

Future Directions for Korea's Official Development Assistance Policy to MENA Region Countries

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Summary

The aim of this study is to increase the effectiveness of Korean aid provision for countries in the Middle East and North Africa (MENA) region, which are important ODA recipient countries from a Korean perspective, but have not been studied extensively in Korea. Although there are twenty countries in the MENA region, in this study five countries, Egypt, Algeria, Libya, Iran and Iraq, which are considered important from a Korean perspective, are targeted. The analysis includes an examination of the regional characteristics and the long-term development plans of these five countries, and the size and contents of aid projects provided by Korea to these countries. It is expected that as a result of this analysis Korea will be able to carry out aid projects involving these countries more effectively in the future.

Keywords: MENA (Middle East and North Africa), ODA, text mining analysis.

1 Introduction

'MENA' is a compound word standing for the Middle East and North Africa, although the region is not absolutely clearly defined. According to the introduction to the region provided by Korea's Ministry of Foreign Affairs, 'the Middle East' refers to the region from the Eastern Mediterranean Sea to the Arabian Gulf (Persian Gulf), and is subdivided into the Gulf Coast, the Arabian Peninsula, the Levant, the Fertile Crescent and the Maghreb. By contrast, 'Arab' refers to a group of Arab-speaking countries with Islam as the state religion, and these countries form the Arab League. The World Bank, the OECD and the IMF also use 'MENA' as a regionally distinct concept, and the countries included are the same. Among the MENA countries, the subject of this research project is just five countries: Egypt, Algeria, Libya, Iran and Iraq.

The Middle East is becoming a popular in



Figure 1 Countries in MENA region (source: Google Maps)

vestment destination for investors all around the world. Young, innovative entrepreneurship contributes significantly to overall productivity development. According to Wamda, even during the Coronavirus pandemic investment growth continued in the MENA region, and as of April 2021 44 start-ups had raised more than \$175 million in funding. Given this, we can certainly say that the MENA region is important from a Korean perspective, and the analysis results of this study will hopefully contribute to enhancing the effectiveness of Korean aid to MENA region countries in the future (<https://wamdacapital.com/>)

2 Review of general characteristics of MENA region and previous research

2.1 Overall characteristics of the MENA area

The countries belonging to the MENA region are shown in Figure 1.

The five countries that form the focus of this study, Egypt, Algeria, Libya, Iran and Iraq, are major countries in the region. The MENA region is characterised by most of its countries having a very poor Fragile State Index (FSI). As Table 1 indicates, Libya ranks seventeenth in terms of vulnerability among 190 comparison countries. Iraq ranks 20th, Egypt 39th, Iran 43rd and Algeria 74th, which is relatively good.

Table 1 Fragile State Index (FSI) (ranking in 2021)

Country	Year	Rank	Total	C1: Security Apparatus	C2: Factionalised Elites	C3: Group Grievance	E1: Economy	E2: Economic Inequality	E3: Human Flight and Brain Drain	P1: State Legitimacy	P2: Public Services	P3: Human Rights	S1: Demographic Pressures	S2: Refugees and IDPs	X1: External Intervention
Yemen	2021	1st	111.7	9.4	10.0	9.4	9.8	7.7	6.7	9.9	9.8	9.7	9.8	9.8	9.7
Somalia	2021	2nd	110.9	9.3	10.0	8.3	9.2	9.5	8.8	9.2	9.8	8.7	10.0	9.2	8.9
Syria	2021	3rd	110.7	9.6	9.9	9.7	9.6	7.1	8.2	10.0	9.6	9.7	7.6	9.7	10.0
South Sudan	2021	4th	109.4	9.7	9.2	8.8	9.2	8.9	6.7	9.5	10.0	8.7	9.5	9.9	9.3
Congo Democratic Republic	2021	5th	108.4	8.6	9.5	9.4	8.5	8.5	6.8	9.2	9.8	9.2	9.8	10.0	9.1
Central African Republic	2021	6th	107.0	8.0	9.7	8.1	8.5	9.6	6.6	9.0	10.0	9.3	8.9	9.7	9.6
Chad	2021	7th	105.8	8.9	9.5	8.0	8.6	8.7	7.9	9.4	9.8	8.2	9.6	9.3	7.9
Sudan	2021	8th	105.2	8.1	9.1	9.5	9.1	8.3	7.7	8.8	8.8	8.6	9.1	9.4	8.7
Libya	2021	17th	97.0	9.6	9.4	7.5	9.6	5.6	5.4	9.9	7.4	9.1	5.9	7.7	9.9
Iraq	2021	20th	96.2	7.9	9.6	8.2	6.9	6.1	6.5	8.8	8.9	8.1	8.4	8.3	8.5
Egypt	2021	39th	85.0	7.6	9.1	8.3	7.3	5.1	5.2	8.6	4.7	9.8	6.5	6.1	6.7
Iran	2021	43rd	84.5	6.9	9.6	9.3	7.6	4.9	5.3	9.2	4.7	9.5	5.5	5.3	6.7
Algeria	2021	74th	73.6	6.0	7.5	7.2	6.8	5.6	5.5	7.8	5.6	6.3	4.8	6.8	3.7
Morocco	2021	83rd	71.5	4.9	6.6	8.5	6.2	5.0	7.5	6.8	5.1	5.6	4.8	5.3	5.2

Source:

<https://fragilestatesindex.org/2021/05/20/fragile-states-index-2021-annual-report/>

Comparing the sustainable development goals (SDGs) levels of countries in the MENA region, we see that in the figure 1, the red colour shows a downward trend. As indicated by the dotted line, MENA is particularly lacking in terms of SDGs 14 (marine ecosystems) and 15 (terrestrial ecosystems) standards.

2.2 Efforts at the level of international organisations

In 2005, at the request of the MENA countries, the OECD promoted the MENA Initiative and started supporting investment for the development of the region (Aker et al., 2010; Ayanso, 2014; Polak and Warwick, 2013; Osterwalder et al., 2010). The MENA Initiative has two major pillars, the MENA–OECD Governance Program and the MENA–OECD Competitiveness Program, in which Korea has a strong presence. On 31 March 2021, the Minister of Public Administration and Security participated in the MENA–

OECD Ministerial Meeting held online. In particular, Tunisia, Egypt and Morocco are promoting ‘digital transformation’ as a government strategy, and there is a very high possibility of new future co-operation with Korea in areas such as intelligent government, digital innovation and public data.

Meanwhile, the World Bank has over the past decade carried out support projects in areas such as jobs expansion for youth and women in the MENA region, restoring trust in the government, strengthening human capital, strengthening economic competitiveness, fostering green growth and promoting gender equality (Choi and Kim, 2018; Cornish et al., 2010; Hynes and Scott, 2013; Mazzurco and Jesiek, 2017; Corbett and Fikkert, 2012). In particular, since 2015, renewing social contracts, expanding regional co-operation, strengthening resilience to climate and refugee shocks, and promoting recovery and reconstruction of conflict-affected countries have been designated as four major pillars of the strategy. Table 2 outlines the projects supported by the World Bank for countries in the MENA region.

Table 2 The World Bank’s MENA region project

Project name	Starting date	Closing date
Red Sea and Gulf of Aden Strategic Ecosystem Management GEF Project	2013.08.29.	2018.12.31.
MNXTA: Enhancing Microfinance Amongst Women and Youth in MENA	2013.07.24.	2015.06.30.
MENA – Desert Ecosystems and Livelihoods Knowledge Sharing and Coordination Project	2013.05.23.	2017.12.31.
Regional – Governance and Knowledge Generation	2011.11.29.	2015.10.30.
5M – Regional Coordination on Improved Water Resources Management and Capacity Building in Cooperation with NASA	2011.06.09.	2015.05.31.
Middle East Consortium on Infectious Disease Surveillance Phase II	2011.02.14.	2012.06.30.
5M –Regional Perspectives on Iraqi Displacement	2009.05.27.	2010.12.31.
Bahrain Business Incubator Center	2009.04.22.	2009.12.30.
Fund for New Market Development	2008.04.10.	2011.04.30.

5M – Displaced Iraqis in the Sub-Region Program	2007.12.1 9.	2011.06.3 0.
Jordan, WBG, Israel, Egypt – Sub regional initiative for Avian Influenza	2006.12.1 9.	2009.12.3 1.
Metap Solid Waste Management Project	2002.08.2 7.	–

Source: World Bank.

In the area of development co-operation in the MENA region at the level of international organisations, there is a need for a well-established support system, because Korea has a very high field of participation.

2.3 Basic direction for international development co-operation by the Korean government

The Korean government is taking a strategic approach regarding countries receiving aid by establishing a basic plan for international development co-operation. The Third Comprehensive Basic Plan for International Development Cooperation (2021–2025),

recently established by the Korean government, suggests the direction of assistance tailored to each income level of the aid-recipient countries. The previous master plan focused mainly on strategies for the least developed countries, but the third plan emphasises customised support strategies for each income level. The box below suggests the direction of co-operation by income group, and, as the Development Assistance Committee (DAC) list presented in Table 3 shows, the MENA region is included in the lower-middle- and upper-middle-income countries, and so it is necessary to comply with these basic directions.

Co-operation Direction by Income Group

Least-developed countries. Basic infrastructure such as health, education and sanitation can improve basic quality of life, and transportation and energy sectors form the basis for industrial development.

Lower-middle-income countries. Development demand for large-scale infrastructure projects will be supported, and support expanded for large-scale paid projects through the linking of privately funded projects and complex finance packages.

Upper-middle-income countries. As binding aid is limited, non-binding loan pilot project countries are selected and the projects implemented, and linkage with MDB co-operative loans and economic co-operation promotion funds is activated.

Source: KOICA

As the box above shows, in the case of upper-middle-income countries, for example, the direction is towards providing assistance such as MDB co-operative loans. Multilateral Development Bank (MDB) refers to a method of promoting economic development and poverty alleviation in developing countries by mobilising large-scale financial resources in the global international development co-

operation market. It refers to a method of providing large-scale paid loans and small-scale grants. This method applies to the cases of Algeria and Iraq, which belong to MENA's upper-middle-income countries. Since the five countries studied here are among the lower-middle-income and top-middle-income MENA countries, it is necessary to use them for direction setting.

Table 3 DAC list of ODA recipients (2020)

Least Developed Countries (GNI per capita below \$1,005)	Lower-middle-income countries (GNI per capita between \$1,006 and \$3,955)	Top-middle-income countries (GNI \$3,956–12,235 per person)
	Egypt, Iran	Algeria, Iraq, Libya

2.4 Review of previous research

There are not many Korean studies on the MENA region. The Korean journal search process reveals that, from the beginning of 2000 to end November 2021, academic papers with ‘MENA’ in their title numbered only 36. It is difficult to find papers that study the MENA area in relation to Korea’s ODA. Most of the papers are studies on the population outflow problem of the MENA region, economic co-operation with the European Union (EU), or the political, economic and social problems of the MENA region. It is not an exaggeration to say that most academic papers produced in Korea deal with oil price issues and political instability in the MENA region.

ODA between Korea and the major MENA countries, which is examined in this study, has hardly been addressed in academic research to date. Rather than academic papers, there have been studies in the form of various reports dealing with economic co-operation such as trade and investment by various government research institutes or public institutions. The representative institutions here are the Korea Institute for International Economic Policy, the POSCO Research Institute and the Korea Trade-Investment Promotion Agency. Via reports on the MENA region, these organisations provide various kinds of information to the Korean government and Korean companies so that they can effectively engage in economic co-operation activities in the MENA region. In other words, such provision is characterised by information that is necessary for companies to invest and trade, rather than consisting of data on ODA projects for countries in the MENA region. Thus, studies relating to information analysis of Korea’s aid programmes for MENA region countries are lacking. The significance of the present study is that it seeks to fill these gaps in the academic literature.

3 Research design

3.1 Countries to be analysed

The countries analysed in this study are not the twenty countries of the MENA region, but five countries that are particularly important and have not been studied much from the perspective of Korea. These are Egypt, Algeria, Libya, Iran and Iraq.

3.2 Analysis content

First, text-mining analysis of the national long-term development plans of the five countries is conducted. The reason for this is that each country’s long-term development plans reflect the industrial fields and budget allocations that these countries wish to focus on in the future. When Korea’s ODA policy is established and implemented in consideration of the industrial and specialised development directions included in each country’s long-term development plan, the probability of success for the ODA policy increases. Second, we analyse the scale and the business fields of ODA projects provided by the Korean government to these five countries between 2015 and 2019. In this way, it is possible to analyse the extent to which Korea has provided aid to these countries and, at the same time, which areas it has focused on. This is important, because it provides information on the areas on which the Korean government should focus more in the future.

3.3 Analysis method

In this study, text-mining analysis is conducted in order to analyse the contents of the long-term development plans of four of the five countries. (Libya was excluded from the analysis because its national long-term development plan was not well-established.) In the process of this analysis, the complex network will be simplified utilising the PFnet function (Borgatte et al., 2013; El-Harizi and Klemick, 2007; Markus et al., 2018). In

addition, topic analysis will be conducted to analyse the details of Korea’s aid projects to the five countries (Rosenberg and Koehler, 2015; Son, 2015; Turner et al., 2013)..

4 Analysis result

4.1 Analysis of the contents of the national long-term development plan

The long-term plans included in the analysis

are: Egypt Vision 2030 for Egypt, the Sixth Five-Year Development Plan (2016–2021) for Iran, the Establishment of National Vision 2030 for Algeria, and the National Development Plan 2018–2022 for Iraq. First, a simple word cloud analysis was performed using extracted words and excluding unsuitable words (Figure 2).



Figure 2 Word cloud analysis result for the five countries

Figure 3 shows the results obtained by topic analysis. The image is organized into five main topics. Topic 1 shows that the five countries are focusing on national growth and placing weight on FTAs. It can be seen that Topic 2 adopts training policy as a long-term policy.

Topic 3 places importance on nurturing experts in defence policy and defence policy with the economy. Topic 4 presents efforts at the national level to improve the level of health and education, and Topic 5 is focused on preventing corruption in industry.

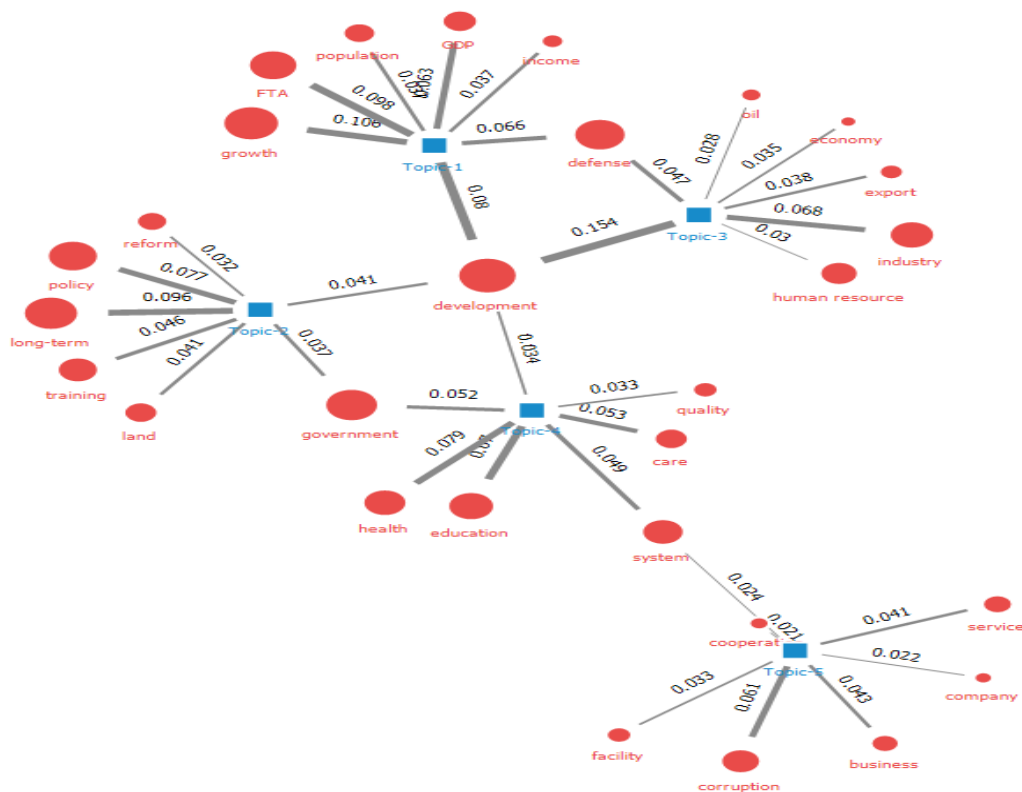


Figure 3 The five main topics

Using the PFnet function, Figure 4 shows the network connection that forms the backbone of the core content of the national long-term

development plan of the countries to be analysed.

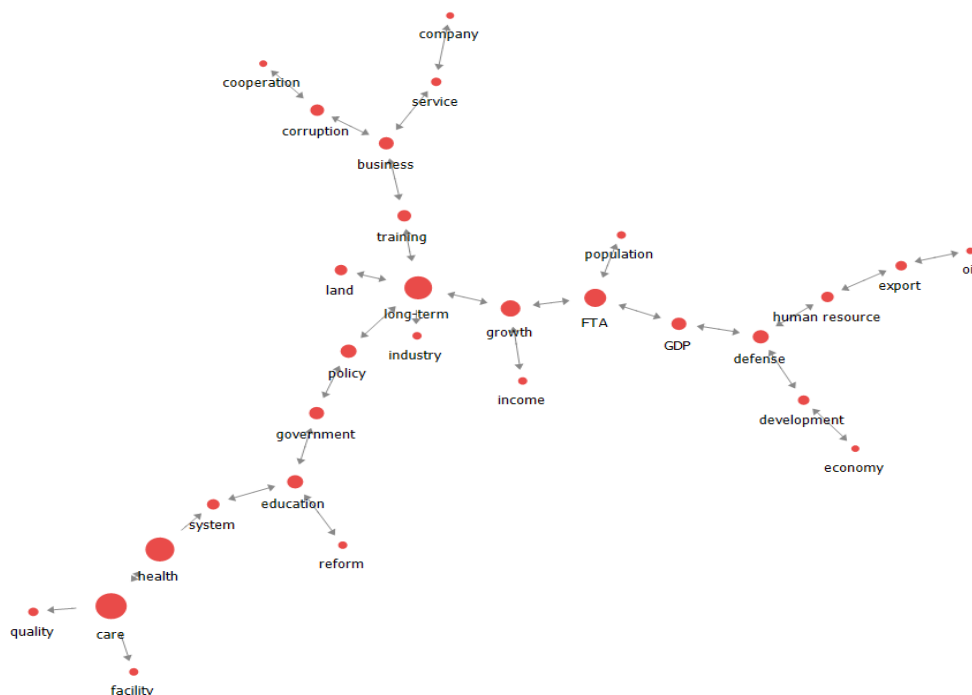


Figure 4 Core structure by PFnet

If we re-cluster this figure and summarise all the topics, the new cluster is as follows (Figure 5).

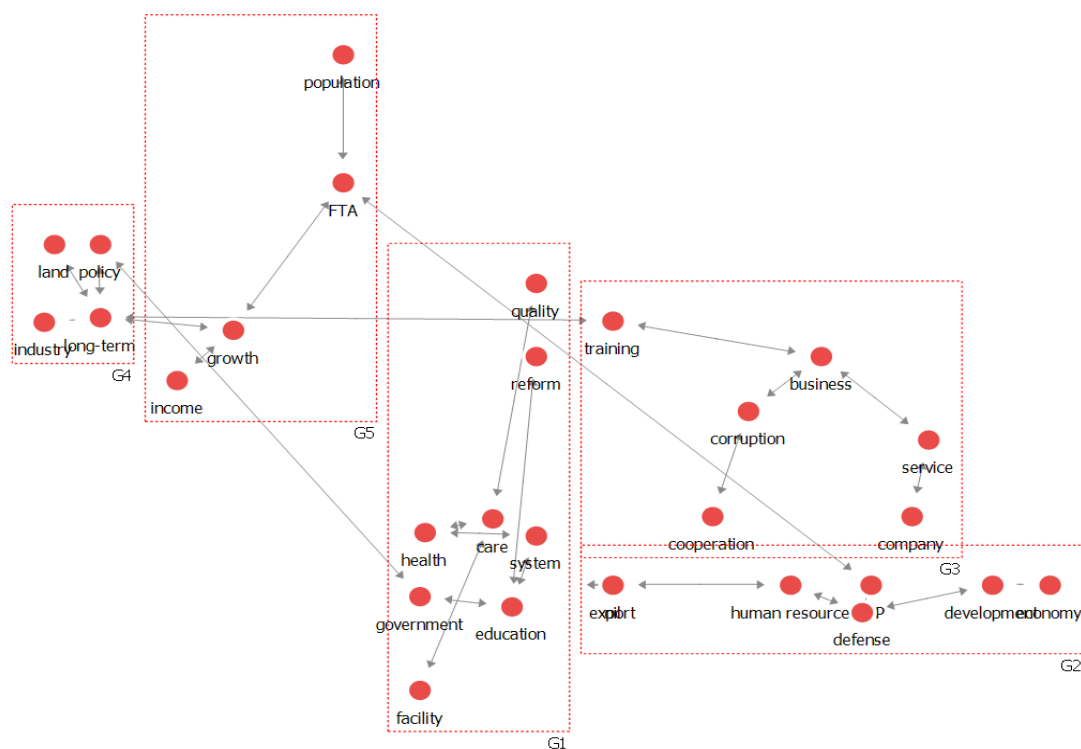


Figure 5 Cluster of key concepts

The above analysis can be summarised in several points, as follows:

1. It focuses on growth policies. In focusing on economic development, it shows a willingness to utilise means such as FTAs. Korea also needs to actively promote FTAs with these countries.
2. The proportion occupied by the defence industry and the health industry is large. In particular, in these industries, efforts are being made not only in the field of industrial development but also in manpower nurturing and education.
3. Governments are showing great interest in using training in the mid to long term. Around the world, in fact, governments are showing great interest in training systems in nurturing industrial manpower. In the process of economic co-operation with the five MENA countries, Korea's efforts indicate the need to increase the proportion of aid directed at nurturing scientific and technological manpower, and industrial manpower.
4. It appears that the five countries are trying to make institutional efforts regarding public administration and anti-corruption. Corruption issues are also being highlighted in industry. This raises the need to carefully consider the opacity of business relationships in the process of conducting business in these countries. In addition, in the field of international development co-operation, there is a need to carry out various e-government projects to ensure transparency in the public administration field.

4.2 Characteristics analysis of Korean ODA for five countries

Table 4 shows Korea's ODA performance in each major sector of the analysed countries. The main sectors here are limited to education, health, water resources, public administration, other social infrastructure, transport, telecommunications, energy and agriculture.

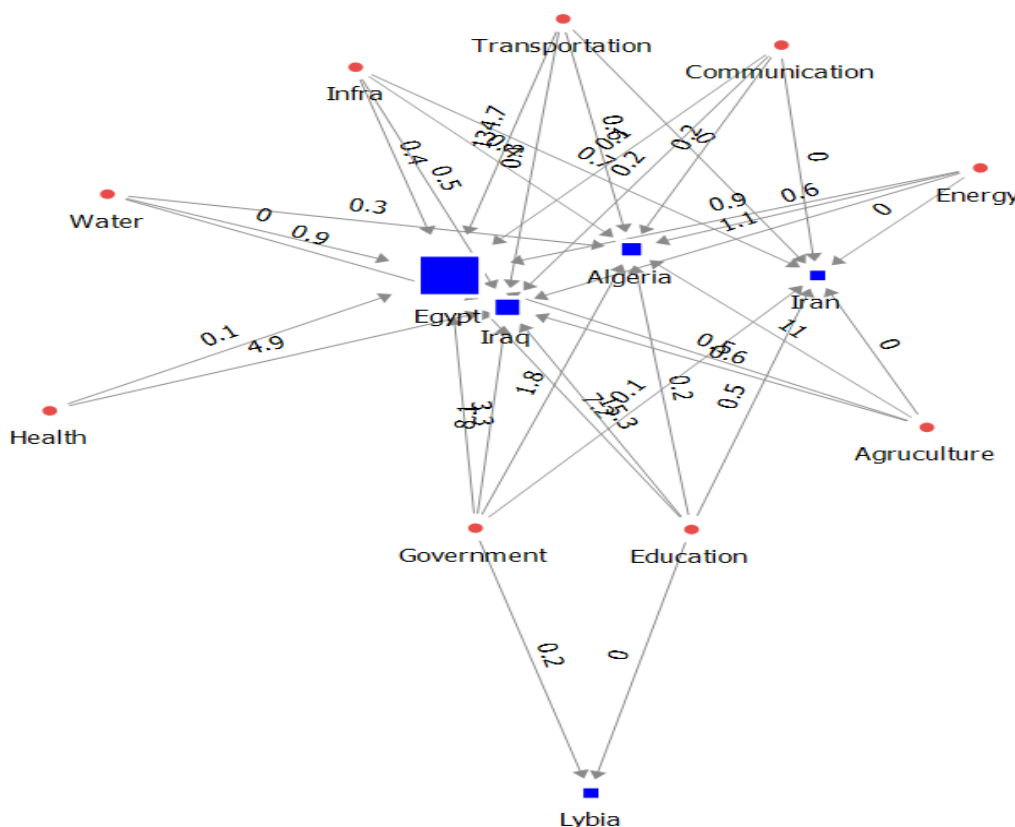
Table 4 Performance of major sectors by country, 2015–2019 (unit = USD million)

	Algeria	Egypt	Iran	Iraq	Libya
Education	0.16	7.24	0.51	15.32	0.04
Health	0.00	0.11	0.00	4.88	0.00
Water	0.28	0.04	0.00	0.94	0.00
Government	1.80	3.29	0.08	8.09	0.21
Infra	0.43	0.41	0.73	0.50	0.00
Transportation	0.56	134.65	0.01	0.35	0.00
Communication	0.16	0.13	0.02	0.16	0.00
Energy	0.56	0.89	0.03	1.12	0.00
Agruculture	10.97	0.55	0.01	0.56	0.00
Total	14.92	147.30	1.39	31.91	0.25

The above data represent each sector from 2015 to 2019. Egypt has the largest total with 147.30 million dollars, followed by Iraq, Algeria, Libya, and Iran in that order.

Meanwhile, the results of network analysis performed with the Netminer program using

the above statistics for each country are presented in Figure 6, which shows the results of the connection centrality analysis. It can be seen that Egypt plays the most central role within this network, while Libya occupies the lowest position.



Note. Country names are in squares and major fields are in circles. The number above the link

indicates the amount of ODA (unit = USD million).

Figure 6 Size by sector of the five countries

Table 5 In-degree centrality

		1	2
		In-Degree Centrality	Out-Degree Centrality
1	Egypt	11.331073	0.000000
2	Iraq	2.454833	0.000000
3	Algeria	1.147377	0.000000
4	Iran	0.107204	0.000000
5	Lybia	0.019460	0.000000
6	Agruculture	0.000000	0.929560
7	Energy	0.000000	0.199163
8	Communication	0.000000	0.036361
9	Transportation	0.000000	10.428423
10	Infra	0.000000	0.158621
11	Government	0.000000	1.036764
12	Water	0.000000	0.096802
13	Health	0.000000	0.384078
14	Education	0.000000	1.790174

Note. The connection centrality score is a number that compares the degree of connection. In-degree means introverted centrality and out-degree means outward centrality.

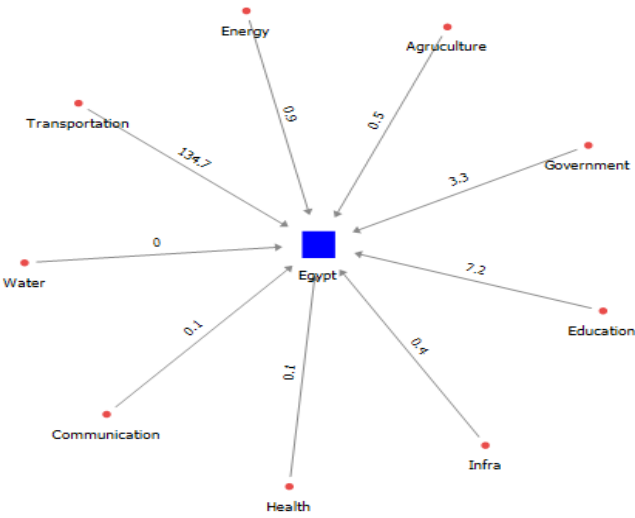
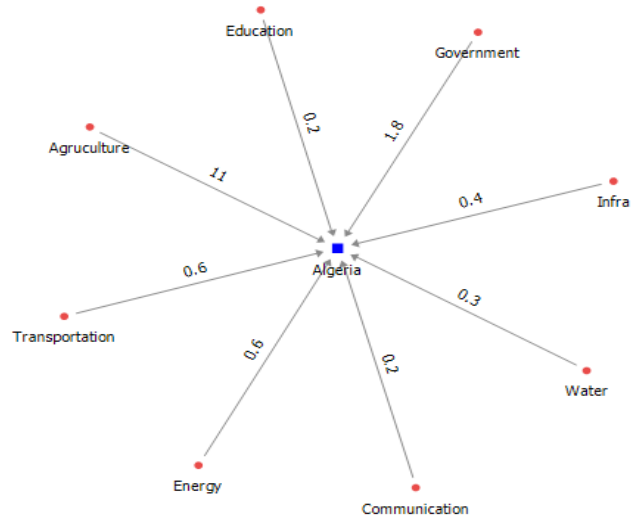
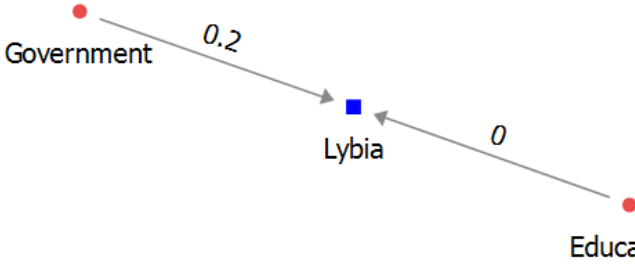
Table 6 shows the centrality index by major sector. That is, it presents information regarding which fields are being heavily invested in. It shows that the transportation sector is receiving the largest investment, followed by education and public administration.

Table 6 Out-degree centrality

		1	2
		In-Degree Centrality	Out-Degree Centrality
1	Transportation	0.000000	10.428423
2	Education	0.000000	1.790174
3	Government	0.000000	1.036764
4	Agruculture	0.000000	0.929560
5	Health	0.000000	0.384078
6	Energy	0.000000	0.199163
7	Infra	0.000000	0.158621
8	Water	0.000000	0.096802
9	Communication	0.000000	0.036361
10	Lybia	0.019460	0.000000
11	Iraq	2.454833	0.000000
12	Iran	0.107204	0.000000
13	Egypt	11.331073	0.000000
14	Algeria	1.147377	0.000000

The scale of Korea's ODA performance by country and sector is summarised in Table 7.

Table 7 Characteristics by country

Country	Network Features by Country	Remarks
Egypt	 <p>A network diagram for Egypt with a central blue square labeled 'Egypt'. It has nine outgoing arrows to various sectors: Energy (0.9), Agriculture (0.5), Government (3.3), Education (7.2), Infra (0.4), Health (1.0), Communication (0.1), Water (0), and Transportation (134.7).</p>	<p>o Focus on transportation, public administration and education</p>
Algeria	 <p>A network diagram for Algeria with a central blue square labeled 'Algeria'. It has eight outgoing arrows to various sectors: Education (0.2), Government (1.8), Infra (0.4), Water (0.3), Communication (0.2), Energy (0.6), Transportation (0.6), and Agriculture (11).</p>	<p>o Focus on agriculture and public administration</p>
Libya	 <p>A network diagram for Libya with a central blue square labeled 'Lybia'. It has two outgoing arrows: one to Government (0.2) and one to Education (0).</p>	<p>o Focus on public administration and education</p>

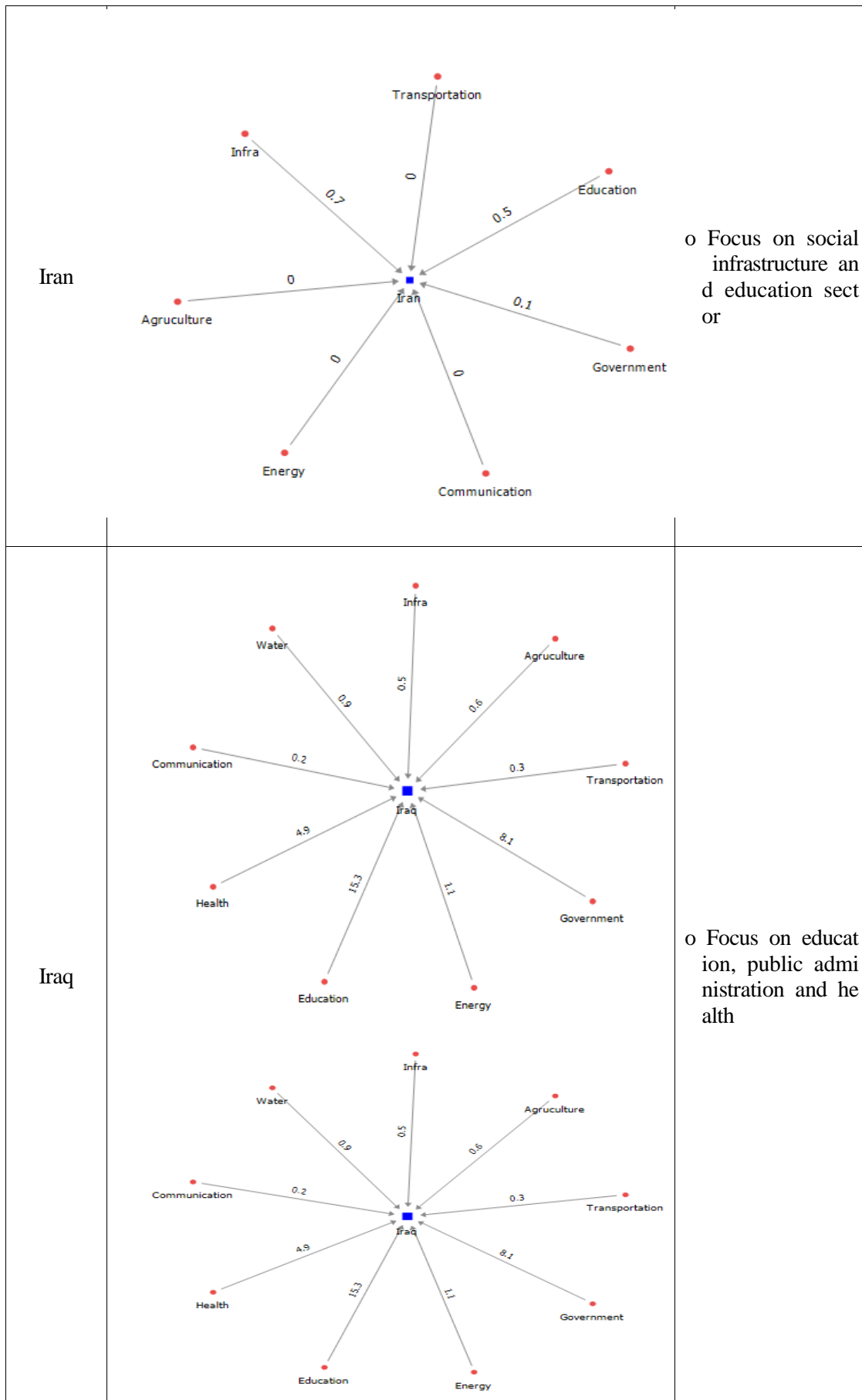
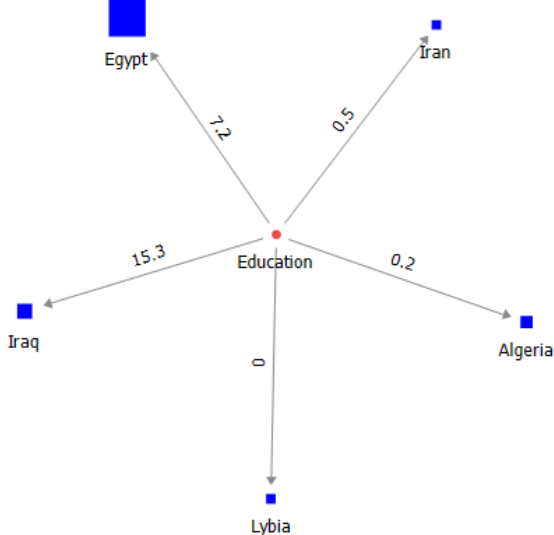

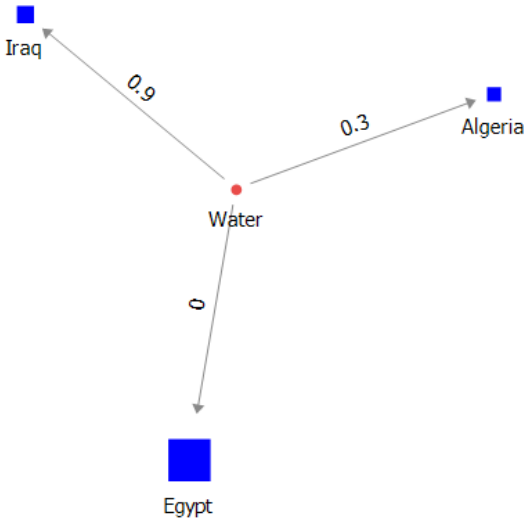
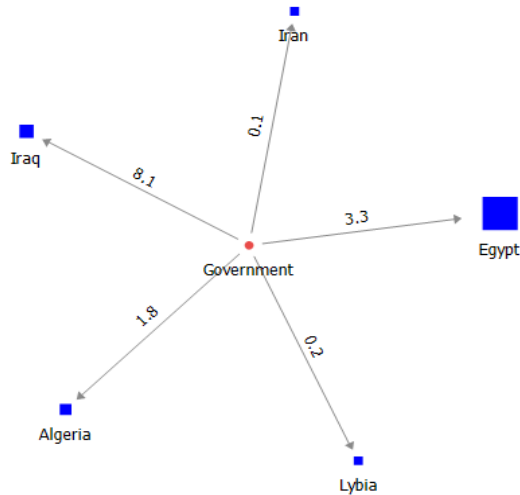
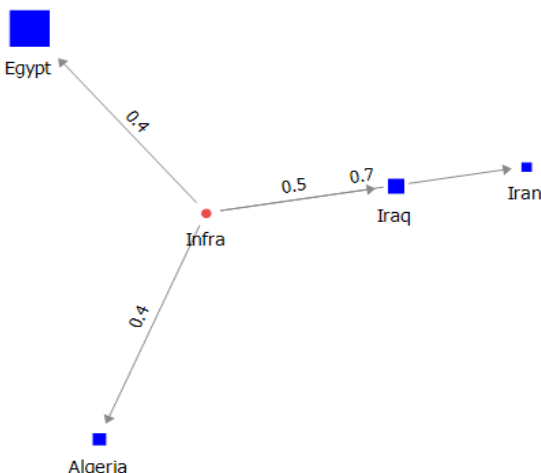
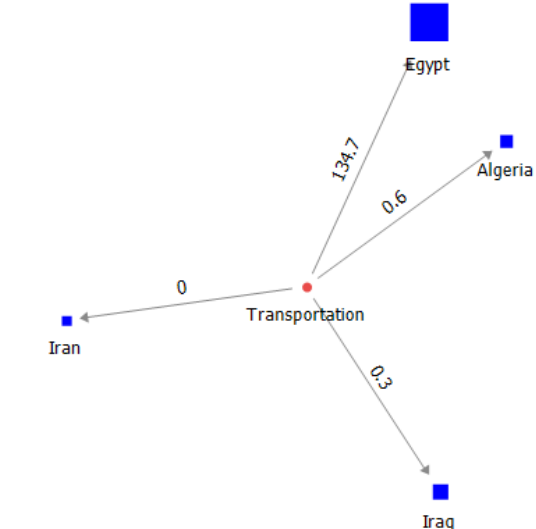


Table 8, on the other hand, shows which countries are receiving large amounts of money focused on major fields.

Table 8 Characteristics by major field

분야	Network Features by Field	비고
Education	 <p>A network diagram with a central red dot labeled 'Education'. Five arrows point outwards to blue squares representing countries: Egypt (top-left, value 7.2), Iran (top-right, value 0.5), Iraq (left, value 15.3), Algeria (right, value 0.2), and Lybia (bottom, value 0).</p>	<p>o Focus on Iraq and Egypt</p>
Health	 <p>A network diagram with a central red dot labeled 'Health'. Two arrows point outwards to blue squares representing countries: Iraq (left, value 4.9) and Egypt (right, value 0.1).</p>	<p>o Focus on Iran and Egypt</p>
Water	 <p>A network diagram with a central red dot labeled 'Water'. Three arrows point outwards to blue squares representing countries: Iraq (top-left, value 0.9), Algeria (top-right, value 0.3), and Egypt (bottom, value 0).</p>	<p>o Focus on Iraq, Egypt and Algeria</p>

<p>Public administration</p>	 <p>A network diagram with a central red node labeled "Government". Five arrows point outwards to blue square nodes: Iran (0.1), Egypt (3.3), Libya (0.3), Algeria (1.8), and Iraq (8.1).</p>	<p>o Focus on Egypt and Iraq</p>
<p>Social infra</p>	 <p>A network diagram with a central red node labeled "Infra". Four arrows point outwards to blue square nodes: Egypt (0.4), Iran (0.7), Iraq (0.5), and Algeria (0.4).</p>	<p>o Focus on Iran and Iraq</p>
<p>Transportation</p>	 <p>A network diagram with a central red node labeled "Transportation". Four arrows point outwards to blue square nodes: Egypt (134.7), Algeria (0.6), Iraq (0.3), and Iran (0).</p>	<p>o Focus on Egypt, Algeria, Iran and Iraq</p>

<p>Communication</p>		<p>o Focus on Algeria and Iraq</p>
<p>Energy</p>		<p>o Focus on Iraq and Egypt</p>
<p>Agriculture</p>		<p>o Focus on Algeria, Egypt and Iraq</p>

5 Conclusion

The main conclusions derived from the text-mining analysis and social network analysis

are as follows. First, analysing the mid-to long-term national development plans of the countries to be analysed, we see that

all the countries are focusing on economic growth and showing a willingness to utilize means such as FTAs. In the industrial field, there is a will to foster the defence industry and the health industry. In these industries, efforts are being made not only towards industrial development but also in manpower nurturing and education. In addition, the five countries are showing great interest in using training in the mid to long term. Thus there is a need to link this policy impetus with economic co-operation or with international development co-operation, interested as it is in training systems in nurturing human resources in industry. In the process, there is a need also to expand the proportion of aid spent on nurturing scientific and technological manpower and industrial manpower. In addition, it seems that the five countries are trying to make institutional efforts in the areas of public administration and anti-corruption.

Thus there is a need to carry out numerous e-government projects, something in which Korea excels. As regards ODA policies in respect of the individual countries, Egypt needs to focus more on transport, public administration and education, Algeria needs to focus on agriculture and public administration, and Libya needs to focus on public administration and education. Iran, meanwhile, needs to focus on social infrastructure and education, and Iraq on education, public administration and health.

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