsaw, Belgrade and Bucharest). Tripoli and its competitors receive investment from many European investor cities (London, Ieper, Paris, Croix, Amsterdam, Luxembourg, Zurich, Stockholm, Warsaw, Vienna, Madrid and Athens). From the Middle east, Tripoli receives FDI from Dubai, Ad Dawah, and Kuwait City. It receives no investment from the rest of Africa. The sectors that Tripoli and its competitors compete for can be seen in Appendix Figure E. These sectors are, in diminishing order, Real Estate, Hotels and Tourism, Business Services, Financial Services, Warehousing, Chemicals, Metals, Energy, Communications and Renewable Energy.

Tunis

Lastly, for Tunis (Appendix Map L), its distant international competition is quite like that of Beirut (Appendix Map F) and Algiers (Map 13), because it similarly competes with Luanda and Da Nang. Please see the section on Amman's competitors as an explanation of

the sectors that Luanda and Da Nang compete in. Tunis and its competitors also receive FDI from distant, important cities. From North America they receive FDI from Toronto, New York, Philadelphia, Atlanta, San Francisco, Denver and Bridgeport. From Asia these competitors receive FDI from Beijing, Seoul, Tokyo and Singapore. Observing closer (Appendix Map M), we see that Tunis has only one European competitor (Milton Keynes). In the Southern Mediterranean region it has no competitors in North Africa, but three in the MED Middle East. In the rest of the Middle East it competes with Lusail, Al Muharraq, Baghdad and As Sulaymaniyah. FDI into Tunis and its competitors are received from Porto, Paris, London and Amsterdam in Europe, while it receives investment from Dubai, Al Manamah, Kuwait City, Dammam and Abu Dhabi.

Regions of competition of the eight MED cities

In the next part of this study, a new technique is applied to the competition data of the 8 Southern European cities. The technique is called "hotspot analysis". Where the previous analysis simply mapped the top 10 competitors of each cities, this analysis includes the 1147 competitors of each of the eight cities. More importantly, hotspot analysis statistically identifies the most significant "hot spots" and "cold spots" in the data, by aggregating nodes (cities) of occurrence that are in proximity to one another, based on a calculated distance. The analysis identifies cities with similar high (hot) or low (cold) values into clusters. Importantly, unlike the previous maps which identify city competitors, this type of analysis identifies contingent regional competitor clusters – i.e. it identifies regions of competition.

In the case of Casablanca (Figure 9), we see that considering all its 1147 competitors (from strong to weak), most cities are statistically insignificant (grey-green nodes). The red nodes are the most competitive regional clusters of Casablanca. It is interesting that the most competitive region of Casablanca (the darkest red cities), is the Randstad-Ruhr-Flemish Diamond region in North-West Europe (99% confidence). This means that Casablanca competes with one of the world's most competitive FDI megaregions. Next, Casablanca competes at a lower level with cities in its own region (orange cities), i.e. the Western Atlas-Portugal-Southern Spain region, as well as the United Kingdom and Eastern Europe. It has no significant competition with the rest of the Southern Mediterranean, nor the rest of the world. Interestingly, the cold spot clusters (the dark blue cities), reveal cities that are significant "non-competitors of Casablanca". These are cities with a completely opposite type of FDI sectoral profile. These cities are not a threat to Casablanca and its competitors. The major cluster is the East China-South Korea zone. A less cold region is found in the Persian Gulf region. Cities like Dubai and Abu Dhabi are not a threat to Casablanca, and could serve as regional collaborators, because they attract different configurations of sectoral investment. Other cold clusters are seen in the Gulf of Mexico, and Southern Australia.

The regional competition clusters of Algiers are seen in Figure 10. Its major regional competition zones (dark red cities) are the Atlas Corridor, the Nile Corridor and many coastal cities around the Mediterranean and Turkey. These are cities attracting very similar types of FDI sectors and monetary values. Unlike Casablanca, it has no significant competition with Northern Europe. Algiers is much more in competition within the Southern European megaregion. It has similar cold spot cluster zones as Casablanca, but these are highly significant for Algiers (dark blue cities). In Appendix Map N we see the regional competition clusters of Cairo. A very interesting finding is that although Cairo is the number one attractor of FDI in the MED region (see Table 3), its regional competition clusters are unexpectedly super local. Its major cluster is cities in the Nile Corridor-Middle Eastern zone. Its smaller strong cluster is in the area of Amman. Its secondary cluster zone

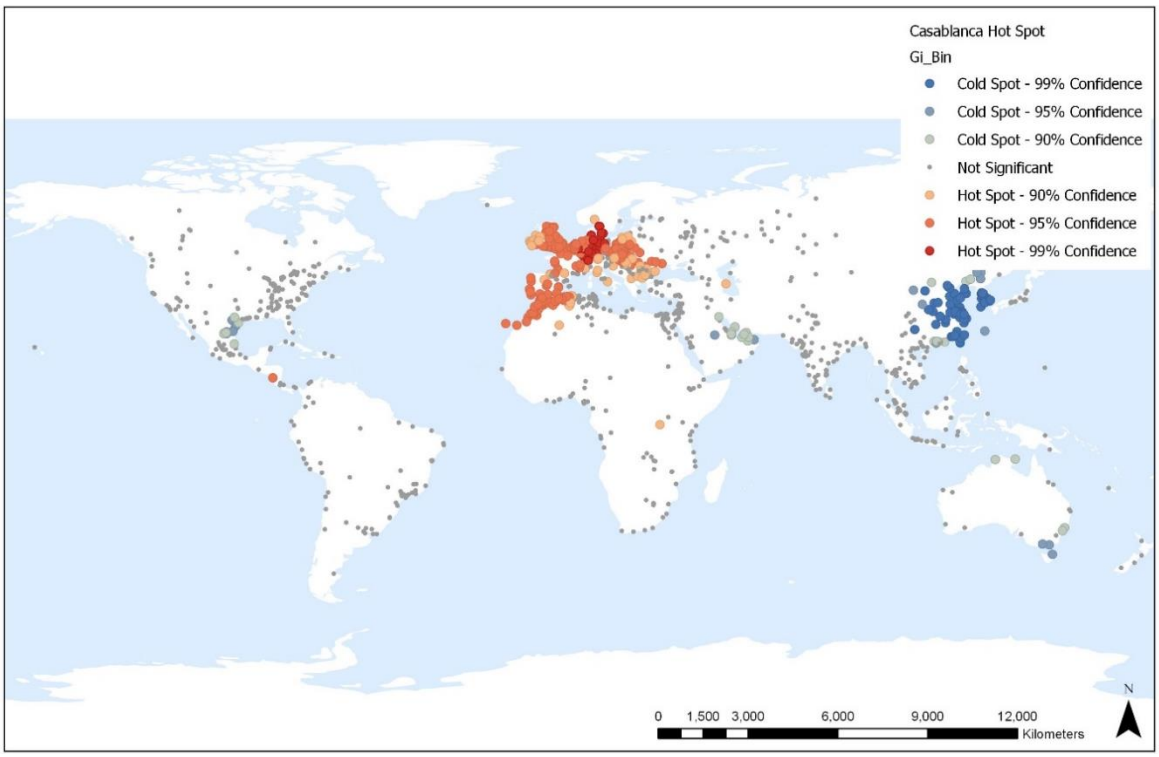
of competition (orange cities) is found in the Turkey-East Europe Zone. Strikingly Cairo has no significant competition with the Atlas Corridor, the Gulf of Persia, nor Western and Northern Europe. As with the other competitor cities, its cold spot is the China-South Korea region.

In the case of Amman (Appendix Map O), we see that it competes strongly with the Nile Corridor-Middle Eastern cluster, as well as the Atlas clusters around Algiers and Tunis. It also competes strongly with the UK region, as well as the Georgia-Armenia-Azerbaijan zone. It also competes strongly with the Lunda Region and the Beira Region in Africa.

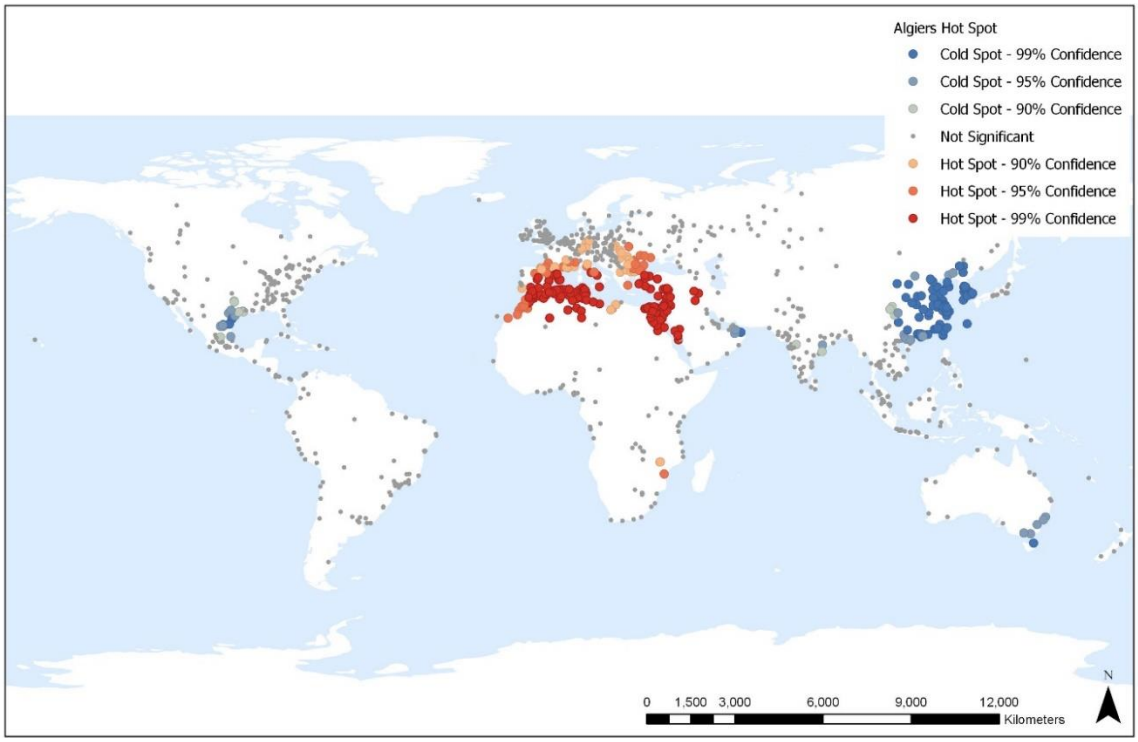
In the following map (Appendix Map P), the regional competitor clusters of Beirut are seen. Its major competition clusters are the Algiers-Tunis-Tripoli zone, the Nile Corridor-Middle Eastern zone, the Turkish zone and the Baghdad Zone. Its cold spot is the same as the other maps. In the case of Bethlehem (Appendix Map Q) we see that its major regional competition clusters are the whole Atlas region (Casablanca-Tripoli-Tunis-Algiers), and the Nile Corridor-Middle Eastern zone. The Baghdad region is also similarly competitive. Coastal cities of Portugal, Spain and Italy are also highly competitive with Bethlehem. It means that all these many smaller cities in all these regional competition clusters all attract the same configurations and smaller magnitudes of FDI. This indicates that all these cities are replaceable to each other by investors. It is therefore important that Bethlehem specialises its FDI sectors more. Next, we see Tripoli's regional competitor clusters (Appendix Map R). It has the same regional clusters of competition as Bethlehem. However, it also has a very strong competition cluster in East Europe. Lastly, for Tunis (Appendix Map S), we see that it has the same regional competition clusters as Tripoli, but it also competes at a secondary level all over Europe.

Figure 9. Hot Spot Analysis of Casablanca and Algiers Regional Competitor Clusters

Panel A. Casablanca



Panel B. Algiers



Source: Author's elaboration based on the Financial Times' fDi Markets database

III. The relationship between the geography of FDI and income inequality

This chapter discusses the relationship between FDI and income inequality at the local level, i.e. within a country. Income inequality at the country level can be decomposed into inter-city (or inter-region) inequality and intra-city (or intra-region) inequality (Kanbur et al., 2014). Studies on the impact of globalization (trade or financial) on inequality at the country level are not able to decompose this effect. This is particularly limiting when it comes to the study of impact of FDI on inequality, as conclusions based on country-level studies may be misleading, as these combine the impact of FDI with the distribution of FDI.

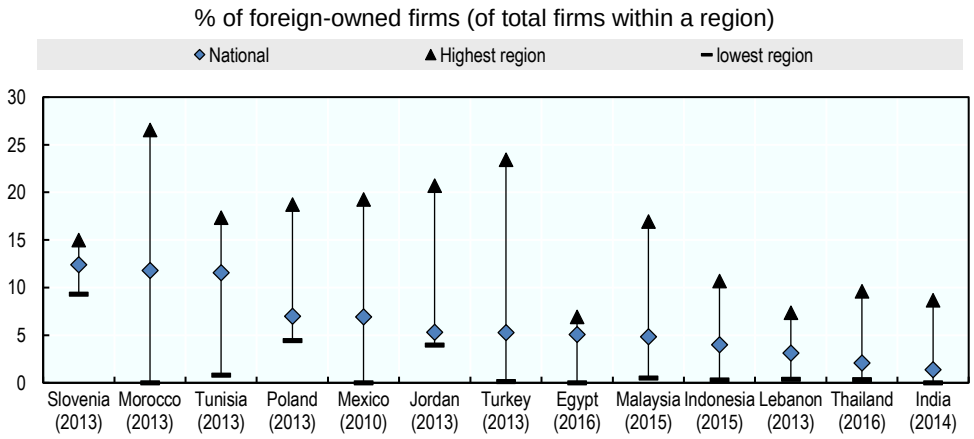
FDI inflows may affect different regions or cities of an economy unevenly and, consequently, exacerbate territorial disparities (Lessmann, 2013). At the same time, FDI can have positive effects on hosts countries' local development, i.e. on a specific governorate or a city. It can play an important role in raising technological level, productive capability and a region or a city ability to compete in international markets. Foreign firms bring also new knowledge and new management skills, and local firms can learn from this. Furthermore, FDI can increase local labour demand, even if some adjustments across sectors can take place in the short-term.

The relationship between FDI and regional disparities

FDI in MED economies are more concentrated within some specific territories than in others[2]. In the case of Tunisia, foreign investment played an important role in the development of Tunisian coastal regions but much less those in hinterlands, with poor infrastructure and inadequately skilled labour force (Box 2). In Egypt, the top five governorates accounted for 90% of greenfield FDI, while the bottom 22 governorates share the remaining 10%. Egyptian governorates with low shares of FDI are mostly landlocked areas, with the exception of the greater Cairo area. Cairo may have overshadowed other cities' or regions' ability to attract foreign investment, leading to population movements towards agglomeration centres.[3] In Lebanon, the geographical distribution of foreign-owned projects shows that Mount Lebanon attracted the highest share in 2016 (48%), given the presence of industrial zones and a competitive labour force.[4]

FDI disparity among MED economies does not seem to be particularly high when compared to other emerging countries, with the exception Morocco (Figure 10). The country exhibits the highest levels of disparity, measured as the percent of foreign-owned firms out of all firms (domestic and foreign-owned) within the same region. Tunisia and Jordan present similar, but lower levels of disparity than Morocco. High disparities in foreign-owned firms spatial locations can be found in both small (Malaysia) and large emerging countries (Turkey).[5]

Figure 10. FDI regional disparity in MED and other selected emerging economies



Note: Number of regions included in the survey: Egypt (7), India (23), Indonesia (9), Jordan (5), Lebanon (6), Malaysia (5), Mexico (8), Morocco (11), Poland (6), Slovenia (2), Thailand (5), Tunisia (5), Turkey (6).
Source: OECD based on the World Bank Enterprise Survey.

The unequal geographical distribution of FDI is not specific to the MED region and is common to most, if not all, countries. FDI might increase spatial inequalities since different regions of a country usually do not receive FDI in equal amount. FDI tends to concentrate

[2] OECD (2017), making investment promotion work for sustainable development in the southern Mediterranean, background note, Paris 16-17 October 2017.

[3] UN-Habitat's report "State of African Cities 2018: the geography of African investment".

[4] OECD (2017), making investment promotion work for sustainable development in the southern Mediterranean, background note, Paris 16-17 October 2017.

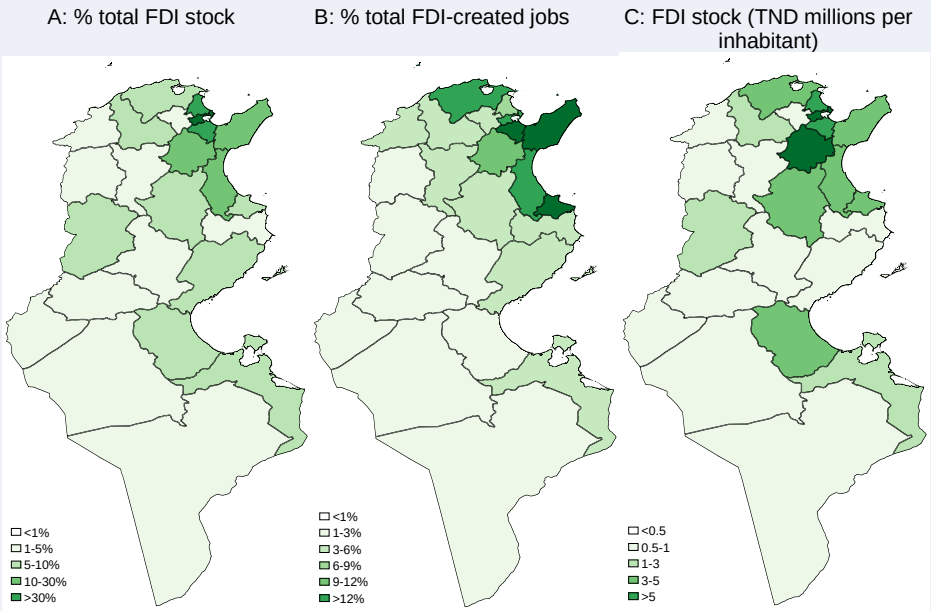
[5] One limitation of the measure used in figure 10 is that it only captures the number of foreign-owned firms and not the actual amount of foreign investment.

in regions of high productivity, which may reinforce existing spatial asymmetries in production structures and capabilities within a country and thereby hinder regional growth convergence. In addition, the beneficial effects of FDI at the regional level are subject to the so-called 'absorptive capacity' of domestic firms (Fu, 2008). It follows that foreign investments in less developed regions may have a lower potential for positive spill overs as the knowledge distance between foreign and domestic firms can be too important. This is corroborated by OECD work showing that the breakdown of the knowledge "diffusion machine" across firms may have had a strong negative impact on lagging regions disconnected from highly productive firms such as MNEs (OECD, 2016).

Box 2. FDI geographical disparity and job creation in Tunisia

Agglomeration forces and FDI play an important role in the development of Tunisian coastal regions. At the same time, there are strong challenges in attracting foreign and domestic investment in regions with poor infrastructure and inadequately skilled labour force. The geographical disparity in the distribution of FDI is relatively high. For instance, more than 30% of FDI stock in the country is concentrated in the capital (Panel A). In general, the coastal regions retain more than 80% of FDI (excluding hydrocarbons). FDI disparity between coastal and inner Tunisian governorates remains high even when controlling for the population of each governorate (Panel C). In 2015, FDI inflows to Regional Development Zones, which benefit from supplementary fiscal and financial incentives, accounted for 21% of total FDI inflows and were concentrated in electronic and mechanical industries, textiles, and agro food. FDI disparity in Tunisia is strongly driven by existing industrial diversification spatial disparities, where coastal governorates are more industrially diversified than those in hinterlands and southern Tunisia.

FDI stock (excluding hydrocarbons), jobs created by FDI projects, and FDI stock per inhabitant, 2015



Source: OECD (2017), making investment promotion work for sustainable development in the southern Mediterranean, background note, Paris 16-17 October 2017.

The relationship between FDI and territorial income disparities is also conditional on the stage of economic development a country is at. Evidence has shown that FDI has a stronger

positive effect on regional inequalities in developing economies compared to more advanced countries (Lessmann, 2011). Such difference can, to some extent, be explained by higher labour mobility in advanced countries as well as by effective government reallocation policies that mitigate the negative re-distributional impact of FDI on regional inequality. In less developed economies, poor infrastructure and weak fiscal capacities limit the possibility for enhanced labour mobility and government capacity for fiscal redistribution. The relationship between FDI and regional disparity may also be affected by possible patterns in the type of investments received, and the sector in which foreign investors operate, across the different regions of a country.

The relationship between FDI and city-level inequality

This section focusses on the relationship between FDI and income inequality at the city-level. The analysis of the impact of FDI on city-level income inequality is based on a simple Ordinary Least Square (OLS) cross-sectional model.[6] This model specification raises severe methodological issues as it does not allow to establish a causal direction between FDI and income inequality.[7] Therefore the description of analysis hereafter focus on the "relationship" between FDI and inequality rather than on the "impact" of FDI. Data on city-level Gini is from Euromonitor Passport. The available data only covers 23 MED cities, which is not enough for a reliable econometric study. Therefore, these cities were combined with 105 European cities and tested in unison. Nonetheless, the MED and European cities were coded as "dummy" variables, to explain the differences between the two classes. Statistical assumption tests were carried out prior to all analyses in this chapter, to make sure they are as reliable as possible.

Appendix Table E shows the seven models discussed henceforth. Models are simply separate analyses using different variable combinations, seen as columns in the tables. Model 1 tests whether FDI (measured in $) to cities is related to their city-level income inequality (Gini coefficient). The results show that an increase in City FDI is significantly associated with an increase in the Gini coefficient. Some additional evidence indicates that foreign investment increases income inequality in these cities (which is often supported by theory). In UN-Habitat's recent report "State of African Cities 2018: the geography of African investment", it was similarly found that FDI into Africa tends to increase income inequality. However, the authors found that in combination with a strong availability of technological skills and trustworthy institutional capacity, that FDI then tends to decrease income inequality[8]. It is arguable that the same conditions could apply to MED cities.

In Model 2, a regional dummy is included, to test whether cities in Europe or Southern Mediterranean are affected differently. The result shows that FDI to cities in Europe is associated with a decrease in income inequality, while FDI to cities in the Southern Mediterranean region is associated with an increase in inequality. This is likely because European cities have a higher presence of technologically skilled labour and more trustworthy institutional capacity, which investors seek to reduce risk.

The next analysis (Model 3) explores if the level of city inequality is related to the spatial distribution of FDI within a given country. The ratio of City FDI to Country FDI is used

[6] The number of observations is too limited for Panel Data or for Generalised Method of Moment (GMM) analysis.

[7] No robust Instrumental Variables were available to perform 2-Stage Least Square Regression.

[8] Kaur R., Wall R. S., and J. Fransen (2018) The Impact of FDI on Income Inequality in Africa, in "The State of African Cities 2018: The Geography of African Investment", ed. Wall R.S., Maseland J., Rochell K. and Spaliviero M. UN-Habitat, United Nations Human Settlements Programme (UN-Habitat).

for this. If a primary city receives an uneven share of FDI in relation to the total FDI received by its country, then its score will be high, meaning that the distribution of FDI between the primary city and other cities in the country is highly disproportionate. The model shows that as the measure of unevenness increases, the higher the income inequality in cities will be. It also suggests that more evenly spread FDI to cities is associated with a decrease in cities' inequality. The model also includes the regional dummy, indicating that cities in the Southern Mediterranean, will tend to have higher inequality, than those in Europe. It suggests that MED cities may have other factors which tend to increase inequality more than in Europe.

In Model 4, the FDI ratio variable is controlled for by other variables that can determine income inequality in cities. Firstly, it is seen that Country Gini Index positively increases City Gini Index, and is highly significant. This suggests that country level inequality may have a spill over effect on its cities. Decreasing a countries income inequality rank in the world, will therefore decrease inequality at the city level. It shows that state level economics and policies have strong influence on the development of cities. Next, we see that City Population increases income inequality, and is also highly significant. It also suggests that cities with smaller populations tend to have less inequality. Model 4 also suggests that City GDP growth is associated with an increase in city inequality. Previous studies, at the national level, have shown than GDP growth does not necessarily lead to a reduction in income inequality.[9] City GDP per Capita does not have any significant relationship with inequality measures. This is possibly because this is already captured by Population and GDP Growth.

The following results (Model 5), are the same as Model 4, but include the Region Europe dummy variable. This proves to no longer hold explanatory power. Similarly, Model 6 includes the Secondary and Tertiary Cities dummy variable. This too, has no significant effect. However, the sign is negative, showing that the more FDI locates in these types of cities, the tendency to decrease Gini. Model 7 is the same as Model 6, but also includes the number of City Knowledge Industry Firms in a city. This data has been collected from the ORBIS database. It includes firms in Aerospace, Communications, Educational Services, Pharmaceuticals, Biotechnology and Software and IT. Interestingly, the results show that the more knowledge firms based in cities, the lower the income inequality. This is a good advocacy for knowledge as an instrument to decrease inequality.

In the next study (Appendix Table F), it is explored how tiers of FDI cities relate to income inequality. In Model 1 we see that the top FDI cities like Cairo, Casablanca, London and Amsterdam, have the effect of increasing Gini across all tiers of cities. This is because these cities tend to attract a disproportionate amount of FDI compared to secondary and tertiary cities. This test is consistent with the results of the previous study. In Model 2, we see that indeed, FDI to lower tiered cities, which are more plentiful, tends to have the power to decrease income inequality amongst all cities. Model 3, shows that cities which are in Europe, tend to have less inequality than those in the Southern Mediterranean. Model 4 shows the variables in unison, with the same outcomes, but higher R2.

The next analysis (Appendix Table G) tests the relationship between FDI and a City's Disposable Income. This concerns the remaining money an individual has to spend after paying pensions, taxes and contributions. This surplus is an indication of wealth. The analysis shows that FDI is positively and significantly related to an increase in the average

[9] Choi, C. (2006). Does foreign direct investment affect domestic income inequality?. Applied Economics Letters, 13 (12), 811-814.

amount of income in a city (Model 1). The model suggests that it is in fact cities in Europe that best explain this relationship, although something that MED cities can take not of (Model 2). Model 3 shows very similar results, but explained by the number of investments, instead of value.

Conclusion

FDI is fundamental to the international economic integration of cities, especially when the right policy conditions can boost FDI's ability to support local enterprise development and promote the competitive position of both destination and source cities. However, to have this kind of impact will depend on a city's ability to attract investment, i.e. the locational advantage of cities will influence the decisions of the firms to locate there. For instance, in the case of FDI to European cities, FDI is positively and significantly attracted by city GDP, air accessibility, road accessibility, internet infrastructure, percentage highly educated citizens, proximity to a top university, being a capital city, and entertainment density. FDI in Europe is significantly and negatively deterred by high average salaries per employee, high corporate tax and high start-up costs. MED cities are invited to explore the determinants mentioned above and be cautious of the factors which can deter FDI.

Unlike most studies on FDI which take place at the country level, this study is unique in that it is carried out at the city-level. This means FDI flows from source cities to destination cities are explored - which is important because the world is urbanizing fast, and the role of cities in the world economy are increasingly important. It therefore is sensible to explore FDI to cities, to reveal regional differences and hereby address specific territorial disparities. In this way, the focus of this study is on understanding the foreign investment geography of MED cities, at different geographic scales.

The strength of FDI attraction of Southern Mediterranean cities

Compared to other regions of the world, the MED region has a strong potential to improve its ability to attract investment. It is striking that the region receives much FDI from the Middle East/GCC and Europe, but compared to other parts of the world, this can be vastly improved. Where MED proves to be a strong investor into sub-Saharan African cities, it receives very little FDI back from these cities. Because Africa is the world region with the second highest growth of inward investment and is one of the largest sources of African investment, MED policymakers could develop ways to attract more African investment into the region.

In the MED region, the only city that is found in the top 20 global destinations of FDI is Cairo (17th). This is remarkable considering that there are over 11 000 FDI destination cities in the database. Although not part of the MED region, other closely proximate cities are Dubai (5th) and Al Jubail (20th), which are also two of the top 20 world FDI destinations. The MED region could therefore consider strengthening its ties, as well as compete better, with these two cities. Furthermore, the top 10 destinations of global FDI into the MED-African region are Cairo (1st), Tripoli (2nd), Johannesburg (3rd), Algiers (4th), Al Aqabah (5th), Casablanca (6th), Beirut (7th), Tunis (8th), Lagos (9th) and Amman (10th). This shows that the MED region is the most powerful in terms of FDI into Africa.

FDI competitors of key Southern Mediterranean cities

The report explored which global cities are FDI competitors of Algiers, Amman, Beirut, Bethlehem, Casablanca, Cairo, Tripoli, and Tunis, and particularly which FDI sectors these cities are competing for. Firstly, it is shown that these cities are generally competing with

entirely different cities, and often for different FDI sectors. This underlines the importance for investment promotion agencies, either at the national or city levels, to understand who their competitors are and which sectors are being contested. All cities are shown to be in fierce competition for attracting FDI. Secondly, it is shown that these 'place wars' take place at local, regional, national, continental and global scales.

Some MED cities compete very locally, while others compete more regionally, and a few compete at the global scale. However, interestingly it is shown that all MED cities compete strongly for real estate and hotels and tourism investments. Also, some compete in Africa, while others do not. As an example (the same analysis has been done for the other 7 cities), Casablanca's top three global competitors are Muscat, Vientiane and Da Nang. These four cities compete for a certain combination of FDI sectors, such as Real Estate, Hotels & Tourism, business and Financial Services, and Automotive. Casablanca therefore competes at the global level, while within the MED region, it has no competitors. Identifying which cities invest in the MED region and which are MED competitors would help investment promotion agencies in their targeting and investment generation activities.

The report also identifies regional clusters of FDI, which is different from the previous analysis, which defines competitors at the city level. The report reveals that the regions of competition of MED cities can be entirely different. Casablanca's major region of competition is the Randstad-Ruhr-Flemish Diamond region in North-West Europe, one of the world's most competitive FDI megaregions. The city of Casablanca could explore in detail what location factors and policies makes North-West Europe such a powerful competitor region and utilize this information to develop its own investment promotion strategies. The same "regional clusters" analysis was done for each of the 8 cities, but not each can be discussed in the conclusions. The key message is that each city will have its own region of competition, at different scales, and contending for different FDI sectors. Such information as well as a better understanding of location factors and policies that make these regions attractive to certain combinations of investment can in the future lead to better-informed investment promotion strategies and marketing.

The relationship between the geography of FDI and income inequality

The paper discusses the relationship between the geography of FDI in MED countries and income inequality. FDI inflows may affect different governorates or cities of an economy unevenly and, consequently, exacerbate territorial disparities. At the same time, FDI can have positive effects on hosts countries' local development. It can play an important role in raising technological level, productive capability and a governorate or a city ability to compete in international markets. Foreign firms bring also new knowledge and new management skills, and local firms can learn from this. Furthermore, FDI can increase local labour demand, even if some adjustments across sectors can take place in the short-term.

The paper shows that higher foreign investment is associated with higher income inequality in MED cities but with lower inequality within European cities. This is likely because European cities have a higher presence of technologically skilled labour and more trustworthy institutional capacity, which investors seek to reduce risk. More importantly, it has been shown that the real problem with FDI is that it is unevenly distributed across cities within a country. The more this unevenness increases, the higher the income inequality in cities will be. Therefore MED cities should explore mechanisms and policies to more evenly distribute FDI.

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Appendix

Appendix Table A: MED-Europe FDI Rank – Top 30 MED-Europe City Destinations

City	Country	Region	FDI (million $)	Europe-AMED Rank
London	United Kingdom	West Europe	138823.96	1
Paris	France	West Europe	53659.74	2
Cairo	Egypt	Africa	46979.01	3
Moscow	Russia	Rest of Europe	45031.09	4
Dublin	Ireland	West Europe	41279.06	5
Bucharest	Romania	Rest of Europe	30952.84	6
Saint Petersburg	Russia	Rest of Europe	30378.42	7
Amsterdam	Netherlands	West Europe	30095.26	8
Warsaw	Poland	Rest of Europe	26600.69	9
Madrid	Spain	West Europe	26430.15	10
Barcelona	Spain	West Europe	24487.39	11
Tripoli	Libya	Africa	22627.10	12
Istanbul	Turkey	Rest of Europe	21241.44	13
Budapest	Hungary	Rest of Europe	18237.75	14
Birmingham	United Kingdom	West Europe	17884.93	15
Berlin	Germany	West Europe	17284.83	16
Rotterdam	Netherlands	West Europe	15825.85	17
Prague	Czech Republic	Rest of Europe	15570.23	18
Sofia	Bulgaria	Rest of Europe	15211.75	19
Vienna	Austria	West Europe	14298.25	20
Manchester	United Kingdom	West Europe	13904.65	21
Frankfurt am Main	Germany	West Europe	13816.53	22
Belgrade	Serbia	Rest of Europe	13696.79	23
Antwerp	Belgium	West Europe	13189.96	24
Milan	Italy	West Europe	13063.65	25
Kiev	Ukraine	Rest of Europe	12871.44	26
Helsinki	Finland	West Europe	12410.19	27
Algiers	Algeria	Africa	12073.65	28
Al 'Aqabah	Jordan	Middle East	11960.80	29
Wroclaw	Poland	Rest of Europe	11860.34	30
TOTAL CITIES				**5554**

Appendix Table B: MED-Africa FDI Rank – Top 30 MED-Africa City Destinations

City	Country	Region	FDI (million $)	Africa-AMED Rank
Cairo	Egypt	Africa	46979.01	1
Tripoli	Libya	Africa	22627.10	2
Johannesburg	South Africa	Africa	19253.78	3
Algiers	Algeria	Africa	12073.65	4
Al 'Aqabah	Jordan	Middle East	11960.80	5
Casablanca	Morocco	Africa	11153.51	6
Beirut	Lebanon	Middle East	9797.45	7
Tunis	Tunisia	Africa	9401.42	8
Lagos	Nigeria	Africa	9057.00	9
Amman	Jordan	Middle East	7557.05	10
Cape Town	South Africa	Africa	7327.81	11
Abidjan	Cote d'Ivoire (Ivory Coast)	Africa	7111.75	12
Luanda	Angola	Africa	6741.65	13
Nairobi	Kenya	Africa	6476.50	14
Kribi	Cameroon	Africa	6152.50	15
Khartoum	Sudan	Africa	5216.20	16
Dakar	Senegal	Africa	5197.68	17
Port Harcourt	Nigeria	Africa	4980.82	18
Sekondi-Takoradi	Ghana	Africa	4908.40	19
Rabat	Morocco	Africa	4771.01	20
Accra	Ghana	Africa	4543.98	21
Marrakech	Morocco	Africa	4436.59	22
Dire Dawa	Ethiopia	Africa	4133.00	23
Maputo	Mozambique	Africa	4034.17	24
Awash	Ethiopia	Africa	4000.00	25
Addis Ababa	Ethiopia	Africa	3956.32	26
Abuja	Nigeria	Africa	3742.08	27
Dar es Salaam	Tanzania	Africa	3643.50	28
Arzew	Algeria	Africa	3607.40	29
Damietta	Egypt	Africa	3499.40	30
TOTAL CITIES				**577**

Appendix Table C: MED-Middle East FDI Rank – Top 30 MED-Middle East City Destinations

City	Country	Region	FDI (million $)	MiddleEast-AMED Rank
Dubai	UAE	Middle East	96487.89	1
Cairo	Egypt	Africa	46979.01	2
Al Jubail	Saudi Arabia	Middle East	40986.18	3
Abu Dhabi	UAE	Middle East	34985.66	4
Jubail	Saudi Arabia	Middle East	25632.40	5
Ad Dawhah	Qatar	Middle East	23313.87	6
Tripoli	Libya	Africa	22627.10	7
Riyadh	Saudi Arabia	Middle East	17039.93	8
Suhar	Oman	Middle East	13815.66	9
Jeddah	Saudi Arabia	Middle East	13751.17	10
Rabigh	Saudi Arabia	Middle East	13108.70	11
Algiers	Algeria	Africa	12073.65	12
Al 'Aqabah	Jordan	Middle East	11960.80	13
Basra	Iraq	Middle East	11284.70	14
Casablanca	Morocco	Africa	11153.51	15
Ras Laffan	Qatar	Middle East	10714.20	16
Beirut	Lebanon	Middle East	9797.45	17
Al Manamah	Bahrain	Middle East	9558.02	18
Tunis	Tunisia	Africa	9401.42	19
Kiryat Gat	Israel	Middle East	9132.10	20
Mesaieed	Qatar	Middle East	8591.76	21
Muscat	Oman	Middle East	8326.61	22
Dammam	Saudi Arabia	Middle East	8234.06	23
Damascus	Syria	Middle East	7570.10	24
Amman	Jordan	Middle East	7557.05	25
Ras al Khaymah	UAE	Middle East	6551.97	26
Salalah	Oman	Middle East	5845.20	27
Tel Aviv	Israel	Middle East	5177.60	28
Yanbu' al Bahr	Saudi Arabia	Middle East	4849.27	29
Lusail	Qatar	Middle East	4824.10	30
TOTAL CITIES				**323**

Appendix Table D: Various FDI Ranks of all Southern Mediterranean City Destinations

1

City	Country	Region	FDI (million $)	World Rank	Europe-AMED Rank	MiddleEast-AMED Rank	Africa-AMED Rank	AMED Rank
Cairo	Egypt	Africa	46979.01	17	3	2	1	1
Tripoli	Libya	Africa	22627.10	54	12	7	2	2
Algiers	Algeria	Africa	12073.65	100	28	12	4	3
Al 'Aqabah	Jordan	Middle East	11960.80	102	29	13	5	4
Casablanca	Morocco	Africa	11153.51	113	32	15	6	5
Beirut	Lebanon	Middle East	9797.45	133	37	17	7	6
Tunis	Tunisia	Africa	9401.42	139	39	19	8	7
Amman	Jordan	Middle East	7557.05	171	49	25	10	8
Rabat	Morocco	Africa	4771.01	267	74	31	20	9
Marrakech	Morocco	Africa	4436.59	287	81	33	22	10
Arzew	Algeria	Africa	3607.40	351	109	36	29	11
Damietta	Egypt	Africa	3499.40	366	116	39	30	12
Alexandria	Egypt	Africa	3444.05	369	118	41	31	13
Giza	Egypt	Africa	3203.83	391	125	43	33	14
Marsa Alam	Egypt	Africa	2788.90	441	139	47	38	15
Port Said	Egypt	Africa	2680.01	457	147	49	39	16
Suez	Egypt	Africa	2441.19	511	166	53	47	17
Kenitra	Morocco	Africa	2343.73	534	179	54	48	18
6th of October City	Egypt	Africa	2039.50	604	198	55	55	19
Tetouan	Morocco	Africa	1716.36	695	231	57	61	20
In Amenas	Algeria	Africa	1641.20	733	252	59	63	21
Relizane	Algeria	Africa	1610.00	744	256	60	64	22
Rosetta	Egypt	Africa	1525.10	779	274	61	68	23
Setif	Algeria	Africa	1471.50	804	287	62	71	24
El Faiyum	Egypt	Africa	1470.30	806	289	63	72	25

2

City	Country	Region	FDI (million $)	World Rank	Europe-AMED Rank	MiddleEast-AMED Rank	Africa-AMED Rank	AMED Rank
Jijel	Algeria	Africa	1448.30	818	293	64	75	26
Agadir	Morocco	Africa	1083.30	1022	365	70	82	27
Ain el-Sokhna	Egypt	Africa	1000.00	1099	400	72	91	28
Tlemcen	Algeria	Africa	994.70	1101	401	73	92	29
El Minya	Egypt	Africa	931.80	1158	426	76	96	30
Hadjret Ennous	Algeria	Africa	900.00	1190	442	78	98	31
Ghadamis	Libya	Africa	900.00	1191	443	79	99	32
Reggane	Algeria	Africa	864.70	1228	457	80	105	33
Ma'an	Jordan	Middle East	814.00	1291	485	87	109	34
Sharm El-Sheikh	Egypt	Africa	771.32	1346	513	89	112	35
Beni Saf	Algeria	Africa	698.30	1430	550	91	117	36
Ain Beni-Mathar	Morocco	Africa	641.00	1505	583	94	119	37
Asilah	Morocco	Africa	628.40	1530	595	95	122	38
Bouznika	Morocco	Africa	624.97	1539	600	96	123	39
Fez	Morocco	Africa	599.80	1585	618	99	125	40
Jarjis	Tunisia	Africa	588.00	1607	632	100	127	41
Djelfa	Algeria	Africa	578.00	1623	643	101	128	42
Idku	Egypt	Africa	550.00	1671	674	102	131	43
Al Mafraq	Jordan	Middle East	549.00	1674	676	103	132	44
Tarfaya	Morocco	Africa	516.80	1749	709	104	135	45
Adrar	Algeria	Africa	509.80	1760	717	105	136	46
Port Ghalib	Egypt	Africa	500.00	1782	723	106	137	47
Settat	Morocco	Africa	444.00	1966	823	110	143	48
Aswan	Egypt	Africa	443.14	1967	824	111	144	49
Az Zarqa	Jordan	Middle East	439.10	1981	827	112	145	50

3

City	Country	Region	FDI (million $)	World Rank	Europe-AMED Rank	MiddleEast-AMED Rank	Africa-AMED Rank	AMED Rank
Hurghada	Egypt	Africa	425.30	2026	851	114	146	51
Ouarzazate	Morocco	Africa	419.39	2045	862	115	149	52
Mohammedia	Morocco	Africa	402.59	2101	893	116	150	53
Taba	Egypt	Africa	389.40	2161	920	119	156	54
Banghazi	Libya	Africa	384.90	2179	931	120	158	55
Bethlehem	Palestine	Middle East	365.10	2260	969	122	166	56
Kairouan	Tunisia	Africa	336.00	2375	1017	125	173	57
Susah (Sousse)	Tunisia	Africa	317.95	2456	1048	127	177	58
Bizerte	Tunisia	Africa	294.20	2593	1118	128	183	59
Skhirat	Morocco	Africa	288.86	2627	1133	132	185	60
Biskra	Algeria	Africa	288.00	2634	1138	133	186	61
Tala Hamza	Algeria	Africa	270.00	2748	1196	135	194	62
Nabul	Tunisia	Africa	251.60	2866	1258	137	214	63
Meknes	Morocco	Africa	233.15	2999	1306	141	221	64
Tenes	Algeria	Africa	232.00	3006	1309	142	222	65
El Borma	Algeria	Africa	231.70	3011	1311	143	223	66
Hazmieh	Lebanon	Middle East	227.90	3034	1321	145	227	67
Al Karak	Jordan	Middle East	220.00	3107	1353	151	230	68
Tawzar	Tunisia	Africa	216.20	3147	1370	153	233	69
Dahmani	Tunisia	Africa	204.95	3242	1414	154	237	70
Oujda	Morocco	Africa	200.50	3293	1434	158	238	71
Marsa Al-Brega	Libya	Africa	194.70	3354	1459	161	242	72
Ra's Lanuf	Libya	Africa	183.60	3441	1501	165	248	73
Fouka	Algeria	Africa	183.20	3443	1502	166	249	74
Gabes	Tunisia	Africa	174.90	3537	1536	170	252	75

4

City	Country	Region	FDI (million $)	World Rank	Europe-AMED Rank	MiddleEast-AMED Rank	Africa-AMED Rank	AMED Rank
Asyut	Egypt	Africa	170.80	3582	1550	171	257	76
Luxor	Egypt	Africa	160.70	3690	1605	172	263	77
M'Sila	Algeria	Africa	156.40	3760	1633	173	267	78
Djendjen	Algeria	Africa	150.00	3847	1684	175	271	79
Djerba	Tunisia	Africa	149.70	3863	1689	176	277	80
Hammamet	Tunisia	Africa	140.80	3982	1750	178	279	81
Rades	Tunisia	Africa	140.78	3983	1751	179	281	82
Al-Mahdiyah	Tunisia	Africa	139.00	4019	1771	180	282	83
Sfax	Tunisia	Africa	135.30	4065	1793	181	285	84
Goulimine	Morocco	Africa	131.20	4128	1829	182	289	85
Oukaimeden	Morocco	Africa	131.20	4129	1830	183	290	86
El Alamein	Egypt	Africa	129.80	4155	1838	184	291	87
Port El Kantaoui	Tunisia	Africa	129.80	4157	1839	185	292	88
Al-Kef	Tunisia	Africa	128.59	4177	1848	186	294	89
Tipaza	Algeria	Africa	114.90	4399	1956	189	302	90
Murzuq	Libya	Africa	108.00	4524	2026	192	308	91
Bouskoura	Morocco	Africa	101.15	4673	2089	193	315	92
Nouaceur	Morocco	Africa	91.94	4864	2179	196	323	93
Tiaret	Algeria	Africa	88.80	4943	2218	197	324	94
Larache	Morocco	Africa	66.95	5623	2570	206	347	95
Batna	Algeria	Africa	63.00	5772	2653	208	348	96
Borg El Arab	Egypt	Africa	61.90	5823	2682	210	351	97
Blida	Algeria	Africa	56.00	6026	2786	213	360	98
Misurata	Libya	Africa	53.20	6145	2851	216	366	99
Rouiba	Algeria	Africa	51.00	6225	2903	218	368	100

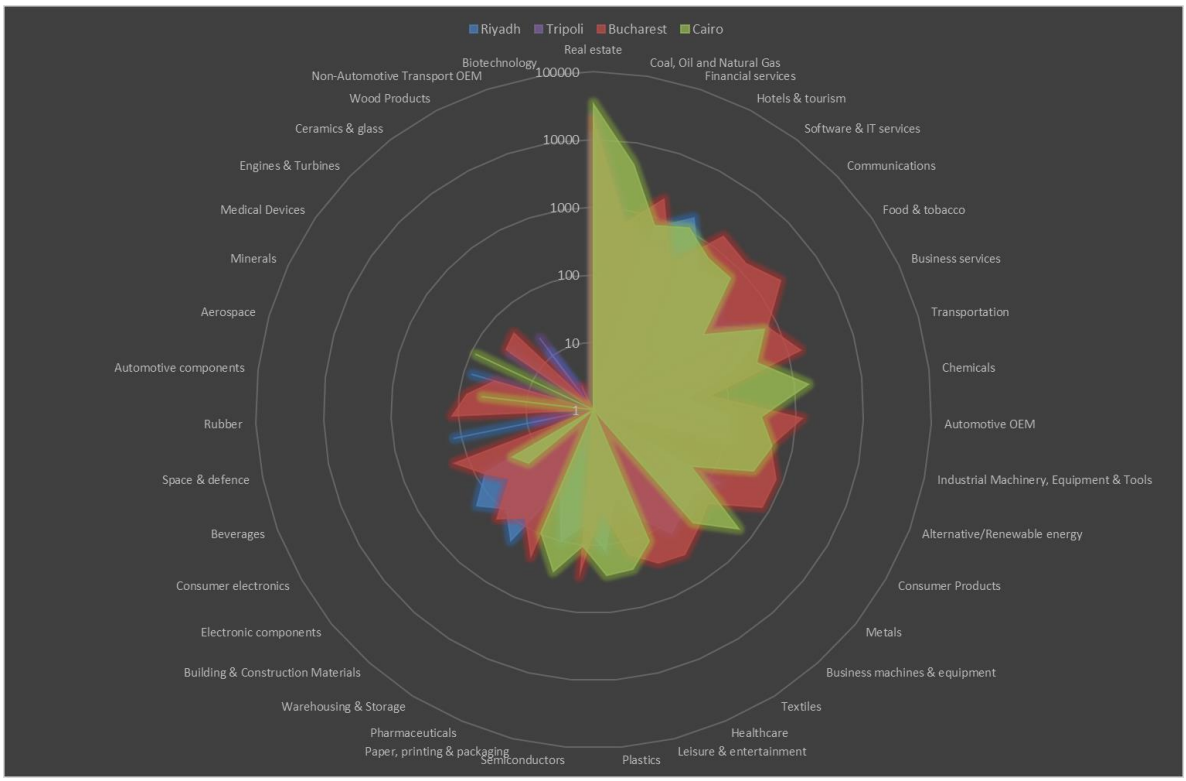
5

City	Country	Region	FDI (million $)	World Rank	Europe-AMED Rank	MiddleEast-AMED Rank	Africa-AMED Rank	AMED Rank
Bilbays	Egypt	Africa	45.70	6512	3007	223	375	101
Irbid	Jordan	Middle East	45.50	6517	3009	224	376	102
Qafsah	Tunisia	Africa	44.29	6581	3037	228	379	103
Zaghouan	Tunisia	Africa	41.54	6736	3132	229	380	104
Grombalia	Tunisia	Africa	37.68	6938	3243	234	385	105
Mostghanerm	Algeria	Africa	36.30	7022	3303	236	388	106
Ramallah	Palestine	Middle East	36.00	7047	3319	237	389	107
El Gouna	Egypt	Africa	33.35	7250	3410	241	395	108
Sale	Morocco	Africa	33.30	7255	3413	242	396	109
Ain el Aouda	Morocco	Africa	32.70	7291	3436	243	400	110
Barrechid	Morocco	Africa	29.81	7501	3559	247	407	111
Sidi Abdallah	Algeria	Africa	29.55	7527	3574	248	408	112
Nablus	Palestine	Middle East	28.90	7572	3598	249	409	113
Jundubah	Tunisia	Africa	28.80	7577	3602	250	410	114
Hidra	Algeria	Africa	28.30	7614	3624	251	412	115
Kondar	Tunisia	Africa	25.50	7788	3727	255	421	116
Boumerdes	Algeria	Africa	25.00	7829	3746	256	423	117
Zriba	Tunisia	Africa	24.20	7895	3778	258	424	118
Sidi Kacem	Morocco	Africa	23.00	7980	3836	259	427	119
El Kef	Morocco	Africa	22.80	8004	3848	260	428	120
Al-Munastr	Tunisia	Africa	21.79	8122	3926	263	436	121
Enfidha	Tunisia	Africa	19.94	8283	4017	265	440	122
Hammam Sousse	Tunisia	Africa	19.90	8295	4019	266	441	123
Gaza	Palestine	Middle East	16.60	8568	4175	267	448	124
Bayda	Libya	Africa	15.30	8690	4256	271	451	125

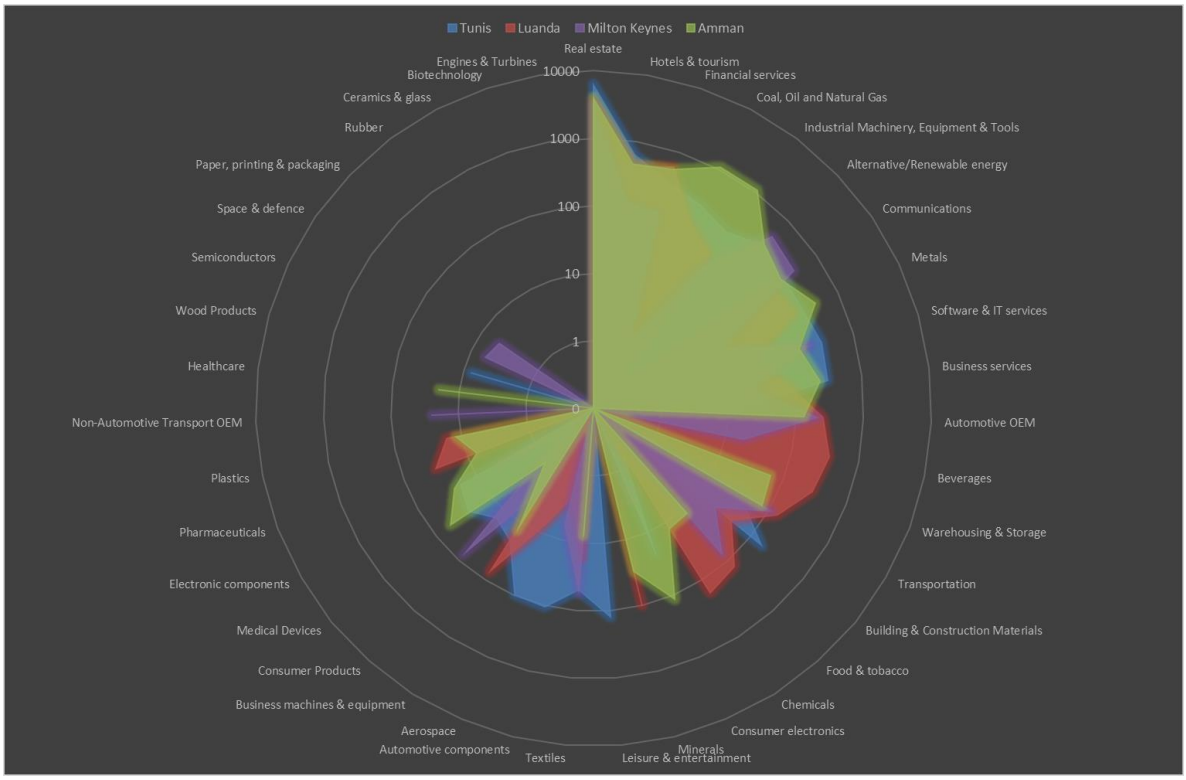
6

City	Country	Region	FDI (million $)	World Rank	Europe-AMED Rank	MiddleEast-AMED Rank	Africa-AMED Rank	AMED Rank
Aley	Lebanon	Middle East	15.10	8715	4263	275	453	126
Halhul	Palestine	Middle East	15.10	8719	4264	276	454	127
Jenin	Palestine	Middle East	15.10	8720	4265	277	455	128
Khan Yunis	Palestine	Middle East	15.10	8721	4266	278	456	129
Soliman	Tunisia	Africa	14.60	8788	4300	288	458	130
Borj Cedria	Tunisia	Africa	13.80	8852	4332	289	461	131
Tripoli	Lebanon	Middle East	13.20	8901	4365	291	462	132
Bordj bou Arreridj	Algeria	Africa	11.00	9151	4496	296	468	133
El Oued	Algeria	Africa	11.00	9152	4497	297	469	134
Laghouat	Algeria	Africa	11.00	9153	4498	298	470	135
Banha	Egypt	Africa	11.00	9154	4499	299	471	136
El Mahalla el Kubra	Egypt	Africa	11.00	9155	4500	300	472	137
El Mansura	Egypt	Africa	11.00	9156	4501	301	473	138
Sohag	Egypt	Africa	11.00	9157	4502	302	474	139
Fkih ben Salah	Morocco	Africa	11.00	9177	4503	303	475	140
Nador	Morocco	Africa	11.00	9178	4504	304	476	141
Nouasser	Morocco	Africa	10.40	9289	4542	308	531	142
Hassi Messaoud	Algeria	Africa	10.10	9340	4566	309	532	143
Hydra	Algeria	Africa	6.20	9831	4820	313	548	144
La Soukra	Tunisia	Africa	5.30	10014	4909	315	557	145
El-Aaiun	Morocco	Africa	5.10	10040	4929	316	559	146
Boufarik	Algeria	Africa	5.00	10059	4933	317	560	147
Halq al-Wadi	Tunisia	Africa	4.50	10155	4988	318	561	148
Fouchana	Tunisia	Africa	3.90	10293	5048	319	563	149
Bou Ismail	Algeria	Africa	2.90	10461	5161	320	566	150
TOTAL CITIES				11045	5554	323	577	150

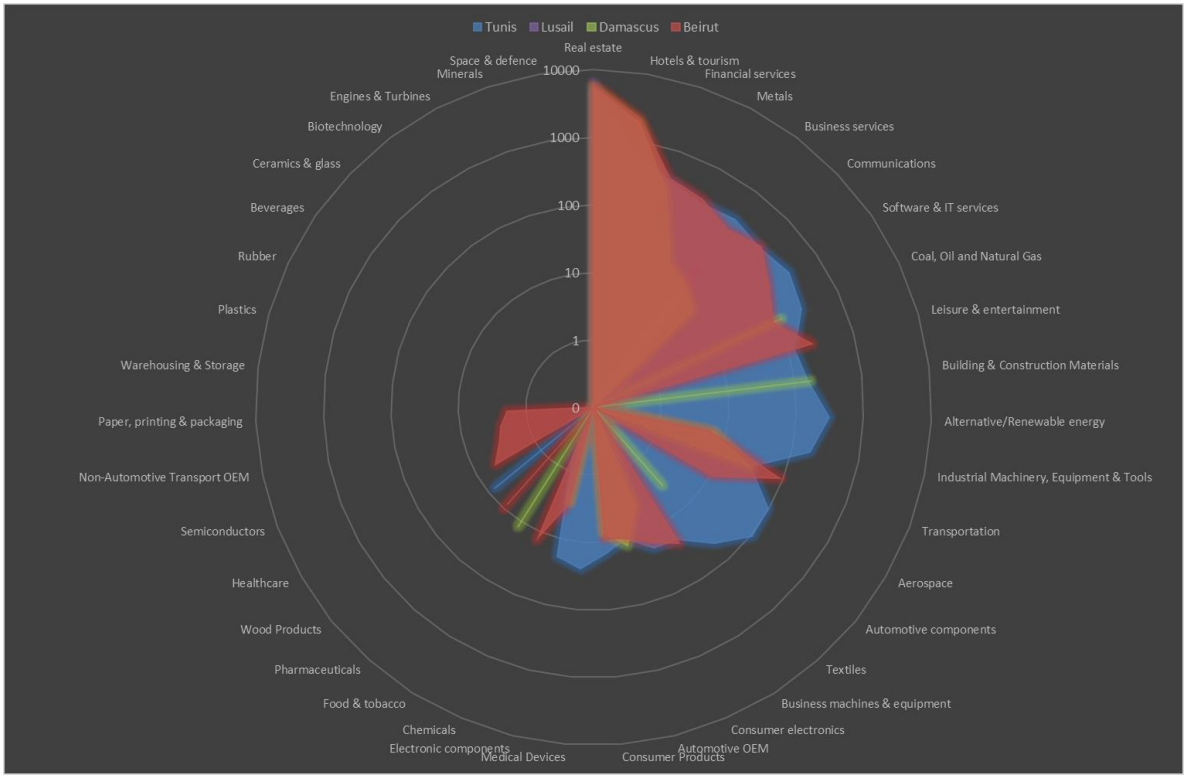
Appendix Figure A: Cairo Top Three Competitors for FDI



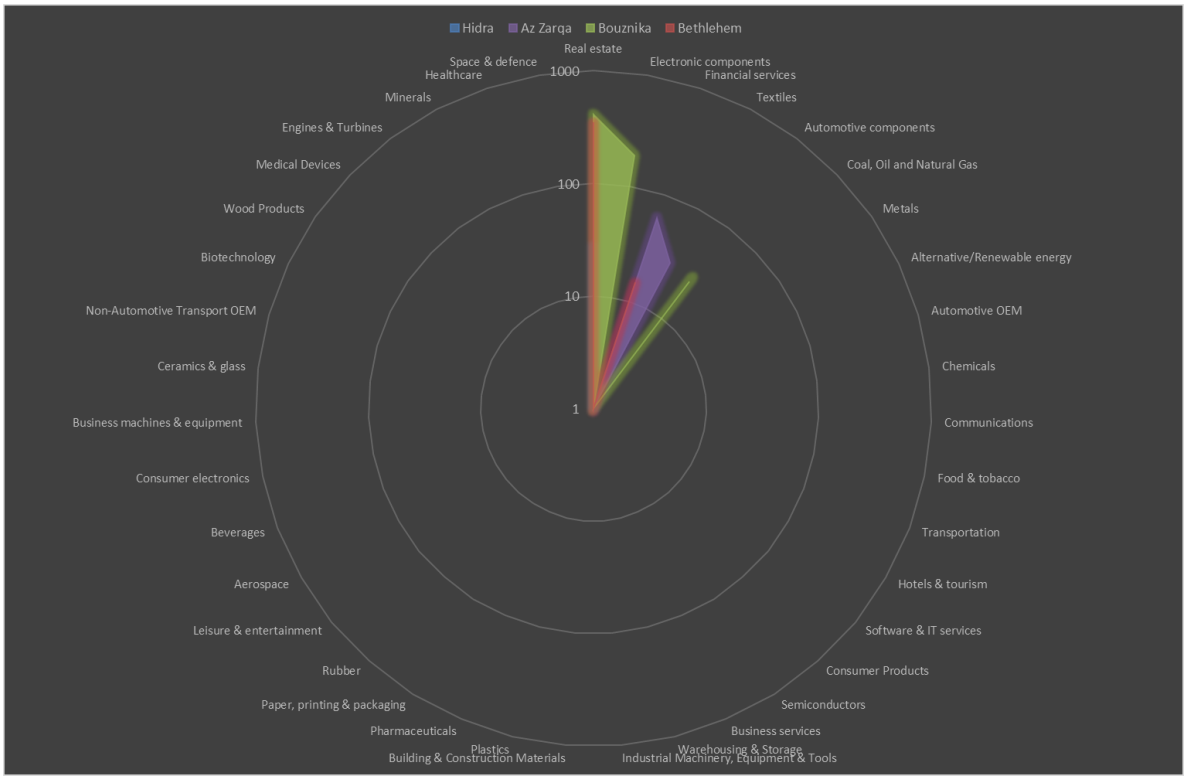
Appendix Figure B: Amman Top Three Competitors for FDI



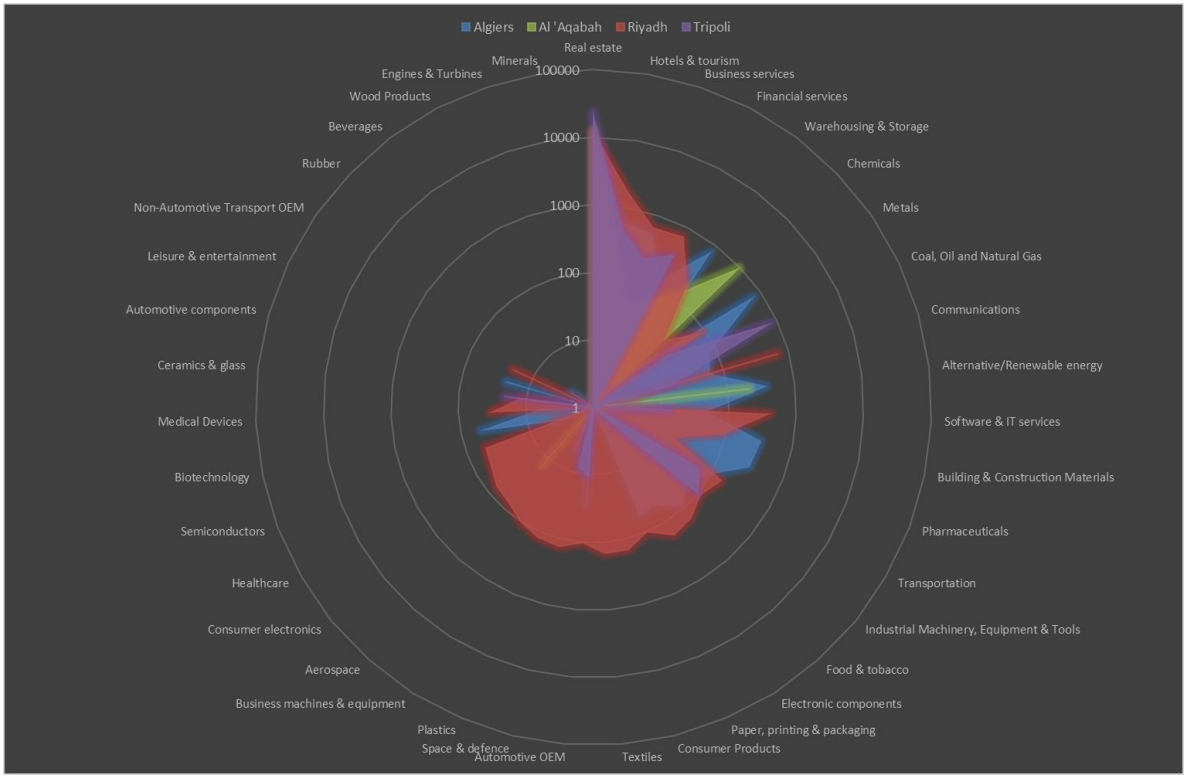
Appendix Figure C: Beirut Top Three Competitors for FDI



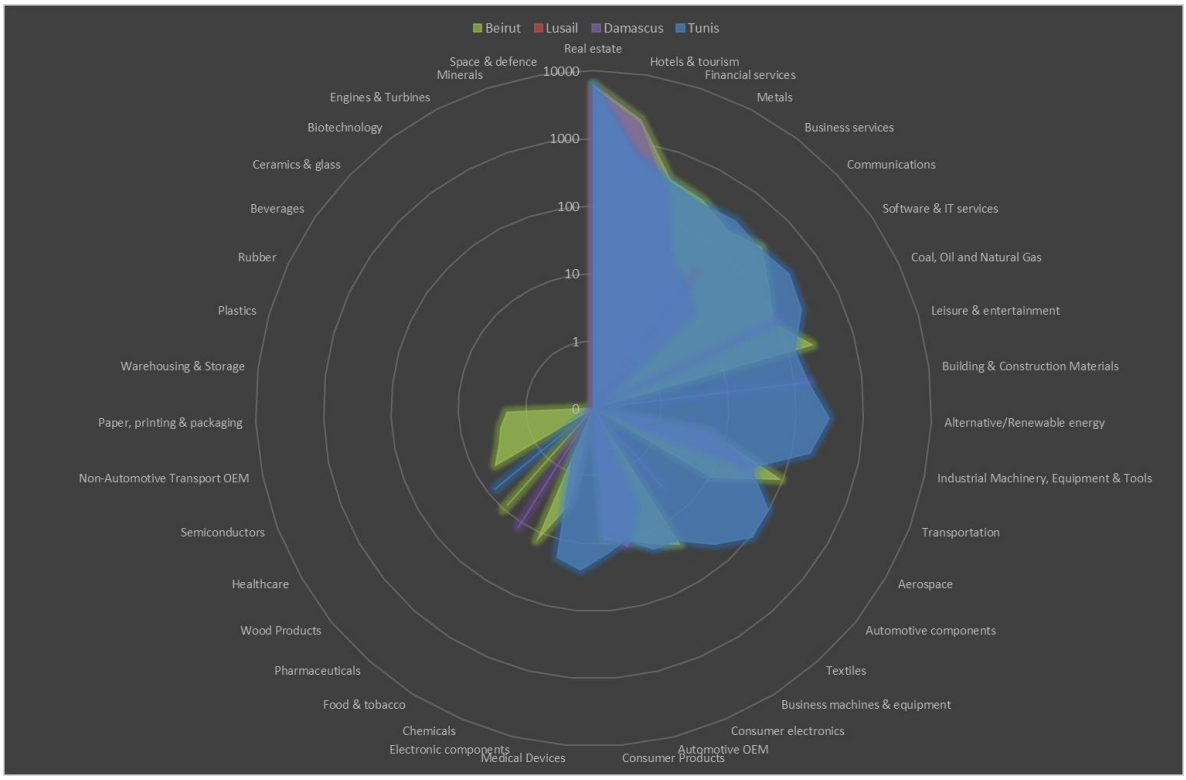
Appendix Figure D: Bethlehem Top Three Competitors for FDI



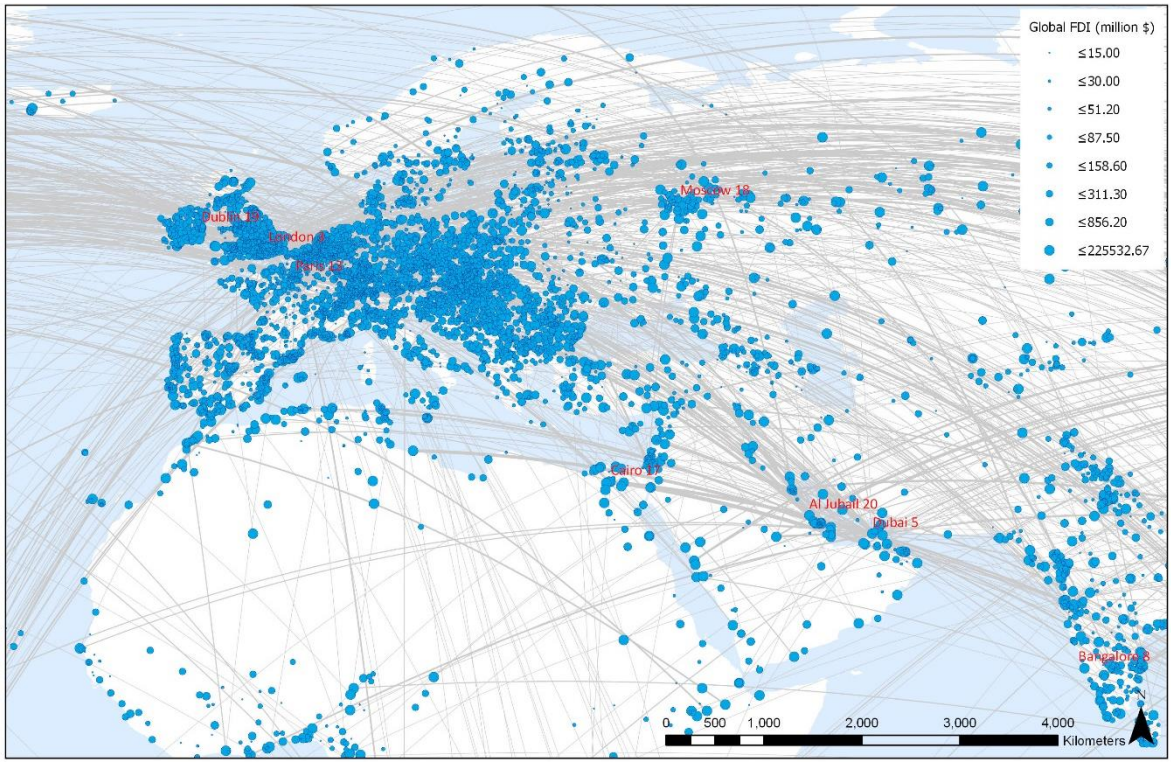
Appendix Figure E: Tripoli Top Three Competitors for FDI



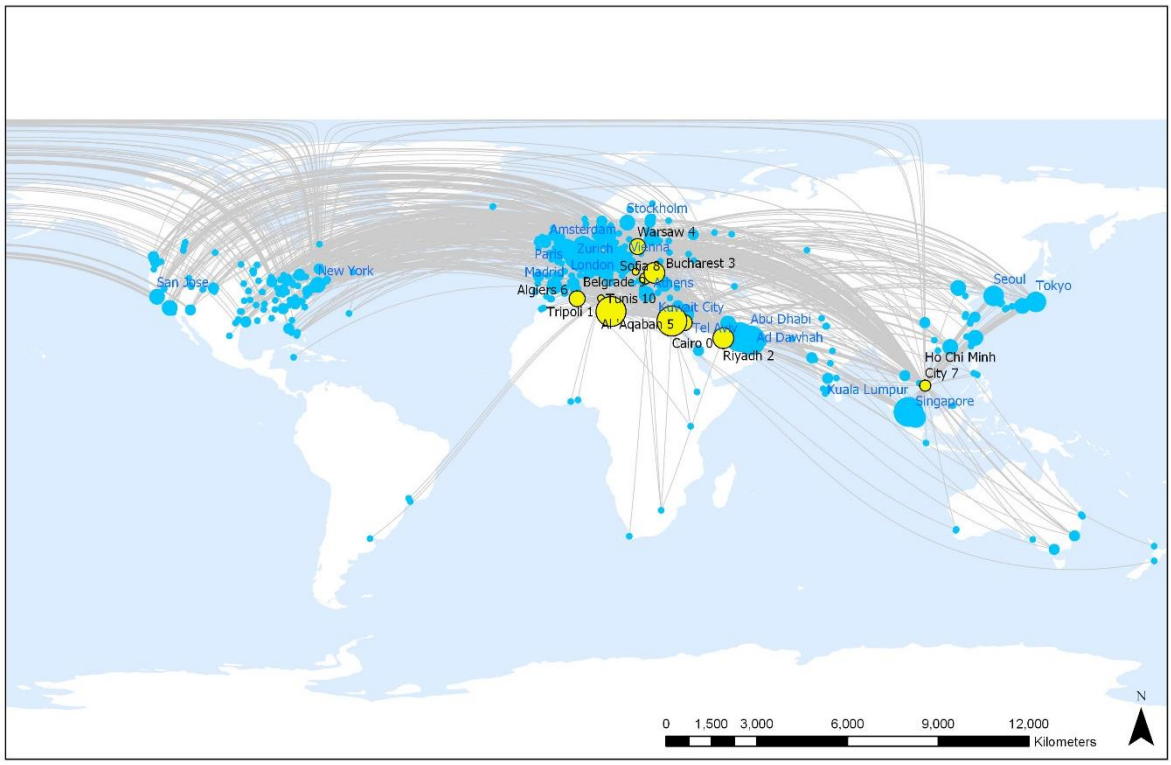
Appendix Figure F: Tunis Top Three Competitors for FDI



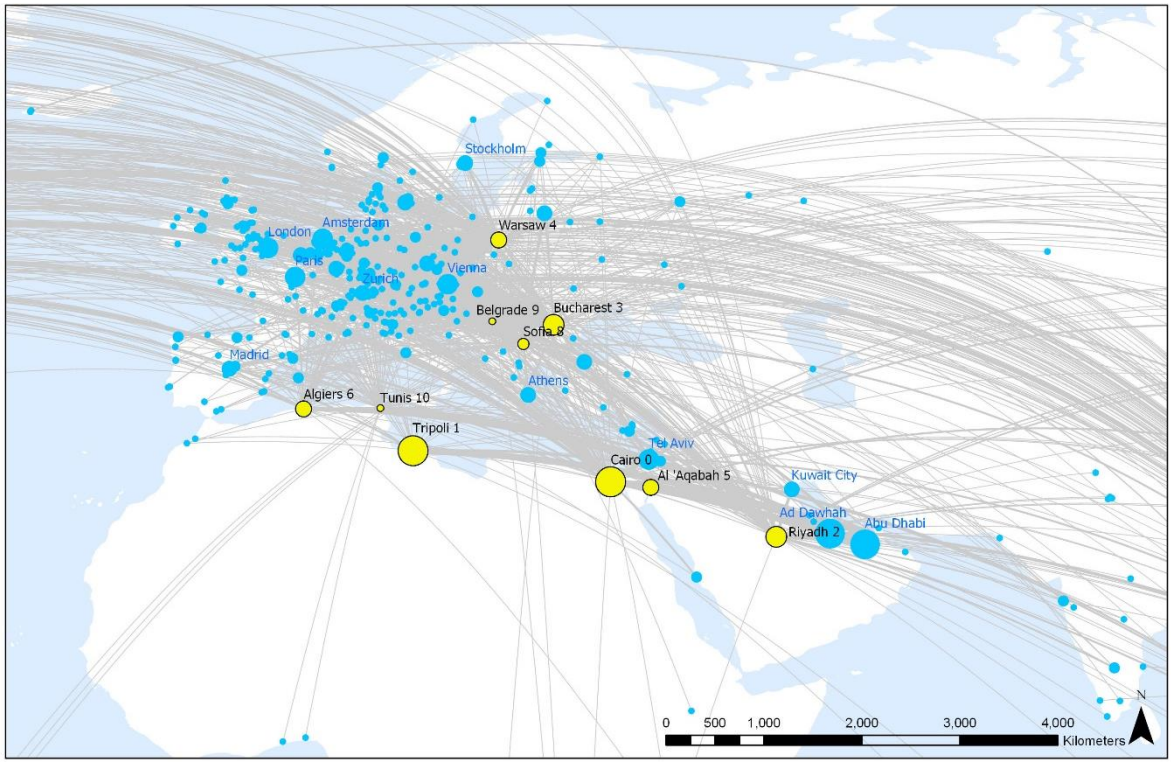
Appendix Map A: Global FDI – Top 20 World City Destinations: Zoom-in



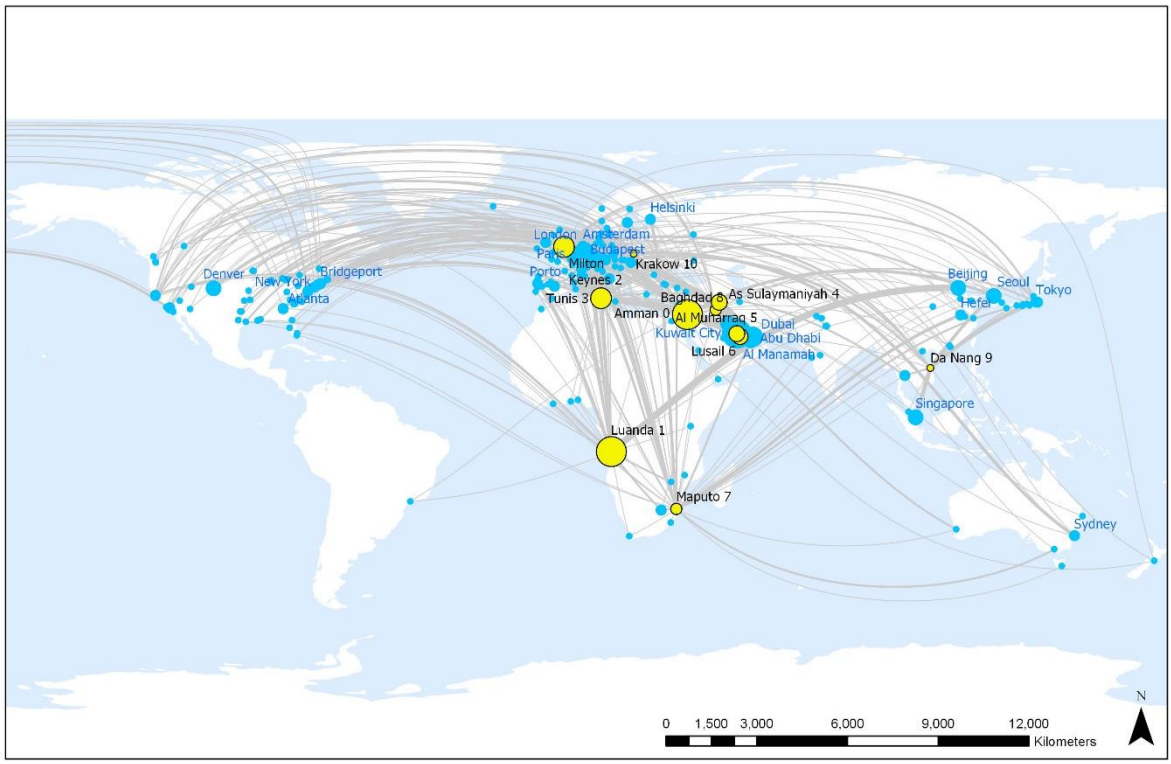
Appendix Map B: Top Ten Competitors of Cairo (yellow) and their Investing Cities (blue)



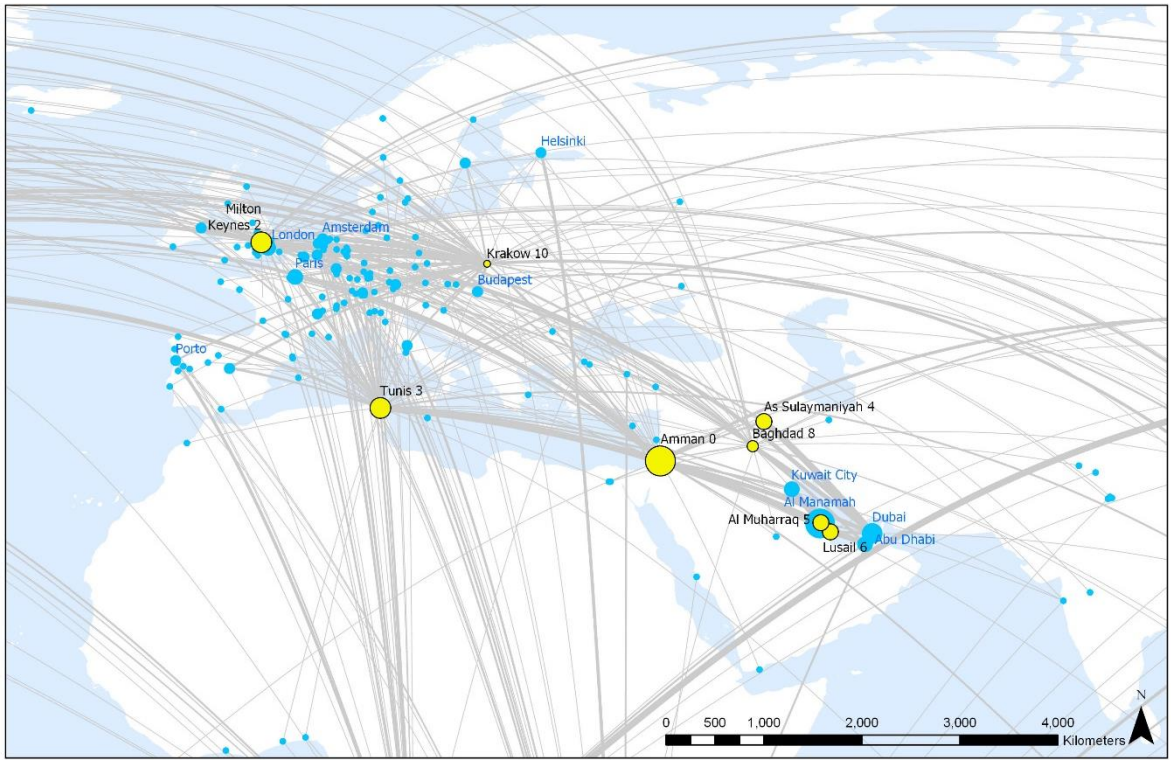
Appendix Map C: Top Ten Competitors of Cairo (yellow) and their Investing Cities (blue) – Zoom-in



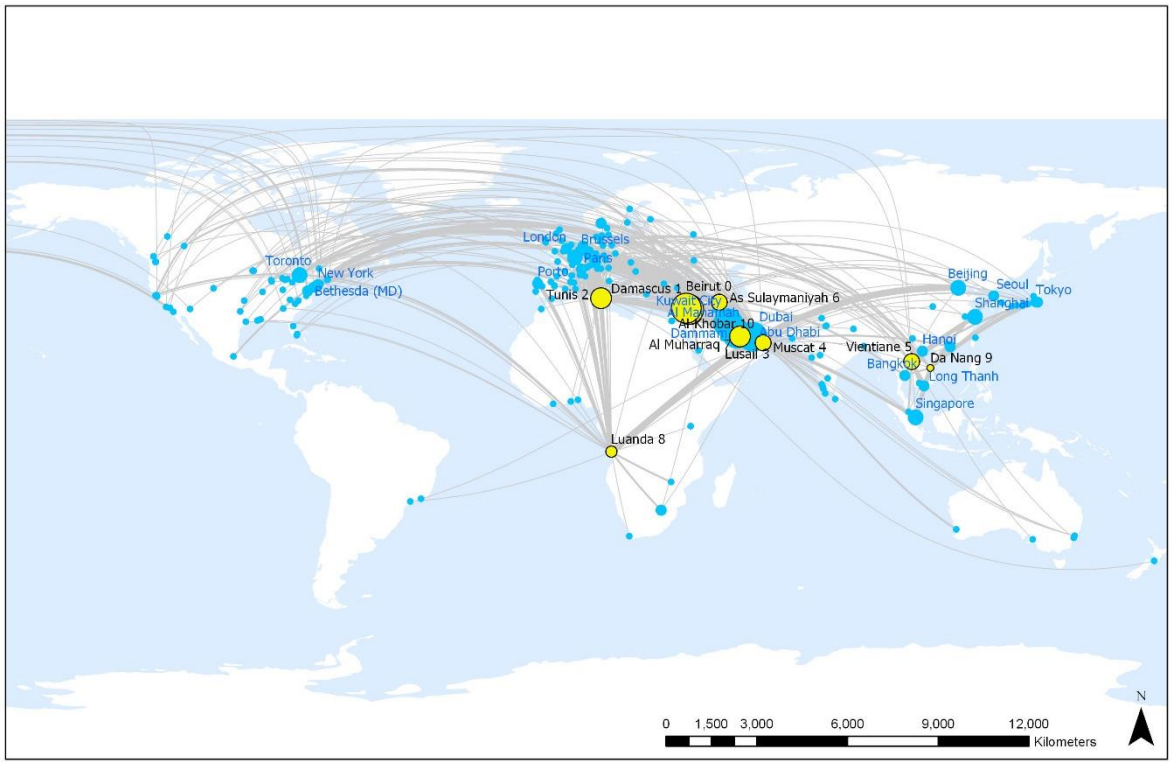
Appendix Map D: Top Ten Competitors of Amman (yellow) and their Investing Cities (blue)



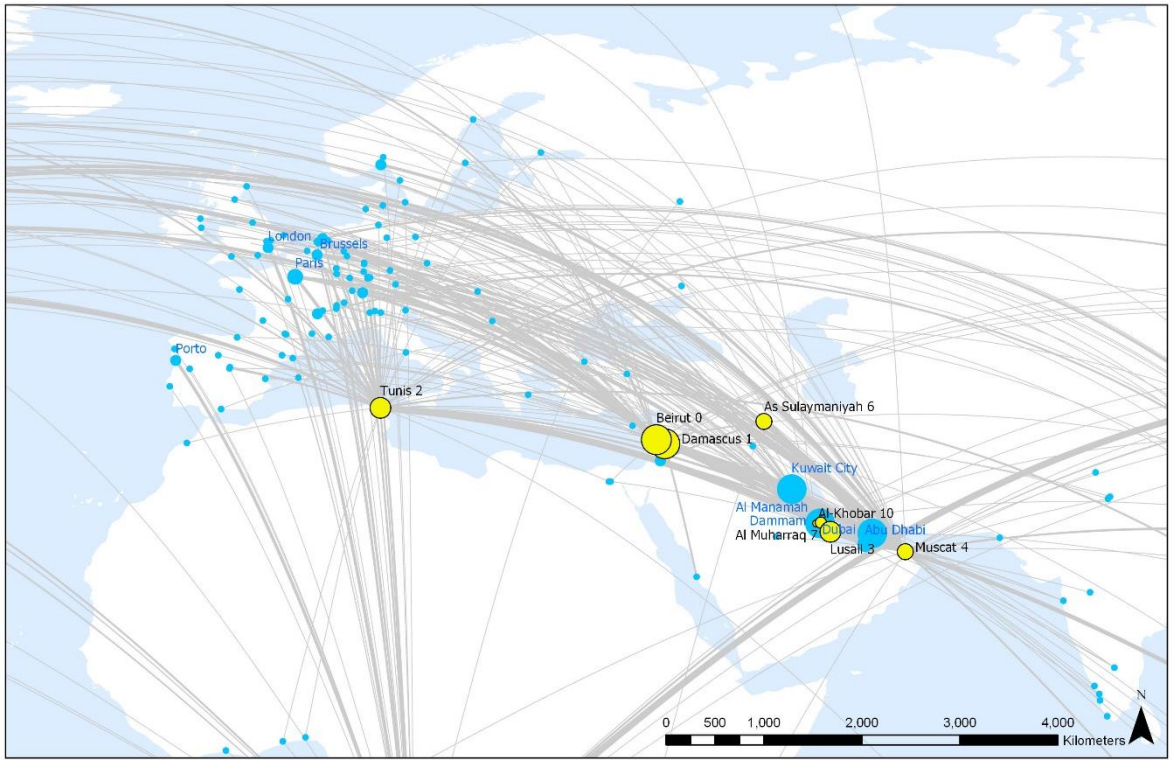
Appendix Map E: Top Ten Competitors of Amman (yellow) and their Investing Cities (blue) – Zoom-in



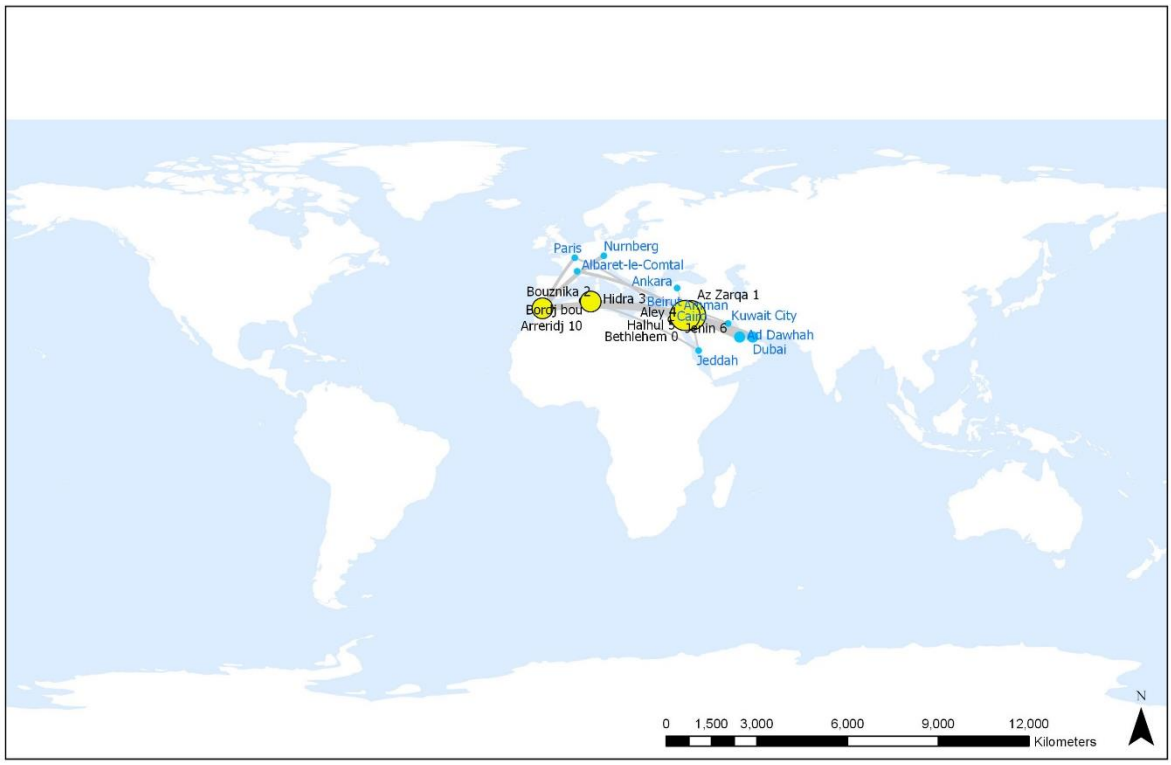
Appendix Map F: Top Ten Competitors of Beirut (yellow) and their Investing Cities (blue)



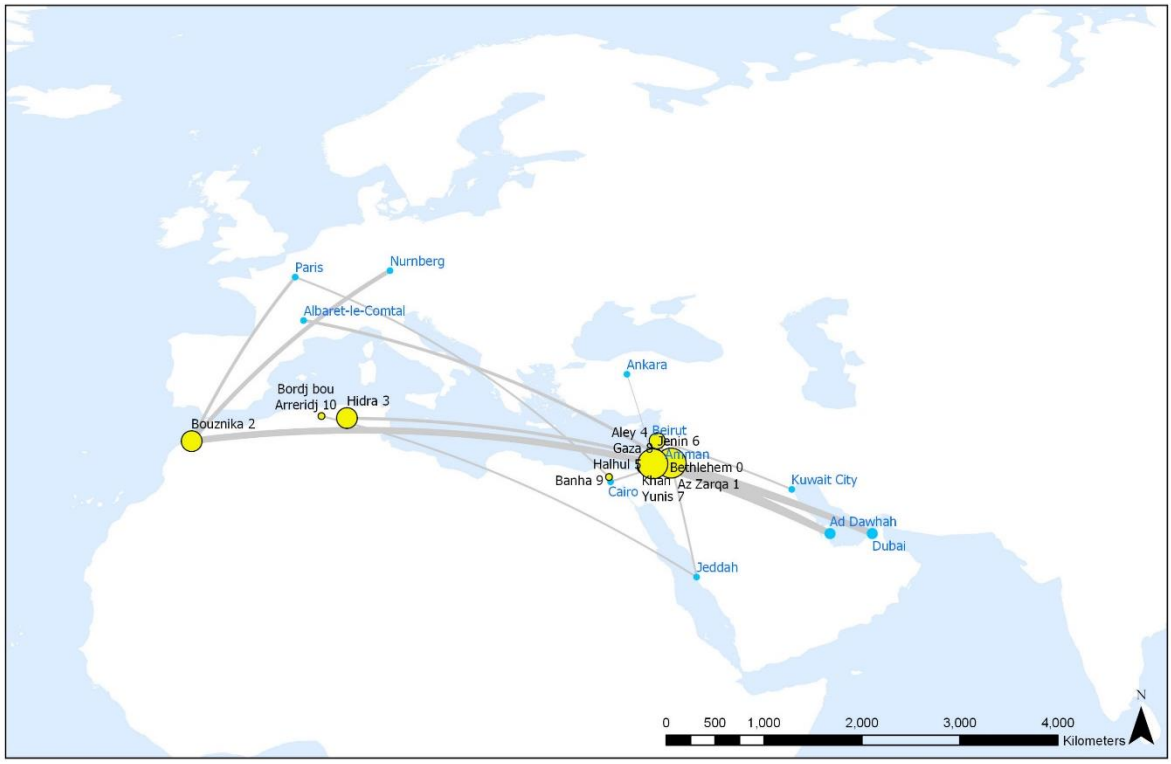
Appendix Map G: Top Ten Competitors of Beirut (yellow) and their Investing Cities (blue) – Zoom-in



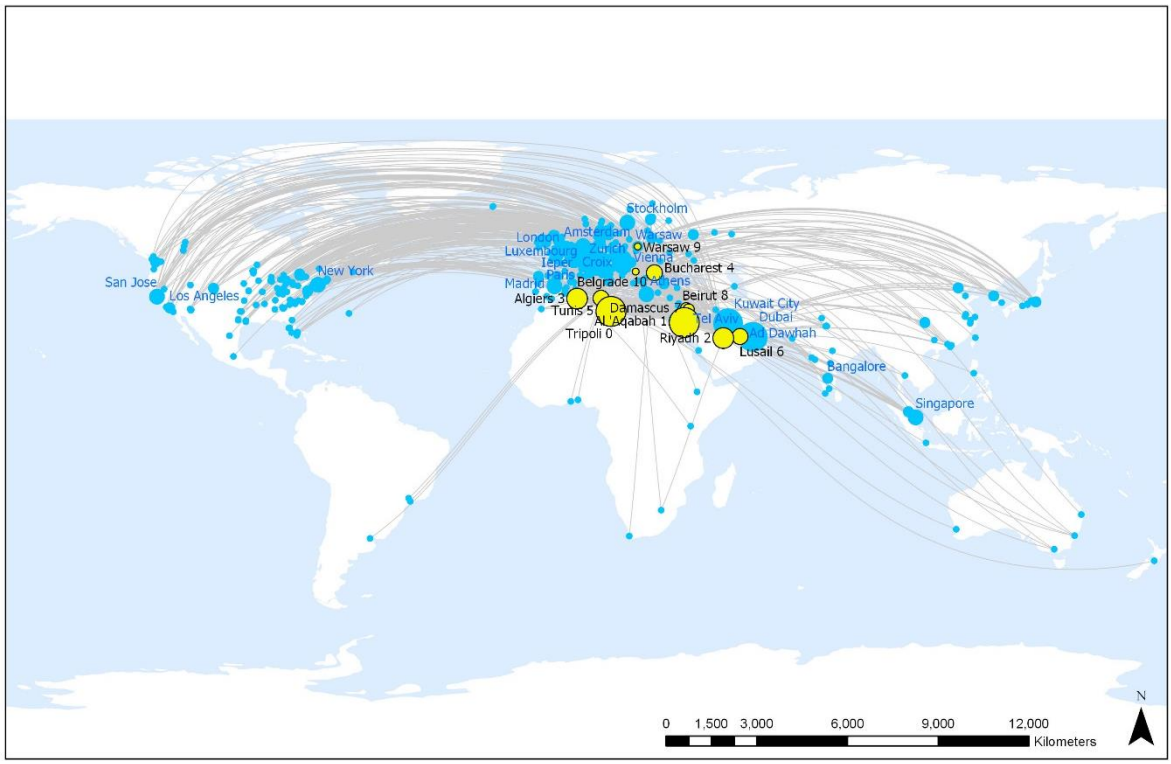
Appendix Map H: Top Ten Competitors of Bethlehem (yellow) and their Investing Cities (blue)



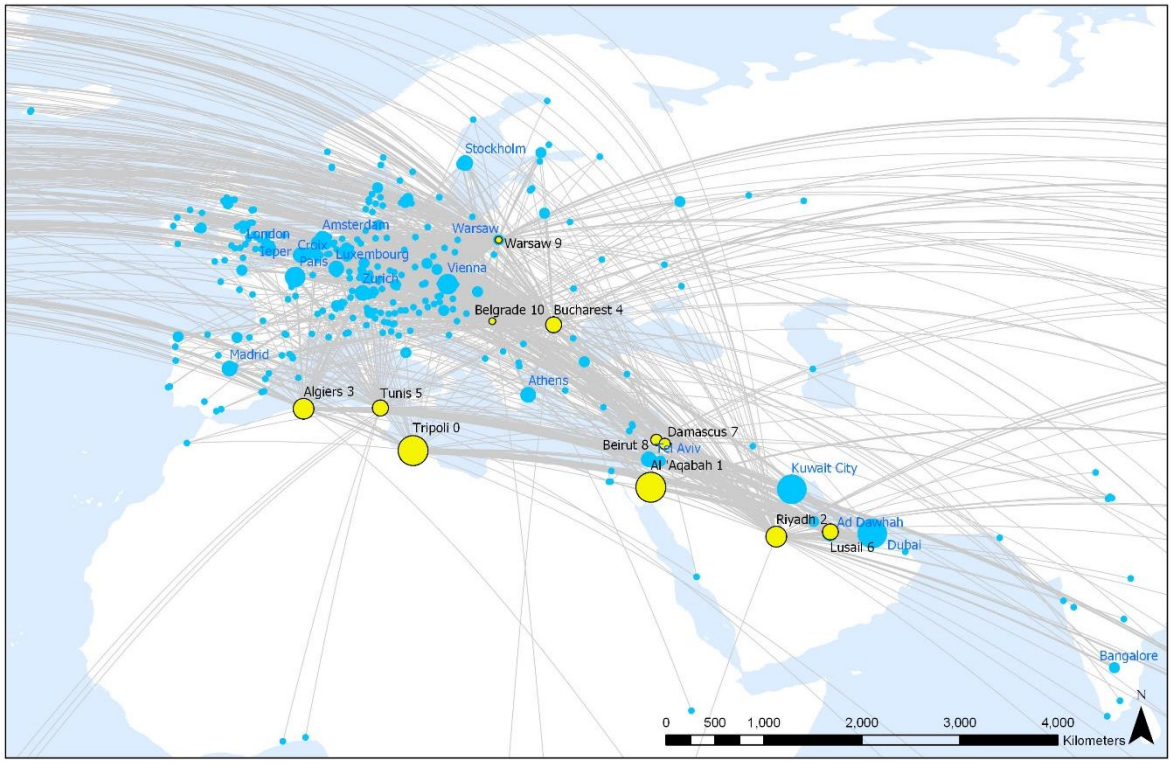
Appendix Map I: Top Ten Competitors of Bethlehem (yellow) and their Investing Cities (blue) – Zoom-in



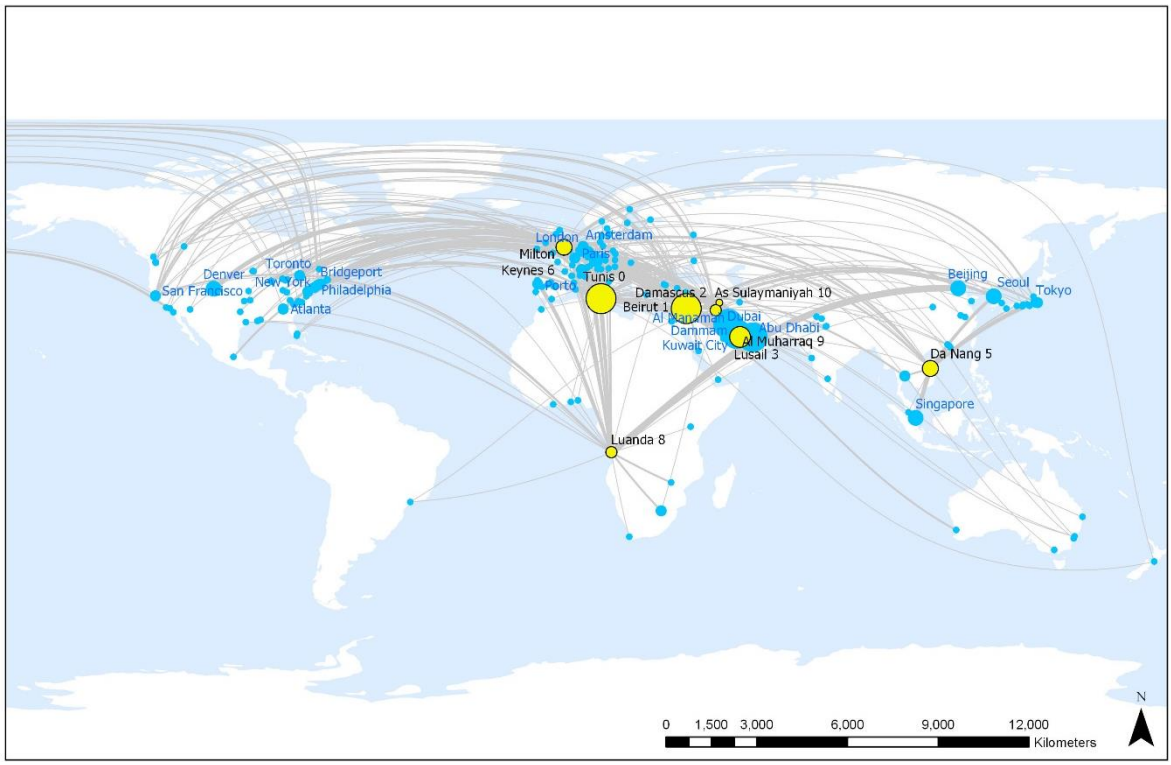
Appendix Map J: Top Ten Competitors of Tripoli (yellow) and their Investing Cities (blue)



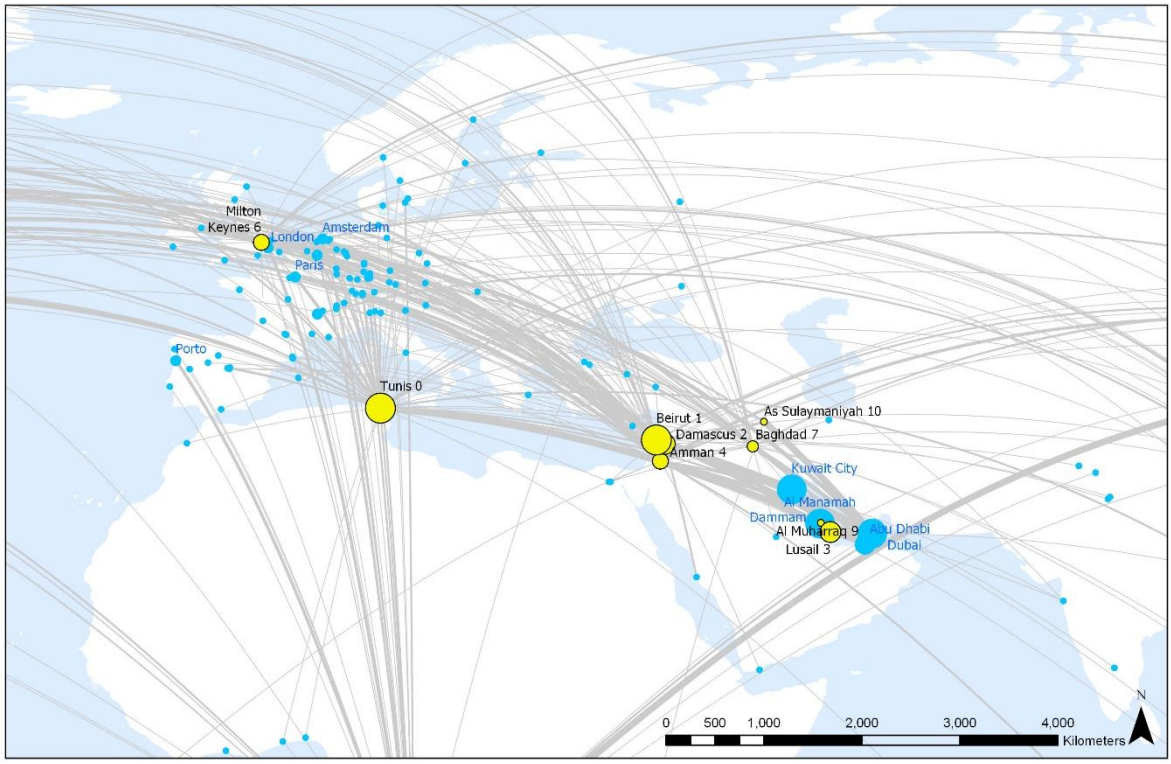
Appendix Map K: Top Ten Competitors of Tripoli (yellow) and their Investing Cities (blue) – Zoom-in



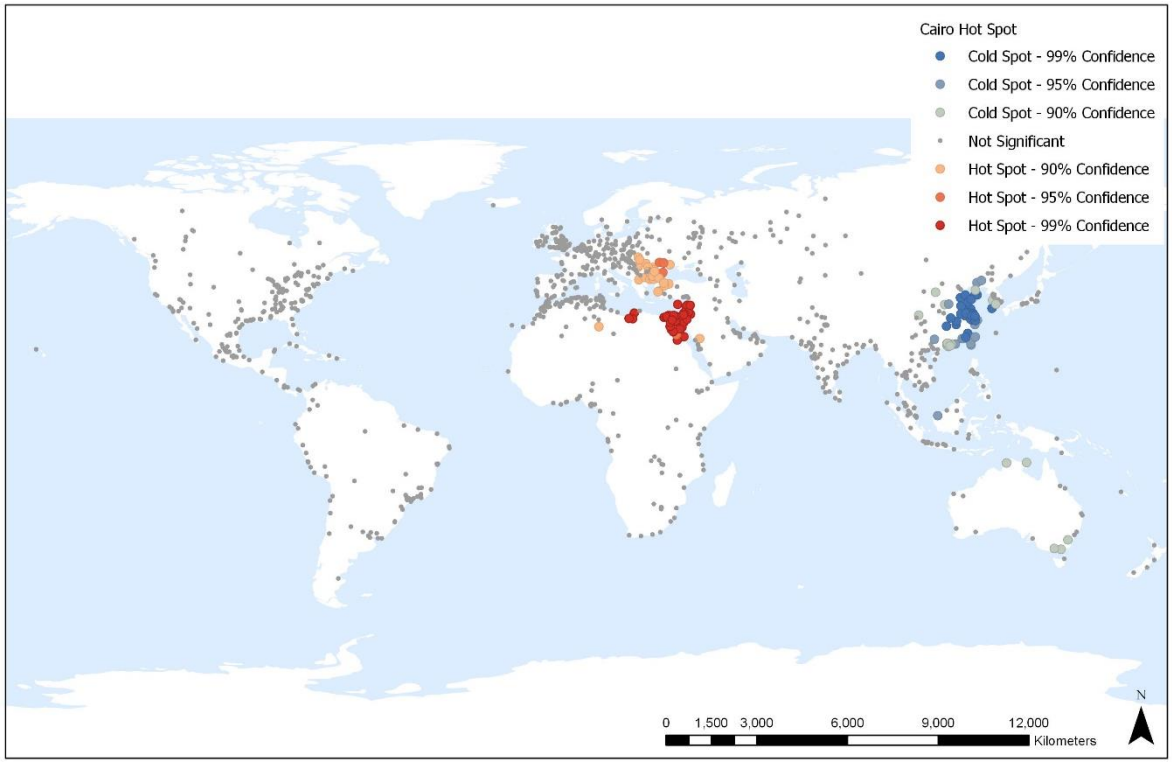
Appendix Map L: Top Ten Competitors of Tunis (yellow) and their Investing Cities (blue)



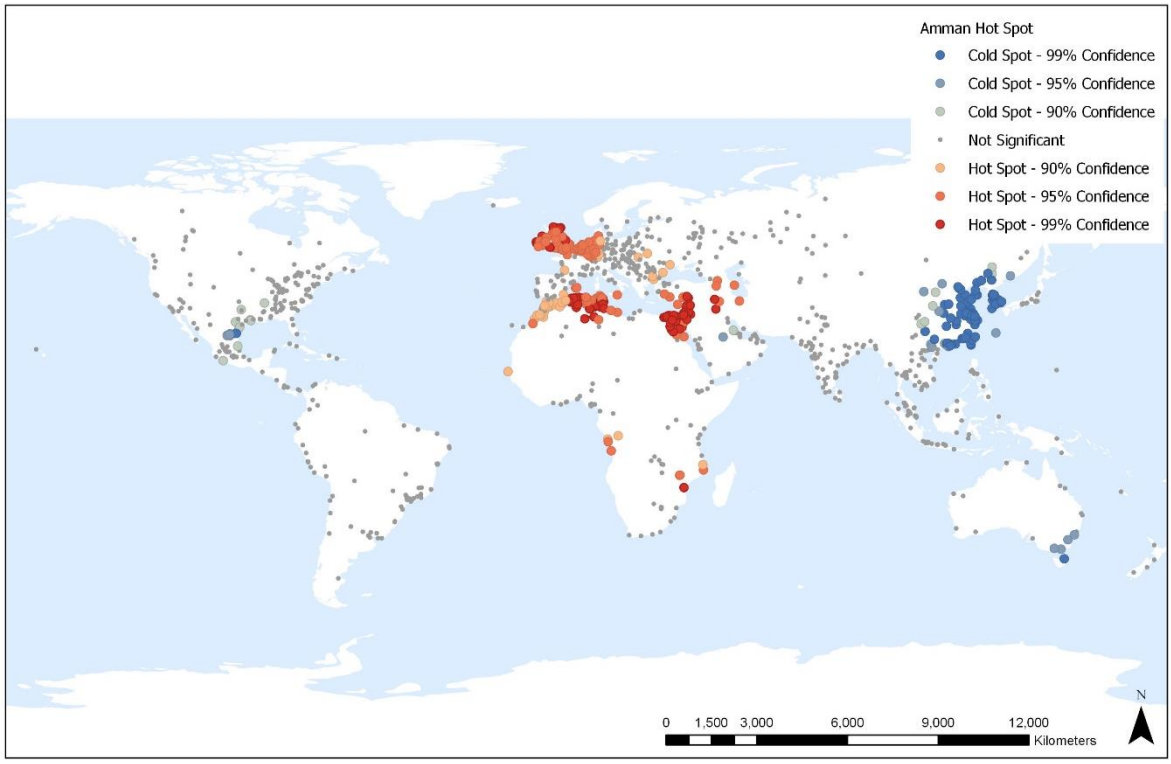
Appendix Map M: Top Ten Competitors of Tunis (yellow) and their Investing Cities (blue) – Zoom-in



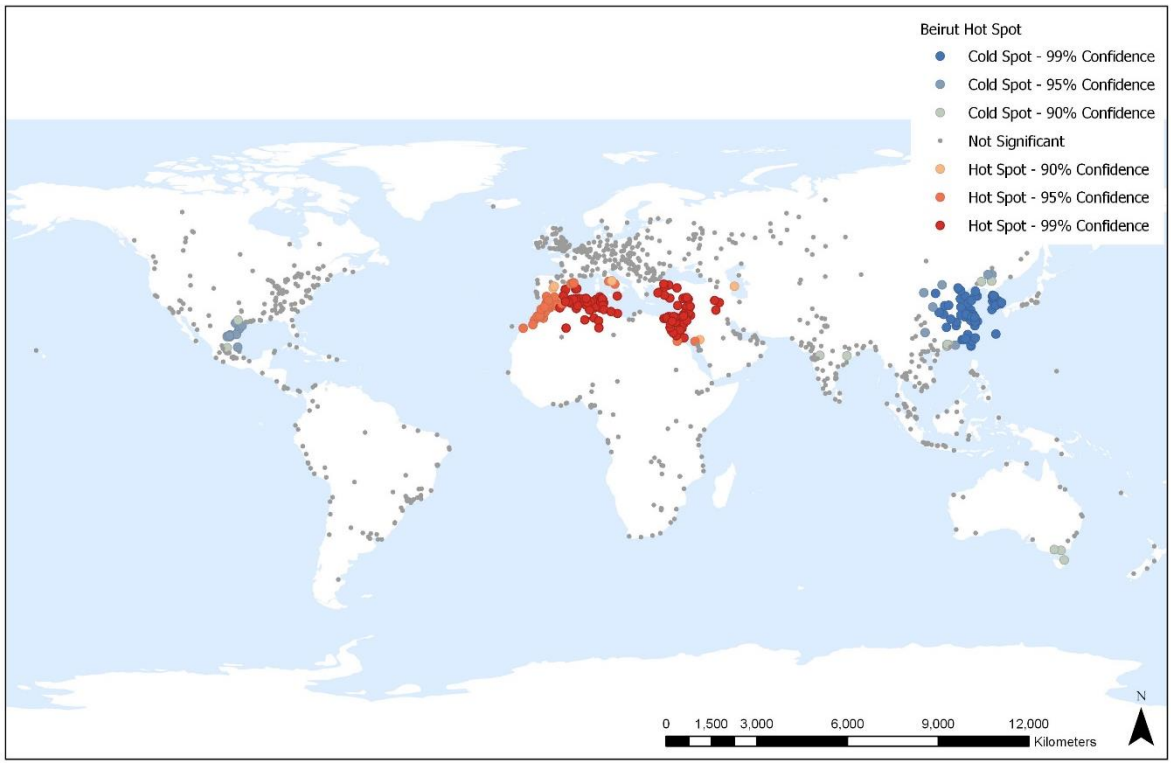
Appendix Map N: Hot Spot Analysis of Cairo's Regional Competitor Clusters



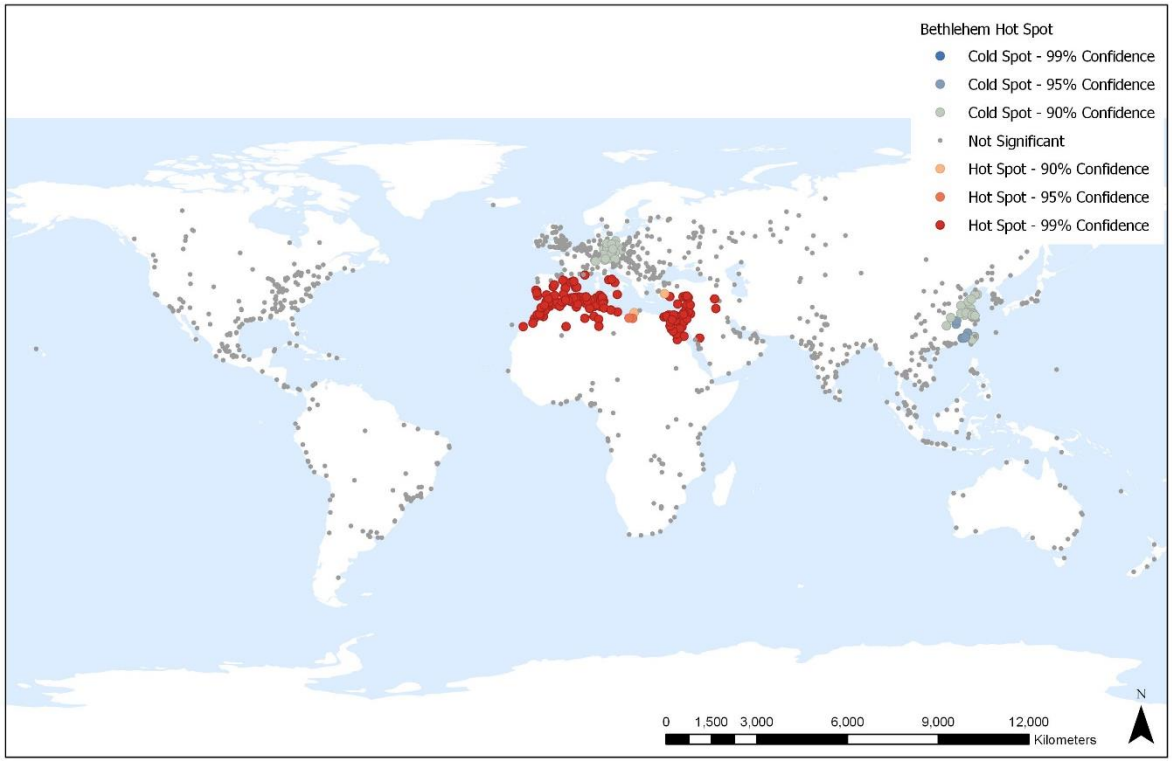
Appendix Map O: Hot Spot Analysis of Amman's Regional Competitor Clusters



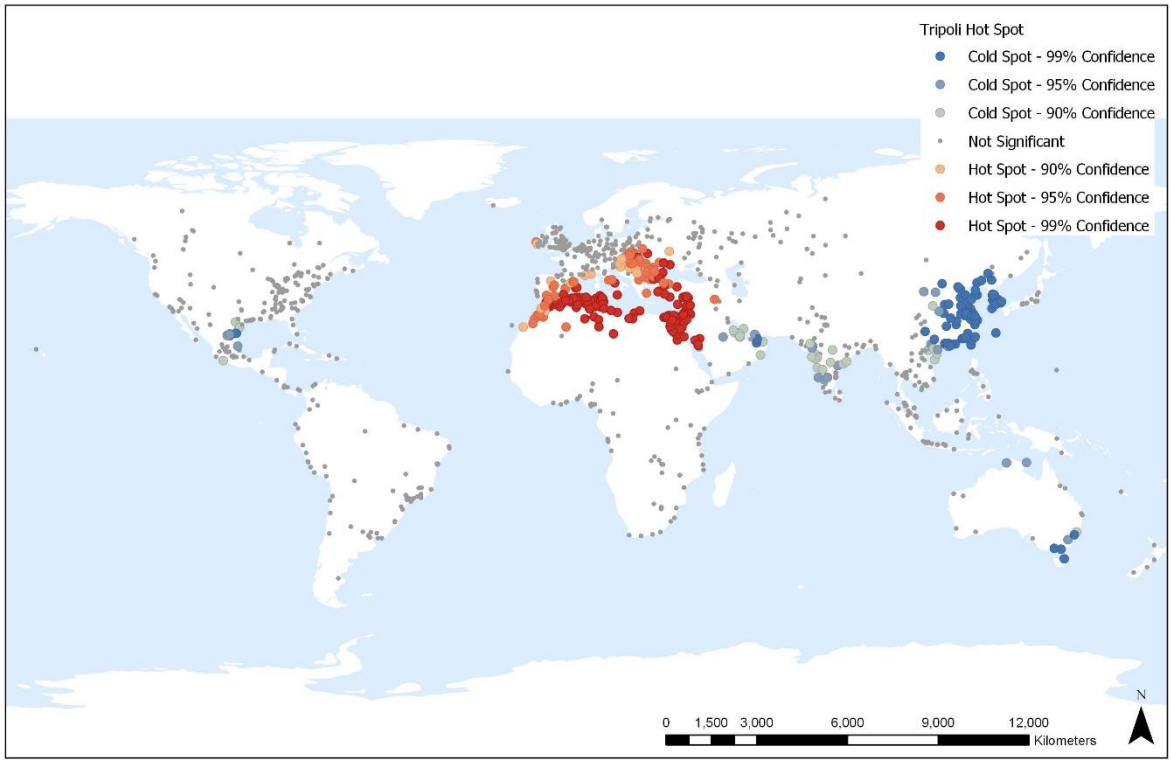
Appendix Map P: Hot Spot Analysis of Beirut's Regional Competitor Clusters



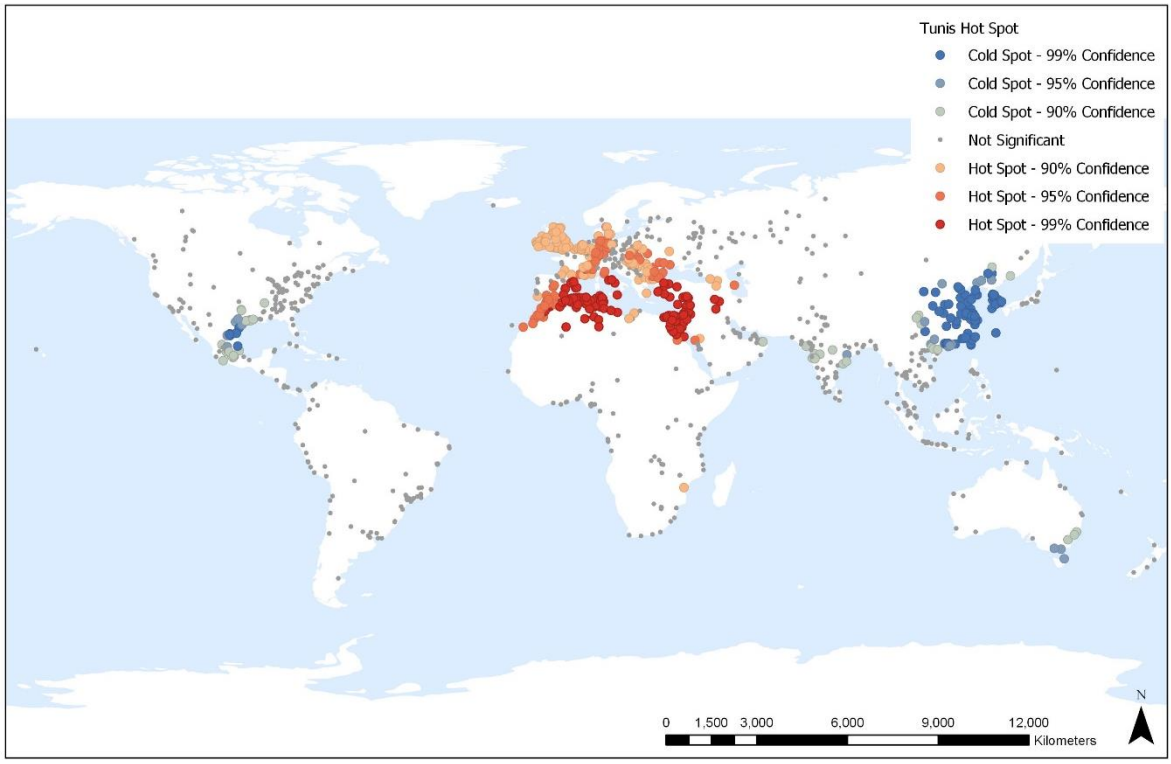
Appendix Map Q: Hot Spot Analysis of Bethlehem's Regional Competitor Clusters



Appendix Map R: Hot Spot Analysis of Tripoli's Regional Competitor Clusters



Appendix Map S: Hot Spot Analysis of Tunis's Regional Competitor Clusters



Appendix Table E: FDI's Impact on Inequality in the Southern Mediterranean and Europe

VARIABLES	*City Gini Index*	*City Gini Index*	*City Gini Index*	*City Gini Index*	*City Gini Index*	*City Gini Index*	*City Gini Index*
	Model 1	***Model 2***	***Model 3***	***Model 4***	***Model 5***	***Model 6***	***Model 7***
City FDI ($)	0.000495**	0.000604***					
	-0.000199	-0.000211					
Ratio City FDI by Country FDI ($)			8.143**	7.328**	7.433**	7.327**	9.529***
			-3.452	-3.322	-3.393	-3.438	-3.572
Country Gini Index				0.773***	0.776***	0.773***	0.829***
				-0.114	-0.115	-0.115	-0.121
City Population				3.43e-08***	3.37e-08***	3.33e-08***	3.60e-08***
				-1.08E-08	-1.12E-08	-1.13E-08	-1.14E-08
City GDP Growth				0.430***	0.507*	0.510*	0.501*
				-0.16	-0.284	-0.286	-0.29
City GDP per Capita				0.0382	0.0326	0.0326	0.035
				-0.0214	-0.0274	-0.0274	-0.0282
Region Europe (dummy)		-3.045***	-2.821***		0.588	0.582	0.5
		-0.78	-0.73		-1.844	-1.85	-1.882
Secondary and Tertiary Cities (dummy)						-0.188	-0.0996
						-0.693	-0.703
City Knowledge Industry Firms (Count)							-0.00176**
							-0.000791
Constant	36.02***	38.48***	38.02***	4.826	4.286	4.446	2.394
	-0.34	-0.69	-0.66	-4.502	-4.842	-4.843	-5.138
Observations (number of cities in model)	128	128	128	128	128	128	128
R-squared (percentage model explained)	0.013	0.112	0.142	0.351	0.351	0.351	0.368

Standard errors in parentheses

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

Appendix Table F: The Distribution of FDI across Different City Tiers

VARIABLES	City Gini Index	City Gini Index	City Gini Index	City Gini Index
	Model 1	**Model 2**	**Model 3**	**Model 4**
Primary City (dummy)	2.137**			
	-0.869			
Secondary City (dummy)		-1.907		-1.862
		-1.176		-1.125
Tertiary City (dummy)		-2.825**		-2.757**
		-1.263		-1.209
Quarterly City (dummy)		-2.064**		-1.803**
		-0.904		-0.868
Region (Europe)			-2.941***	-2.850***
			-0.817	-0.811
Constant	35.86***	38.00***	38.62***	40.17***
	-0.352	-0.799	-0.74	-0.983
Observations (number of cities in model)	128	128	128	128
R-squared (percentage model explained)	0.046	0.05	0.093	0.137

Standard errors in parentheses

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

Appendix Table G: The Impact of FDI on City Disposable Income

	Income	Income	Income	Income
VARIABLES	**Model 1**	**Model 2**	**Model 3**	**Model 4**
City FDI ($)	52.65***	11.77*		
	-4.784	-5.973		
City GDP (PPP)		0.365***		0.331***
		-0.05		-0.0629
City FDI (count)			1,134***	336.2**
			-81.58	-154.3
Region Europe (dummy)		13,898***		12,352***
		-4498		-3308
Constant	9,927***	-9,374***	11,023***	-7,011***
	-1622	-3192	-1451	-1982
Observations	128	128	128	128
R-squared	0.811	0.959	0.875	0.963

Standard errors in parentheses

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