

# Central Asia's Trade Strategies and Korea-Central Asia Cooperation Plans

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## I. Introduction

The purpose of this research is to derive the future directions of the cooperation between Korea and Central Asia under the global uncertainty that is deepening with the competition and confrontation of major powers that cannot be easily resolved, and as the strategic value of economic security increases.

Our economy, which has scarce natural resources and relatively abundant high-quality human capital, has long relied on expanding markets through trade and increasing efficiency through resource allocation through the international division of labor as the basis for economic growth. Therefore, in the current era of increasing global economic uncertainty, which is difficult to predict, even slightly, it is even more urgent to establish a new external cooperation system that is appropriate to the times. Especially in the situation where the sanctions against the Russian economy are expected to be prolonged, the geographical value

of Central Asia, which connects Russia and Europe, becomes more prominent. In addition, given the rich natural resources and relatively young population structure of Central Asia, expanding cooperation with Central Asia has even more significant implications.

In this study, we classified the five Central Asian countries into three middle-income countries (Kazakhstan, Uzbekistan, Turkmenistan) and two low-income countries (Kyrgyzstan, Tajikistan) based on the similarities and differences revealed in the structural characteristics of each country's economy and the level of development. According to this classification, we analyzed the direction of cooperation in the digital, climate change, and health and medical sectors, which are currently in high demand for cooperation. This classification allows us to more systematically understand the growth issues that Central Asia's middle- and low-income countries need

to solve for sustained growth and to provide macro-level answers for the direction of cooperation between Korea and these countries.

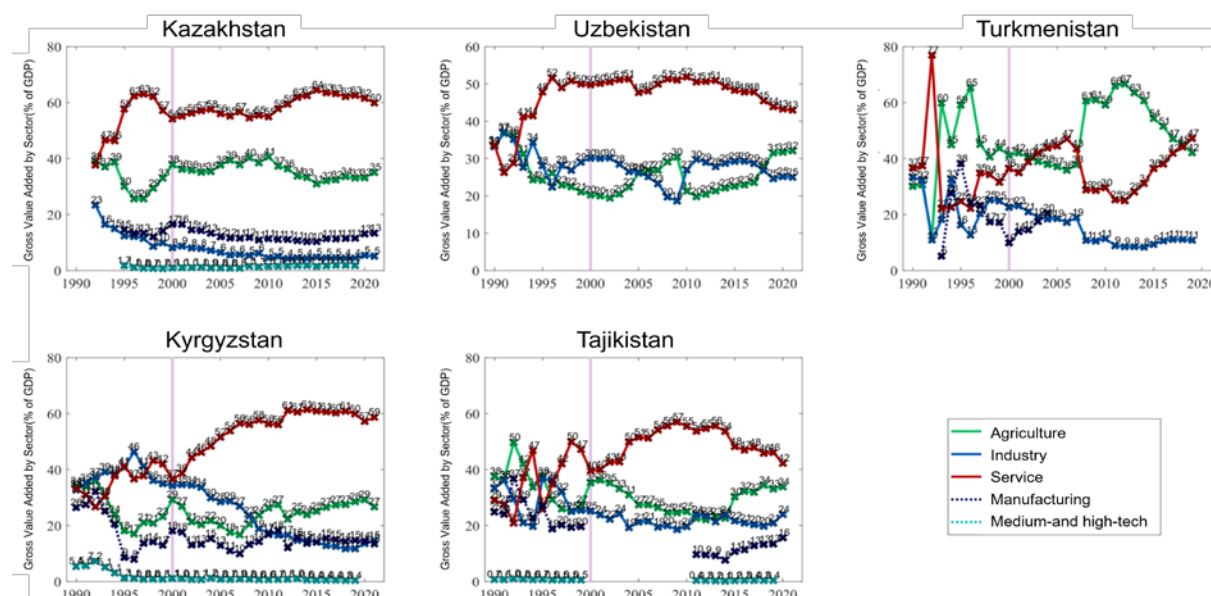
## II. Long-Term Growth Challenges for Central Asian Countries

The growth challenges of Kazakhstan, Uzbekistan, and Turkmenistan, the middle-income countries in Central Asia, can be summarized as diversification and industrial upgrading. Despite high growth, the development of medium- and high-value-added manufacturing industries, which play an essential role in productivity growth, is lagging. The delay in industrial structure transformation to medium- and high-value-added industries hinders the essential qualitative growth for the long-term growth of middle-income countries in Central Asia, which could lead to chronic

growth delay in the so-called "middle-income trap".

On the other hand, the growth challenges of Kyrgyzstan and Tajikistan, low-income countries in Central Asia, can be summarized as expanding industrial infrastructure through physical capital accumulation. It is necessary to rapidly expand physical capital to form industrial infrastructure. This makes it possible to embed labor in labor-intensive export goods such as food and clothing and sell them to overseas markets, instead of directly exporting labor to neighboring countries. To do this, it is necessary to build a domestic industrial infrastructure suitable for the country's stage of economic development by utilizing relatively abundant labor compared to neighboring countries.

Figure 1. Industrial Structure of Five Central Asian Countries



Source: World Development Index (<https://databank.worldbank.org/source/world-development-indicators>) and Statistics Agency under the President of the Republic of Uzbekistan (<https://stat.uz/ru/>).

### III. Directions for Cooperation in Digital, Climate Change, and Health and Medical Fields

Digital, climate change, and health and medical materials are the fields that have a significant impact on the continued growth of Central Asian countries, and cooperation in these fields also meets the needs of the current times. The direction of cooperation in each field was mainly derived from material cooperation related to physical capital and human resource cooperation related to human capital, and is as follows.

#### 1. Digital Cooperation

Each country's digital industrial development is generally correlated with its income level, and the government's digital transformation strategy is structured to align with industrial development. Specifically, middle-income countries such as Kazakhstan and Uzbekistan have a relatively well-established digital infrastructure, technology, and industrial bases compared to other countries. In contrast, considering various indicators announced by international institutions, Tajikistan, a low-income country, is perceived as having an overall poor digital environment. Considering these characteristics, the direction of digital cooperation with Korea can be broadly distinguished between middle-income and low-income countries.

In terms of material cooperation with Central Asian middle-income countries in their digital

transformation, it can be summarized as △constructing state-of-the-art broadband Internet networks △improving e-government △establishing production digitalization systems. Leveraging our advanced technology, we can qualitatively improve the already established 4G communication networks and introduce new 5G networks. Similarly, the efficiency of e-government can be enhanced by upgrading the existing e-government systems and increasing their use by the private sector. Introducing electronic systems such as ERP for business use and establishing private electronic payment systems can improve the overall economic productivity, which is necessary for the long-term growth of middle-income countries. In terms of human cooperation for digital transformation, it includes △training experts in AI, IoT, cloud computing, and big data △consulting on the introduction of solutions for smart cities, energy, and waste management △developing startup incubation programs, and sharing of operational know-how.

The direction of digital transformation cooperation with low-income countries in Central Asia reflects a relatively poor digital infrastructure environment. In terms of material cooperation, it can be summarized as △building 3G/4G broadband internet networks △building e-government systems △building production digitalization systems. Moreover, compared to middle-income countries with relatively active startup activities, there is a challenge in expecting extensive and proactive voluntary cooperation in the digital sector

from the private sector, which is not yet active. Therefore, the role of the government is relatively more crucial. In terms of human cooperation, △digital basic education △advice on cybersecurity systems and regulations are effective.

## 2. Climate Change Cooperation

Central Asia's position in responding to climate change varies. Not only is there diversity in available energy sources such as fossil fuels, hydropower, and wind power, but differences in economic development also influence the development of energy sources, power generation, and transmission and distribution infrastructure. However, similar to the direction of digital transformation collaboration, climate change cooperation can be broadly divided into middle-income countries and low-income countries.

First, concrete cooperation with middle-income countries on climate change can be summarized as follows: △diversification of energy sources △improvement of energy efficiency △decarbonization of the transportation sector. The development of environmentally friendly energy sources such as solar, wind, and hydrogen, and the exchange of relevant technologies are crucial. It is noteworthy that Kazakhstan aims to reduce its dependence on fossil fuel power generation by partially replacing it with nuclear power. Therefore, cooperation in the construction, maintenance, and operation of nuclear power plants is expected. In addition, with a well-established

manufacturing base, cooperation may extend to technology sectors for the export and local production of environmentally friendly vehicles, including electric and hydrogen vehicles. Given Kazakhstan's abundance of lithium-ion battery raw materials used in electric vehicle batteries, the establishment of a raw material supply chain for battery production is also promising.

On the other hand, in terms of human resource collaboration with middle-income countries on climate change, it is necessary to focus on △training engineers and specialists for environmental protection and improvement of resource productivity △training experts in renewable energy and energy storage △training programs for experts in energy efficiency that can be combined with ICT technology.

Cooperation with low-income countries in Central Asia should prioritize the strengthening of basic energy infrastructure. Opportunities for cooperation include the construction of small hydropower plants that can efficiently utilize the abundant hydropower in Kyrgyzstan and Tajikistan at relatively low cost. Urgent measures are also needed to △expand the capacity of existing power generation plants △enhance and expand power infrastructure, such as transmission and distribution, to increase energy efficiency.

### 3. Health and Medical Cooperation

There are significant differences in key health and medical indicators between low-income and middle-income Central Asian countries. In Particular, in quantitative terms, health and medical expenditures and investments are relatively lower in low-income Central Asian countries than in middle-income countries. There are also significant differences in key health indicators, suggesting that the basic health and medical environment in low-income Central Asian countries is inferior to that in Kazakhstan and Uzbekistan. On the other hand, commonalities among Central Asian countries include low levels of medical and pharmaceutical technology and significant disparities in access to healthcare between urban and rural areas.

Based on these characteristics, the direction of health and medical supplies cooperation with Central Asian middle-income countries includes △advanced cooperation in the medical and pharmaceutical sectors △development of digital healthcare systems. In relatively developed Kazakhstan and Uzbekistan, the recent rapid growth of the pharmaceutical and medical equipment markets suggests immediate potential for private sector cooperation. In particular, there is a high demand for diagnostic imaging equipment, cardiovascular devices, surgical equipment, and diabetes management devices, suggesting opportunities for export and joint local production of such devices.

For countries with relatively high incomes and advanced technology such as Kazakhstan and Uzbekistan, which have shown a strong will to develop advanced pharmaceutical and medical device sectors and to collaborate with Korea, it is necessary to develop cooperation models that take into account the entry and expansion of Korean companies and technologies. This requires simultaneous exploration of channels to address institutional aspects such as healthcare systems, trade and technology barriers, and quarantine regulations. In addition, with a well-established digital infrastructure in Kazakhstan and Uzbekistan, improving access to healthcare through the expansion of digital healthcare systems is a key objective in the health and medical sector development strategy. Additionally, wireless and mobile medical services, remote healthcare, and similar initiatives are expected to help alleviate problems of access to healthcare in remote and vulnerable areas.

In terms of physical capital, there is an urgent need for low-income Central Asian countries to improve basic health and medical infrastructure. Priorities include △improving public health and primary care △improving hospital systems and expanding ambulance services. The challenge is that these services are difficult for the market to provide voluntarily. It is therefore crucial to respond through development cooperation, such as ODA, rather than relying on private cooperation through the market. Kyrgyzstan has already been identified as a priority cooperation partner, with a significant portion of development



assistance going to building hospitals and expanding public health infrastructure. Tajikistan, presumed to have a similar environment in health and medical aspects, is also designated as a priority cooperation partner, highlighting the urgent need for development cooperation in this sector.

As mentioned above, Central Asian low-income countries need to effectively utilize their abundant labor force for economic development. However, due to the poor health and medical environment in low-income countries, there is an urgent need for improvement to prevent the deterioration of the quality of the workforce (reduction in labor productivity), which could hinder economic development.

Finally, as a means of personnel exchange cooperation, it is necessary to develop a plan for personnel exchange that includes the transfer of managerial skills, including hospital management and sector-specific administrative expertise. During a KOICA training program in August-September 2022, medical professionals from Tajikistan expressed a desire to test and learn from Korea's modernized medical facilities, equipment, and systems with efficiency and expertise. Therefore, it is necessary

to consider a tailored approach to transfer medical technology and management expertise to each of the five Central Asian countries.

## IV. Policy Implications

There were significant differences in the demand for cooperation among the low- and middle-income countries of Central Asia in all three fields mentioned above. This is because the overall cooperation environment, including digital industry technology, infrastructure, and laws and regulations; energy and power infrastructure; and health and medical infrastructure and technology, varies depending on the level of each country's economic development. The direction of cooperation with Central Asian middle-income countries can be summarized as the need for state-of-the-art technology, infrastructure, and industrial cooperation in all three areas mentioned above, along with higher-level professional and engineering exchange and transfer of managerial skills in terms of people-to-people exchange. On the other hand, cooperation related to primary infrastructure development was found to be most necessary for low-income countries in terms of material exchange and effective in terms of growth. **KIEP**

## References

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