# Korea's ODA Policy Direction for Azerbaijan: Strengthening Azerbaijan's In novation Policy Capabilities

**Young-Chool Choi** (Professor, Department of Public Administration, Chungbuk National University, Korea)
Contact: ycchoi@cbu.ac.kr

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#### **Abstract**

The primary aim of this study is to identify the policy issues that are important in terms of the national development of Azerbaijan, an exercise which has not been undertaken either at home or abroad. The secondary purpose is to study how addressing these policy issues can be supported in Azerbaijan's public administration arena. Importantly, the study attempts to find a way for K orea to strengthen the public administration arena in Azerbaijan through aid projects, and thereby contribute to the county's national development. As a result of applying text mining analysis and decision tree analysis, it can be seen that policy issues such as tourism and agriculture, the int roduction of a new economic system and business attraction are important. In addition, the study suggests that strengthening Azerbaijan's ability to control corruption is important from the Korea n point of view.

Keywords: ODA, Azerbaijan' innovation policy, text mining method

#### 1. Introduction

Azerbaijan is a republic in which Shia Islam is the state religion but which follows secularism in that politics and religion are separated. The population was around 10 million as of 2019, and the country occupies an area of 86,600 square kilometres, equivalent to around 40 per cent of the Korean Peninsula. The capital is Baku, and the government follows a presidential system, where the president retains office for a seven-year period. The central administrative organization consists of the president, the first vice-president, the prime minister, the deputy prime minister, and eighteen ministries. Looking at the relationship with Korea, we observe that Azerbaijan was included as an important support target country in Korea's first Country Partnership Strategy (2012–15) and second Country Partnership Strategy (2016–20). The Country Partnership Strategy of 2021–5 excludes Azerbaijan from the list of target countries.

Even if Azerbaijan is now excluded from the list of important target countries for Korea's ODA policy, it may be said that it is an oil-exporting country and an important country in terms of r elations with Korea (Abdelsalam, 2020; Agt, 2014; Elkind, 2006). Nevertheless, Korean academics have not done much research on Azerbaijan. In particular, it is not an exaggeration to say that there are few studies by Korean scholars in the fields of politics and economics. Even though A zerbaijan has a small population and not much trade with Korea, it is a country that exports an important energy called oil, and at the same time, as a country that has continuously received aid from Korea, it is one that needs help from advanced countries. In addition, since Azerbaijan is a country that promotes innovative systems in public administration and economic policies such as business attraction and job creation (Karimova and Silova, 2014; Guliyev, 2016; Mammadyarov, 2013; Mammadguliyev, 2009; Nuriyev, 2008; Mishra, 2012), Korea, which has ad vanced experience in economic development and public administration, can provide information re garding the political and economic aspects of Azerbaijan. There is a need to continue such resear ch.

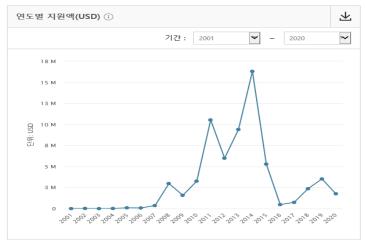
Against this background, this study seeks, first, to derive the important recent policy issues relati

ng to the national development of Azerbaijan, and second, to identify implications for the public administration sector in order to support these policies from an innovative perspective. To achie ve these research objectives, we use text mining techniques and decision tree analysis methods.

## 2. Current Status of Korea's Support for Azerbaijan and Research Issues

#### 2.1 Korean ODA support to Azerbaijan

An overview of Korean aid to Azerbaijan is as follows. Looking at the amount of aid from Kor ea to Azerbaijan, we see that it is not much in scale: for example, it was \$ 1.76 million in 202 0, \$ 3.53 million in 2019 and \$ 2.36 million in 2018. In 2014 it was largest, at around \$16.3 million. The number of projects is relatively small: four in 2020 and three in 2019. Figure 1 sh ows the amount of ODA provided by Korea to Azerbaijan between 2001 and 2020.



Source: KOICA Data Portal.

Figure 1 Korean aid to Azerbaijan (by year)

Looking at the amount of support by sector during the twenty years from 2001 to 2020, we see that the largest occurred in the technology and energy sector, with 56.9 per cent of the total, fo llowed by public administration sector with 22.9 per cent, the education sector with 13.2 per cent, and the agriculture, forestry and fisheries sector with 5.7 per cent (KOICA Data Portal).

Meanwhile, looking at the report (Choi et al., 2020) dealing with the evaluation of aid projects p rovided by Korea to Azerbaijan, we can see that aid performance is evaluated in four main areas. The first is the rural business sector; here the relevance is the highest, and the level of effecti veness is quite high. In particular, it is judged necessary to supplement this in the future, since i t is desirable to promote the rural development project in connection with the regional developm ent project. Next, looking at the education competency reinforcement section, it is judged that the appropriateness and effectiveness are relatively high. In terms of goal achievement, the beneficiary satisfaction score for the education project is judged to be relatively high, although not the be st.

However, it is also shown that some projects are indicating only a moderate level of satisfaction. In the case of the public administration sector, it is judged that the relevance is quite high and the effectiveness very high. The development of ICT infrastructure, systems and capabilities for public administration has been continuously emphasized. This achievement is evaluated as suiting the needs of the countries receiving the aid. However, at the second stage of the Country Partne rship Strategy (CPS) some projects were not actively promoted, owing to delays in the free aid project agreement, and an issue appeared regarding the degree of consistency with the developme

nt goals of Azerbaijan.

Lastly, in the case of water quality improvement, it is judged that the appropriateness and effectiveness of aid projects for Azerbaijan are at the lowest level. There was no direct connection project relating to water and sewage and water, and some management problems were found, such a sidelays in licensing and approval from the Azerbaijani government authority, and requests for changes in the scope of the project during the process of project promotion.

As Figure 1 shows, the results of an overall evaluation of the aid projects that Korea has carried out for Azerbaijan indicate that Azerbaijan is continuously pursuing economic policies and innov ative policies, and so it can be said that there is a need to actively support the country's deman ds in these areas.

#### 2.2 Azerbaijan's policy focus

Azerbaijan is aiming to establish a highly competitive economic system through Azerbaijan 2020: A Vision of the Future and Azerbaijan 2020. Here, effective national regulation and the introduction of a mature market model are important. At the same time, the country has established a policy of actively supporting improvements in economic structure, development of the non-oil sect or, scientific potential and innovative activities, and is in the process of implementing it. In addition, various efforts have been made to develop information and communication technologies and effect transition to an information society. Also, the development of human capital and the establishment of an effective social security system are emphasized as important policy tasks.

Bearing in mind all the above, this study posed the following research questions:

Research Question 1: What are the important policy issues facing Azerbaijan?

Research Question 2: How can Korea support Azerbaijan with regard to public administr

ation so as to address the important policy issues facing the count

ry?

# 3. Survey Design

# 3.1 Analysis target

The overall analysis target of this study can be discussed from two perspectives. One relates to the analysis target of the first research question set in this study. To identify the first research question, two analysis targets were set. One is to identify important policy issues in Azerbaijan from a Korean perspective. For this purpose, academic papers written about Azerbaijan by Korean scholars between 1 January 2000 and 31 December are analysed. The other is to recognize the policy problems that foreign scholars have identified in relation to Azerbaijan. In order to gauge this perception, we analyse the academic papers relating to Azerbaijan published in 145 social science journals managed by the publishing company Springer. These papers relating to Azerbaijan covered by 145 foreign journals form the subject of analysis.

The second point of view is to suggest the direction of aid policy that Korea should pursue in the public administration area so as to address Azerbaijan's policy issues. The 142 developing countries selected by the OECD Development Assistance Committee (DAC) as the recipient countries, are analysed, including Azerbaijan.

#### 3.2 Analysis method

In this study, in order to address the first research question from a Korean perspective, we analy se the academic research papers written by Korean scholars on Azerbaijan. The method employed is a text mining method. This is a method for analysing important topics by examining the rela

tionship between words included in the text to be analysed. The second research question is to e xplore how Korea can offer effective help to Azerbaijan in the field of public administration. For this purpose, important indicators used to measure the level of the public administration sector a re derived, and decision tree analysis is applied using these indicators. This is because it is important to include all aid recipient countries, including Azerbaijan, in the analysis target, identify the characteristics of Azerbaijan from the results of this analysis, and establish an aid policy that meets these characteristics. In order to solve the second research problem, in this study the decis ion tree analysis method is used.

## 3.3 Analysis procedure

In terms of analysis procedure, first, the text mining method is applied to the academic papers on Azerbaijan written by Korean scholars. Via this process, important policy issues facing Azerbaijan are drawn from a Korean perspective. Next, a decision tree analysis is performed using statistics provided by the key indicators of 142 developing countries including Azerbaijan. Via decision tree analysis, these 142 countries can be classified into several types. Since countries classified into several different types nevertheless share the characteristics of each type, donors can implement aid policies that consider the characteristics of each type. The direction of Korea's aid policy towards Azerbaijan can also be established through this process.

#### 4. Analysis result

- 4.1 Results of text mining analysis: identification of important policy issues in Azerbaijan
- 4.1.1 Azerbaijan policy issues from the perspective of Korean scholars

First, we review the studies on Azerbaijan made by Korean scholars. Thereby, it is possible to a scertain what issues Azerbaijan is particularly interested in in relation to national development. F or this purpose, we will review the academic papers on Azerbaijan produced by Korean scholars between 1 January 2000 and 31 December 2020. Analysing these papers by applying the text m ining technique, it is possible to derive the fields of interest and important issues for Korean scholars relating to Azerbaijan. To this end, among papers that contain the word 'Azerbaijan' in the ir title we will extract and analyse those containing the word 'development' as a keyword.

We analyse the academic papers on Azerbaijan using the Netminer 4.5 program made by the Cy ram company in Korea. The number of papers including the word 'Azerbaijan' in the title and 'development' as a keyword was 58, and a total of 1,122 words were derived from these papers. Table 1 shows the words with the highest frequency of occurrence. The word that appeared most frequently was 'Azerbaijan', with 146 appearances. Next was economy', which appeared 44 times, followed by 'culture', which appeared 37 times.

Table 1 Words by frequency of occurrence

		1	2	3	4	5
		rt of Speech(PC	Frequency	Word length	Name Type	Author Keyword
1	아제르바이잔	"Proper Noun"	146.0	6.0	raphical Name"	"False"
2	경제	common Noun"	44.0	2.0	"_"	"False"
3	문화	Common Noun"	37.0	2.0	"_"	"False"
4	분석	Common Noun"	36.0	2.0	"_"	"False"
5	국가	Common Noun"	33.0	2.0	"_"	"False"
6	한국어	Common Noun"	31.0	3.0	"_"	"False"
7	한국	"Proper Noun"	29.0	2.0	raphical Name"	"False"
8	정책	Common Noun"	25.0	2.0	"_"	"False"
9	한류	Common Noun"	23.0	2.0	"_"	"False"
10	비교	Common Noun"	22.0	2.0	"_"	"False"
11	전략	Common Noun"	21.0	2.0	"_"	"False"
12	중심	Common Noun"	20.0	2.0	"_"	"False"
13	이슬람	Common Noun"	20.0	3.0	"-"	"False"
14	검시아	"Proper Noun"	20.0	3.0	raphical Name"	"False"
15	터키	"Proper Noun"	19.0	2.0	raphical Name"	"False"
16	영향	Common Noun"	19.0	2.0	"-"	"False"
17	에너지	Common Noun"	19.0	3.0	"_"	"False"
18	전환	Common Noun"	18.0	2.0	"_"	"False"
19	체계	Common Noun"	17.0	2.0	"_"	"False"
20	외교	Common Noun"	17.0	2.0	"_"	"False"
21	발전	Common Noun"	16.0	2.0	"_"	"False"
22	대외	Common Noun"	16.0	2.0	"_"	"False"
23	지역	Common Noun"	15.0	2.0	"_"	"False"
24	언어	Common Noun"	15.0	2.0	"_"	"False"
25	문자	Common Noun"	15.0	2.0	"_"	"False"
26	라틴	"Proper Noun"	15.0	2.0	"_"	"False"
27	기술	Common Noun"	15.0	2.0	"_"	"False"
28	학습	Common Noun"	14.0	2.0	"_"	"False"
29	카스	"Proper Noun"	14.0	2.0	"_"	"False"
30	체제	Common Noun"	14.0	2.0	"-"	"False"
31	지적	Common Noun"	14.0	2.0	"_"	"False"
32	제도	Common Noun"	14.0	2.0	"_"	"False"
33	정체	Common Noun"	14.0	2.0	"_"	"False"
	1276					

Note. Some of the analysis results were excerpted as an example.

The words appearing here that are represented as pictures through cloud analysis are shown in Fi gure 2.



Figure 2 Cloud analysis result

Via this cloud analysis result, though is possible to identify the outline of words, it is difficult to understand what issues the papers relating to Azerbaijan mainly deal with. To solve this proble m topic analysis was conducted, and the results are shown in Figure 3. As Figure 3 indicates, the four topics allow us to grasp the level of interest of Korean scholars in Azerbaijan. Topic 1 mainly shows the degree of political interest in Azerbaijan, such as concerns the economy, policy, and diplomacy. Topic 2 shows the theme of Korean culture and its dissemination to other counties. Topic 3 may be said to consist of topics relating to national identity and character, including Russia, and Topic 4 may be said to be interest in the Korean language. As in Topic 1, the degree of interest in policy or economic issues is somewhat higher than the interest in other topics.

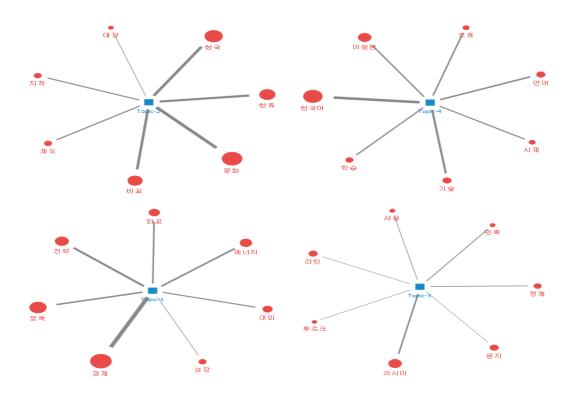


Figure 3 Classification of topics of papers relating to Azerbaijan

Figure 4 further explains the above topic classification. It shows only the core skeletal network that makes up the network, using the PFnet function of the Netminer program. At the top right of the network diagram, looking at the composition of the connected words we can see the linguistic aspect of Azerbaijan issues and the topic of Hallyu (Korean Cultural Wave) as a cultural interest in Korea, identity issues relating to Turkey, economic and institutional policy issues, and R ussia's influence on Azerbaijan. This allows us to see how issues such as the economic structure s that are affected are connected.

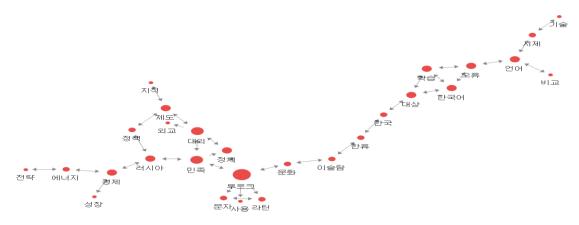


Figure 4 Core network structure derived by PFnet function (paper by Korean scholars)

Considering the results of the above analysis comprehensively, it may be said that Azerbaijan's e conomic problems, energy problems and growth problems are being treated as important from a Korean point of view.

# 4.1.2 Important Azerbaijani policy issues as viewed by foreign journals

Thus, Azerbaijan-related papers included in 145 journals managed by Springer were analysed. This is productive in that, by analysing these papers dealing with the development problems of Azerbaijan, one can discover which policy issues Azerbaijan is focusing on. This analysis method is an indirect one, but it can nevertheless be helpful in identifying important policy issues in Azerbaijan. We extracted and analysed papers that contained 'Azerbaijan' in their title and 'development' as a keyword at the same time. These papers numbered four, which is not a large number. It can be seen that there are not many papers dealing with the development problem of Azerbaijan. First, analysis of the word that appeared with the most frequency in the sentences in the papers shows that it appeared as 'Azerbaijan', nine times in all, as shown in Table 2.

Table 2 Analysis of frequency of occurrence of words

		1	2	3	4	5
		rt of Speech(PC	Frequency	Word length	Name Type	Author Keyword
1	Azerbaijan	"Proper Noun"	9.0	10.0	raphical Name"	"False"
2	system	Common Noun"	8.0	6.0	"_"	"False"
3	province	Common Noun"	8.0	8.0	"_"	"False"
4	development	Common Noun"	8.0	11.0	"_"	"False"
5	management	Common Noun"	6.0	10.0	"-"	"False"
6	risk	Common Noun"	5.0	4.0	"_"	"False"
7	resource	Common Noun"	5.0	8.0	"_"	"False"
8	emergency	Common Noun"	5.0	9.0	"_"	"False"
9	indicator	Common Noun"	4.0	9.0	"_"	"False"
10	disaster	Common Noun"	4.0	8.0	"-"	"False"
11	community	Common Noun"	4.0	9.0	"-"	"False"
12	area	Common Noun"	4.0	4.0	"-"	"False"
13	zone	Common Noun"	3.0	4.0	"-"	"False"
14	revenue	Common Noun"	3.0	7.0	"-"	"False"
15	region	Common Noun"	3.0	6.0	"_"	"False"
16	planning	Common Noun"	3.0	8.0	"-"	"False"
17	measure	Common Noun"	3.0	7.0	"-"	"False"
18	hand	Common Noun"	3.0	4.0	"-"	"False"
19	fund	Common Noun"	3.0	4.0	"-"	"False"
20	country	Common Noun"	3.0	7.0	"-"	"False"
21	Disaster	"Proper Noun"	3.0	8.0	"_"	"False"
22	water	Common Noun"	2.0	5.0	"-"	"False"
23	use	Common Noun"	2.0	3.0	"_"	"False"
24	type	Common Noun"	2.0	4.0	"-"	"False"
25	tourism	Common Noun"	2.0	7.0	"-"	"False"
26	recommendation	Common Noun"	2.0	14.0	"-"	"False"
27	nature	Common Noun"	2.0	6.0	"_"	"False"
28	load	Common Noun"	2.0	4.0	"_"	"False"
29	land	Common Noun"	2.0	4.0	"_"	"False"
30	group	Common Noun"	2.0	5.0	"-"	"False"
31	government	Common Noun"	2.0	10.0	"-"	"False"
32	flood	Common Noun"	2.0	5.0	"-"	"False"
33	enterprise	Common Noun"	2.0	10.0	"_"	"False"

Note. Some results were captured as examples.

Cloud analysis based on the frequency of occurrence of these words is shown in Figure 5.



Figure 5 Cloud analysis results

Cloud analysis results can only show the general composition of words, but does not explain the structural relationships between them. To solve this problem, centrality analysis was performed. The following network structure (Figure 6) was found as a result of centrality analysis by limitin g the word appearance frequency to three or more words.

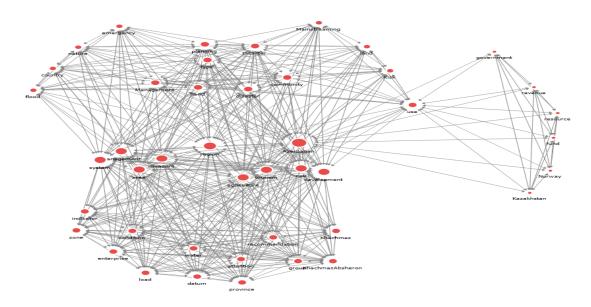


Figure 6 Network structure shown as a result of centrality analysis

Meanwhile, using concentric circle analysis, we tried to ascertain which words are located in the

centre of the concentric circles. It does not follow that simply because the frequency of occurre nce of a word is high it is located at the centre of the concentric circle; rather, the more import ant the word in the network structure, the more it is located at the centre of the concentric circl e. As a result of this, words that play a key role in the word network can be extracted.

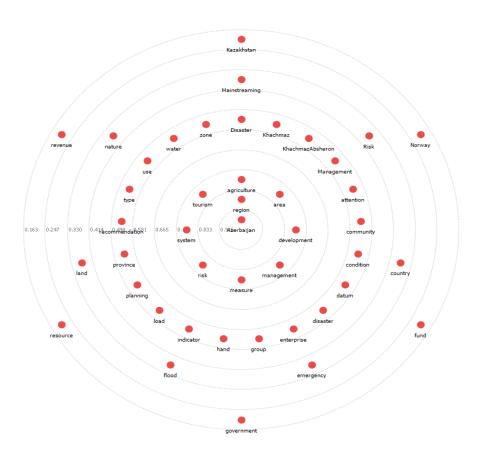


Figure 7 Concentric circle analysis result

Judging from the results of the analysis of concentric circles shown in Figure 7, Azerbaijan is lo cated at the very centre of the concentric circles, which is a natural result. Looking at the words located in the second centre we can see that it is *region*, and that the third centre contains *dev elopment, management, measure, risk, system, agriculture, tourism, measure*, etc. In terms of indu stry, it seems that there is a particular focus on agriculture, tourism and regional development, and the desire for systemic development is included.

On the other hand, for more precise analysis, the network structure can be checked using the PF net function of the Netminer program. As Figure 8 shows, the overall network structure is made up of several detailed structures.

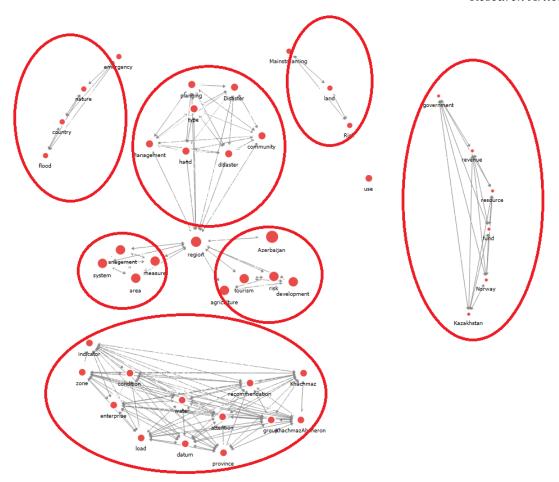


Figure 8 Core network structure derived by PFnet function (paper published in foreign jo urnals)

From the above network, it can be seen that issues such as the Government's tenant resources, d isaster management of local communities, fostering agriculture and tourism, systemic management, strengthening support for companies, and response to natural disasters are derived. In other word s, in the case of papers relating to the development of Azerbaijan published in foreign journals, it can be said that issues such as agriculture and tourism, government resource management, rein forcement of natural disaster response capabilities, and reinforcement of innovative support policie s for companies are emerging as important.

# 4.2 Decision tree analysis

In this section, decision tree analysis will be performed to understand how the public administrati on sector can address policy issues relating to the development of Azerbaijan as derived above. Decision tree analysis has the advantage of simply classifying the complex influence relationship of the independent variables that affect the dependent variable, and extracting the types that affect the dependent variables by combining various conditions of the variables. In order to perform de cision tree analysis, independent variables that are assumed to affect the dependent variable must be selected. If the indicators of public administration in developing countries develop well, it can be assumed that the per capita GDP of developing countries can be improved.

In addition, since the primary purpose of supporting developing countries is to improve the inco me levels of those countries (Koo et al., 2009; Lee et al., 2012; Alesina and Weder, 2002; Chang et al., 2019), it makes sense to set the dependent variable as the GDP per capita of deve

loping countries. When the dependent variable is set in this way, it is necessary to select independent variables in the public administration sector that are assumed to affect these dependent variables. Combining the results of several previous studies, in this study, rule of law, government effectiveness, control of corruption, regulatory quality, voices and accountability, political stability, corruption perception index, political right, civil liberty, eleven variables, are used (Chun et al., 2010; Busse and Groning, 2009; Dileman et al., 2019). Table 3 below shows the statistics of the variables used in this analysis (https://www.theglobaleconomy.com/)

Table 3 Independent variables: basic data

Indicator name (abbreviation)	Definition	Scale	Number of countries to be compared	Mini mum value	Maxi mum value	Mean	S.D.
rule of law (Ruleoflaw)	It refers to the degree of trust and compliance with various regulations in social life.	-2.5 weak, 2.5 strong	118	-1.85	1.08	0.4854	0.60946
government effectiveness (Govefeective)	It means the level of public service, the level of the civil service system, and the level of policy making and policy execution.	-2.5 weak, 2.5 strong	118	-2.28	1.00	0.4966	0.63842
corruption control (Controlofcorrpution)	It refers to the extent to which public power is exercised for private purposes.	-2.5 weak, 2.5 strong	118	-1.72	1.62	0.4887	0.62862
quality of regulation (Regulatory)	It refers to the ability of the government to formulate and enforce regulations or policies for the development of the private sector.	-2.5 weak, 2.5 strong	118	-2.35	1.12	0.4388	0.57697
voice and accountability (Voices)	The degree to which citizens participate in government choice, freedom of expression, and freedom of association.	-2.5 weak, 2.5 strong	118	-1.86	1.13	0.2928	0.77378
political stability (Polistability)	It refers to the possibility that the government will be destabilized by unconstitutional or violent means.	-2.5 weak, 2.5 strong	118	-2.77	1.20	0.3842	0.88541
Corruption Perception Index (CPI)	The degree of corruption in the public sector.	100 = no corruption	108	15.00	68.00	34.398 1	10.4532

Political Rights Index (Poliright1)	It refers to the electoral process, political pluralism and participation, and the adequacy of government functions.	7 (weak)–1 (strong)	118	1.00	7.00	4.0085	1.91037
civil liberties (Civilliberty1)	It refers to the degree of individual autonomy and protection of individual rights	7 (weak)–1 (strong)	118	1.00	7.00	4.1356	1.54652
ratio of female legislators (Women)	It means the percentage of female members of parliament in the National Assembly.	%	115	0.00	61.25	22.183	12.1784 6
refugee index (Refugee1)	It means forced migration to a foreign country due to social and political unrest.	0 (low)–10 (high)	109	0.00	8.00	4.3000	2.17792
GDP per capita	GDP per capita		118	261.2 5	17112. 82	4373.1 866	3681.93 391

Source: Excerpted from https://www.theglobaleconomy.com/

*Note.* For three variables, poligirht1, civilliberty1, refugee1, the higher the score, the more negati ve the meaning.

As a result of analysing the decision tree using the data (11 indicators) for the 142 countries rec eiving aid, the following decision tree was derived (Figure 9).

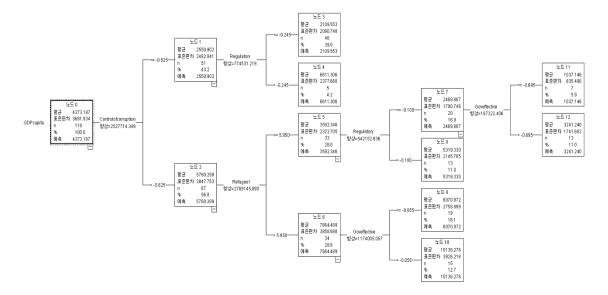


Figure 9 Decision tree structure

Looking at the above decision tree structure, we can see that all seven final nodes have been cr eated. The characteristics of each node are summarized in relation to public administration as sho wn in Table 4. As can be seen, Azerbaijan is included in Node 4. It can be seen that Node 4 includes all five countries. In other words, it can be said that countries included in the same nod

e have similar structures in terms of public administration. Table 4 characterizes seven nodes in t erms of the independent variables included in the analysis.

Table 4 Attributes by node

Node	Characteristics of node	Name of countries to be assisted
10	This node represents a group with an average GDP per capita of \$10,136, corruption control capacity higher than - 0.625, refugee index higher than 5.95, and government effectiveness higher than -0.055.	Ant. & Barb.; Costa Rica; Jamaica; Panama; Saint Lucia; Botswana; Mauritius; China; Kazakhstan; Malaysia; Fiji; Palau; Samoa; Tonga; Montenegro (15 countries)
4	This node has an average GDP per capita of \$6611, and the corruption control capacity is equal to or lower than -0.625, and the quality of regulation is higher than -0.245.	Domin. Rep.; Guatemala; Mexico; Paraguay; Azerbaijan (5 countries)
9	This node represents a group with an average GDP per capita of \$6070, corruption control capacity higher than - 0.625, refugee index higher than 5.95, and government effectiveness equal to or lower than -0.055.	Argentina; Belize; Brazil; Dominica; Grenada; Guyana; Peru; St. Vincent &; Suriname; S.T. & Principe; Tunisia; Maldives; Mongolia; Kiribati; Tuvalu; Vanuatu; Albania; Belarus; Moldova (19 countries)
8	This node has an average GDP per capita of \$5319.  It represents a group whose corruption control capacity is higher than 0.625, the refugee index is equal to or lower than 5.95, and the quality of regulation is higher than 0.1.	Colombia; El Salvador; Rwanda; South Africa; Armenia; Georgia; Indonesia; Jordan; Philippines; Thailand; North Macedonia; Serbia; Turkey (13 countries)
12	This node represents a group with an average GDP per capita of \$3241, corruption control capacity higher than -0.625, refugee index equal to or lower than 5.95, quality of regulation equal to or lower than -0.1, and government effectiveness higher than -0.695.	Ecuador; Algeria; Benin; Ethiopia; Ghana; Morocco; Namibia; Senegal; Bhutan; India; Sri Lanka; Vietnam; Bosnia & Herz (13 countries)
3	This node represents a group with an average GDP per capita of \$2109, corruption control capacity equal to or lower than -0.625, and regulatory quality lower than -0.245.	Bolivia; Haiti; Honduras; Nicaragua; Angola; Burundi; Cameroon; C.A. Republic; Chad; Comoros; DR Congo; Djibouti; Egypt; Eq. Guinea; Gabon; Guinea; GBissau; Kenya; Liberia; Libya; Madagascar; Malawi; Mali; Mauritania; Mozambique; Nigeria; Sudan; Togo; Uganda; Zambia; Zimbabwe; Afghanistan; Bangladesh; Myanmar; Cambodia; Iraq; Kyrgyzstan; Laos; Lebanon; Nepal; Pakistan; Tajikistan; Uzbekistan; Yemen; Papua N.G.; Ukraine (46 countries)
11	This node has a per capita GDP of	Burkina Faso; Gambia; Lesotho; Niger; Sierra

	\$1037, corruption control capacity hig	Leone; Tanzania; Solomon Isl. (7 countries)
	her than -0.625, refugee index equal	
	to or lower than 5.95, regulatory qual	
	ity equal to or lower than -0.1, and	
	government effectiveness lower than -	
	0.695.	
Total		118 countries

*Note.* Data for 142 countries were included, but countries with insufficient data were excluded fr om the final analysis.

The characteristics of the countries included in Node 4 are that the average per capita GDP is \$ 6,611, the corruption control capacity is lower than -0.625 (Z score), and the quality of regulation is higher than -0.245 (Z score). In other words, Azerbaijan's per capita GDP in 2019 was \$4,793. However, as a result of the decision tree analysis, it can be seen that Azerbaijan belongs to the group with an average GDP per capita of \$6,611. Assuming that the higher the income level, the higher the public administration sector index, it can be understood that the level of the public administration sector in Azerbaijan is relatively good compared to those of other countries with similar national characteristics. In the case of countries included in the node to which Azerbaijan belongs, above all, it appears that the ability to control corruption is insufficient. On the other hand, the quality of regulation in economic activities is shown to be relatively good.

In other words, there is a lot of room for strengthening the ability to control corruption in the p ublic administration sector. Corruption is an important variable that affects all areas of society. It has strong implications for Azerbaijan, in that a high level of governance can be established if the corruption problem is solved well, which in turn can lead to strengthening national competiti veness and accelerating economic development.

# 5. Conclusion

In the meantime, it can be said that not many academic studies on Azerbaijan have been conducted in Korea. Although Azerbaijan is far distant from Korea, it is an important oil-producing country, and at the same time has maintained economic relations with Korea for a long time and is a country that Korea has supported through ODA aid projects for a long time. In this respect, even if Azerbaijan is not included in the third (2021–5) of the Country Partnership Strategies that Korea regularly establishes, it is an important country in terms of receiving Korean aid. Nevert heless, not many academic and policy studies have been conducted on Azerbaijan.

Against this background, this study has tried to analyse the important issues regarding national d evelopment that Azerbaijan has recently had, and to ascertain how to support the country in the public administration field. The results of text mining analysis on Azerbaijan-related academic papers published in Korea, and Azerbaijani academic papers published in foreign journals, suggest t hat policy issues relating to tourism and agriculture, introduction of a new economic system, and corporate attraction are important. In addition, they suggest that it is important to strengthen Az erbaijan's ability to control corruption in order to support the country's public administration.

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