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Technological Cooperation in the Industrial and Agricultural Sectors between Iran and Afghanistan

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ABSTRACT

Technological cooperation in the industrial and agricultural sectors between Iran and Afghanistan, as two neighboring countries with a shared history and culture, can play a significant role in the economic and social development of both countries. However, challenges such as political and security problems, cultural and social barriers, and the lack of adequate infrastructure may hinder the realization of such cooperation. Using a descriptive-analytical method, this study presents proposed solutions for strengthening diplomatic and economic relations, establishing legal and regulatory frameworks, and utilizing regional and international capacities. The findings indicate that Iran, as a country with advanced technology in industry and agriculture, can contribute to improving agricultural and industrial production and processing in Afghanistan through the transfer of technology and technical knowledge. Moreover, research and development cooperation between universities and research centers in the two countries can lead to the creation of joint projects and technological innovations. The results of this study demonstrate that technological cooperation can increase productivity, create employment, and promote sustainable development in both countries, ultimately contributing to an improved quality of life for the people of the region.

Keywords: technological cooperation, industrial sector, agricultural sector, economic development, Iran, Afghanistan

Introduction

Technological cooperation in the industrial and agricultural sectors between Iran and Afghanistan, as two neighboring countries with a shared history and culture, is of particular importance. Such cooperation can not only contribute to the economic and social development of both countries but also lead to the strengthening of political and cultural relations between the two nations. Given the economic and social challenges faced by both countries, the utilization of modern technologies and the creation of cooperative frameworks can be considered an effective strategy for improving the current situation. Iran, as a country with advanced industrial and agricultural infrastructure, possesses experiences and technologies that can assist Afghanistan in various fields. On the other hand, Afghanistan, with rich natural resources and a young labor force, has high potential to benefit from these technologies. Therefore, establishing communication bridges and cooperation in research and development,



technology transfer, and joint production can lead to increased productivity and economic growth in both countries. Nevertheless, challenges such as political, security, and cultural problems may hinder the realization of these goals. Addressing these challenges requires a comprehensive and multilateral approach that includes strengthening diplomatic relations, creating appropriate legal and regulatory frameworks, and utilizing regional and international capacities. This article examines the current state of industry and agriculture in Iran and Afghanistan, the areas of technological cooperation, and the existing advantages and challenges in this regard. It is hoped that the findings of this study will assist decision-makers and policymakers in adopting appropriate strategies to create the groundwork for effective and sustainable cooperation and to achieve the joint development of both countries.

The Current State of Industry and Agriculture in Iran and Afghanistan

The State of Industry and Agriculture in Iran

In the Iranian economy, the notion of an inherent conflict between the agricultural and industrial sectors, particularly under current conditions, is not applicable. The real conflict exists between the productive economic sectors, including agriculture, industry, and services, on the one hand, and speculative, monetary, and urban commercial activities on the other. This imbalance requires special attention and policy measures in order to achieve synergy and effective cooperation among productive sectors. Unfortunately, the level of support for the agricultural sector in Iran, compared to developed countries and even some developing countries, is not satisfactory. The performance related to the allocation and absorption of credit is significantly lower than the approved levels, and rural development credits and agricultural research budgets are notably limited. Addressing these shortcomings and increasing investment, support, and credit will only be possible through the establishment of a development-oriented process, the elimination of unproductive activities, and a stronger focus on rural development (1).

In general, the agricultural and industrial sectors, due to their mutual dependence, constitute inseparable components of the development process in developing countries (2). This interdependence varies according to spatial and temporal conditions and has undergone significant changes over time. Theoretical and empirical studies have examined the mutual relationship between these two sectors from various perspectives. This relationship can be observed through two channels: the demand side and the supply (production) side. Supply-side dependence arises from the reliance of one sector on the production inputs of the other, while the dependence of final consumption in one sector on the other reflects demand-side linkages (3).

From the author's perspective, in the year 2025, despite various sanctions, Iran's industry and agriculture continue to face multiple challenges. In the industrial sector, efforts to develop technology and increase domestic production persist, yet dependence on imported raw materials and equipment remains one of the main obstacles. In the agricultural sector, climate change and water scarcity have created serious problems; however, progress can be observed in the use of modern technologies and improvements in productivity. Furthermore, government policies aimed at supporting domestic producers and creating export markets can play a significant role in the growth of these two sectors.

The State of Industry and Agriculture in Afghanistan

Industry and agriculture in Afghanistan face distinct challenges and opportunities. Agriculture, as one of the country's primary economic sectors, plays a significant role in sustaining livelihoods, with products such as saffron,

wheat, and fresh and dried fruits among its major outputs. Nevertheless, inadequate infrastructure, water shortages, and reliance on traditional methods are among the major challenges confronting this sector. In the industrial domain, Afghanistan remains at an early stage of development, with most activities concentrated in small and medium-sized enterprises. Insecurity, limited investment, and heavy dependence on imports are among the main barriers to industrial growth.

The agricultural sector, accounting for approximately 20 percent of gross domestic product and 45 percent of employment, is the most important economic sector in Afghanistan for reducing poverty and unemployment and improving food security. Accordingly, it is expected that growth in the agricultural sector will also influence other economic sectors (4).

Areas of Technological Cooperation

Technological cooperation in the agricultural industry between Iran and Afghanistan can lead to sustainable development and increased productivity in both countries. Considering the existing potentials, such cooperation can contribute to improving economic and social conditions in the region, which will be examined below across various dimensions.

Technology Transfer and Technical Knowledge

The agricultural sector, as one of the key pillars of Afghanistan's economy, requires special attention and careful planning to achieve sustainable development. Given that more than 75 percent of Afghanistan's population lives in rural areas and depends on agricultural production, improving the condition of this sector can have profound effects on livelihoods and food security. In recent years, Afghanistan has faced numerous challenges, including infrastructure destruction due to war and political instability. These challenges have led to reduced agricultural production and increased poverty in rural areas.

Afghanistan possesses significant natural and human potential in agriculture. The country's climatic and geographical diversity allows for the cultivation of a wide range of crops. For example, mountainous regions are suitable for fruit and medicinal plant cultivation, while plains and lowland areas are appropriate for cereals and other agricultural products. In addition, the existence of local knowledge and experience among Afghan farmers can be utilized as an advantage in development projects. Despite existing difficulties, Afghan farmers have consistently relied on traditional methods and accumulated experience to sustain agricultural production.

However, numerous obstacles hinder agricultural development in Afghanistan. One of the most significant barriers is inadequate infrastructure. The destruction of infrastructure, particularly in irrigation, transportation, and storage, has severely affected agricultural production and distribution. Moreover, limited access to domestic and international markets and the absence of efficient supply chains have created serious challenges for marketing agricultural products. These issues have prevented Afghan farmers from effectively benefiting from their production and have consequently reduced their incomes (5).

In this context, technological cooperation with countries such as Iran can serve as an effective solution for improving Afghanistan's agricultural sector. Iran, as a neighboring country with advanced experience and technologies in agriculture, can play a significant role in transferring technical knowledge and modern technologies to Afghanistan. Such cooperation may include the introduction of modern irrigation systems, improvements in cultivation practices, and enhanced water resource management. Additionally, organizing training programs for

Afghan farmers conducted by Iranian specialists can contribute to upgrading technical and managerial knowledge in this sector.

The expected outcomes of these cooperative efforts include increased agricultural production, improved product quality, and ultimately enhanced livelihoods for farmers. By improving agricultural techniques and utilizing modern technologies, agricultural output is likely to increase, enabling farmers to achieve higher incomes. Furthermore, emphasizing sustainable agricultural practices can contribute to the conservation of natural resources and improvements in environmental conditions. Overall, prioritizing the agricultural sector and planning for its growth in Afghanistan can be considered a fundamental element of the country's development policies. Given the population's high dependence on agriculture and the sector's existing potential, agriculture can serve as a primary driver of sustainable development and improved economic and social conditions in Afghanistan.

Cooperation in Research and Development

Technological cooperation in the agricultural sector between Iran and Afghanistan can be regarded as an effective approach to improving agricultural conditions in both countries. One of the key dimensions of such cooperation is research and development (R&D) (6), which can contribute to identifying and addressing existing challenges in the agricultural sector. Given Iran's experiences in agriculture and the presence of reputable research centers and universities, Iran can serve as a model for Afghanistan and play an effective role in transferring knowledge and technology to this country.

Research Centers and Universities

Iran has numerous research centers active in the field of agriculture, and leveraging knowledge and technology for agricultural development requires strengthening the capacities for agricultural research, development, and technological advancement (7). These centers can, in collaboration with universities and educational institutions in Afghanistan, initiate joint research projects. Such projects may focus on studying modern agricultural practices, optimizing water consumption, producing crops resistant to diseases and pests, and improving soil quality. In addition, by organizing training courses and practical workshops for Afghan researchers and students, it is possible to facilitate the transfer of knowledge and hands-on experience.

Joint Research Projects

Developing joint research projects can help identify Afghanistan's specific agricultural needs and challenges. These projects may include assessing the effects of climate change on agriculture, developing sustainable cultivation systems, and examining modern irrigation methods (8). Through cooperation in this area, researchers from both countries can exchange information and experience and propose effective solutions to improve agricultural conditions in Afghanistan.

Strengthening Research Infrastructure

For these collaborations to succeed, Afghanistan's research infrastructure must also be strengthened. This includes equipping laboratories, establishing new research centers, and raising the scientific capacity of universities. Iran can assist Afghanistan in this regard through consultation and financial support. Moreover, building

cooperation networks between the research institutions of the two countries can facilitate the exchange of knowledge and experience and create an appropriate platform for joint research. Ultimately, technological cooperation in the agricultural sector between Iran and Afghanistan can be considered a strategic opportunity for both countries. By focusing on research and development and launching joint projects, Afghanistan's agricultural conditions can be improved while benefiting from Iran's advanced experiences and technologies. Such cooperation not only contributes to increasing productivity and agricultural output (9), but can also promote sustainable development and improve economic and social conditions in both countries.

Cooperation in the Production and Processing of Products

Cooperation in the production and processing of agricultural products between Iran and Afghanistan can be considered a key strategy for improving economic conditions and increasing productivity in both countries, particularly because agriculture is one of Afghanistan's most important economic sectors. In terms of employment generation, income, contribution to gross domestic product, meeting consumption needs, and earning foreign exchange, agriculture holds a strong position in Afghanistan's economy (10). Given Afghanistan's high agricultural capacity and Iran's experience in agro-processing industries, such cooperation can contribute to supply-chain development and the enhancement of agricultural product quality. Cooperation in agricultural production and processing between Iran and Afghanistan can be viewed as a highly suitable opportunity for both countries. By focusing on agro-processing industries and supply-chain development, it is possible to improve product quality and increase value added. These collaborations not only support economic growth and improve the livelihoods of Afghan farmers, but can also strengthen trade and economic relations between the two countries.

Advantages and Challenges of Cooperation

Advantages of Technological Cooperation

Technological cooperation in the agricultural sector between Iran and Afghanistan can function as an effective tool for enhancing economic and social conditions in both countries. Such cooperation not only helps increase productivity in agriculture and industry, but can also lead to job creation and broader economic development.

Increasing Productivity in Agriculture and Industry

One of the most important advantages of technological cooperation is increased productivity in the agricultural sector and related industries. Through technology transfer and the adoption of modern cultivation and production methods, Afghan farmers can improve both the quality and quantity of their products. Given the conditions of the agricultural sector, access to essential services for stakeholders must be facilitated. Moreover, strengthening research and extension linkages through integrated approaches—so that achievements and practical applications can be disseminated to users—is necessary, and these measures can generate positive outcomes for agricultural development (11).

For example:

A) **Use of modern irrigation technologies:** By introducing drip and sprinkler irrigation systems, water consumption can be optimized and agricultural production can be increased. In this context, modern irrigation

technologies and management-oriented programs are central to reducing water consumption and improving agricultural water governance (12).

B) Improving cultivation methods: The use of resistant seeds and modern agricultural techniques can contribute to higher crop yields.

C) Increasing efficiency in processing: By applying advanced technologies in agro-processing industries, greater value added can be generated from agricultural products.

These changes not only increase output and improve product quality, but can also reduce waste and enhance resource management.

Job Creation and Economic Development

Technological cooperation in the agricultural sector can contribute to job creation and economic development in Afghanistan. By improving infrastructure and establishing agro-processing industries, new employment opportunities can be created for young people and farmers. Some of these benefits include:

A) Direct job creation: Establishing processing plants and agro-processing industries requires labor, which can help reduce unemployment.

B) Indirect job creation: With supply-chain and distribution development, new jobs will also emerge in transportation, packaging, and marketing.

C) Strengthening the local economy: Increased production and processing can strengthen local economies and raise household incomes. In this regard, investing in agricultural infrastructure, training and promoting modern agricultural technologies, and creating suitable marketing channels are among the measures that can reinforce the role of agricultural economics in rural development. In addition, supportive government policies for agriculture—especially in less advantaged regions—can facilitate these outcomes (13).

Overall, technological cooperation in the agricultural sector between Iran and Afghanistan can be considered a strategic opportunity for both countries. By increasing productivity and creating employment, these collaborations can support Afghanistan's economic and social development (14) and improve living conditions in the region. Therefore, investment in such cooperation should be treated as a priority within the development policies of both countries.

Challenges and Barriers

Despite their many advantages, technological collaborations in the industrial and agricultural sectors between Iran and Afghanistan also face numerous challenges and barriers. These challenges can significantly affect the success of such cooperation. The following section reviews some of the major obstacles.

Political and Security Problems

One of the most serious challenges to technological cooperation is the presence of political and security problems. These problems may include the following:

A) Political instability: Frequent changes in government and political volatility in Afghanistan can create uncertainty for Iranian investors and companies (15). This uncertainty may hinder the inflow of technology and the investments required for cooperation.

B) **Security threats:** The presence of terrorist groups and internal unrest can pose security risks for Iranian investors and technical experts, thereby undermining technological cooperation (16).

C) **Diplomatic relations:** Political tensions between the two countries may negatively affect trade relations and technological cooperation and may prevent the conclusion of necessary agreements.

Cultural and Social Barriers

Cultural and social obstacles can also constitute major challenges to technological cooperation:

A) **Cultural differences:** Socio-cultural differences between the two countries may lead to misunderstandings and a lack of mutual comprehension, which can affect scientific and research cooperation.

B) **Traditional attitudes and beliefs:** In some regions of Afghanistan, traditional attitudes and resistance to modern change may impede the acceptance of new technologies and modern agricultural methods.

C) **Lack of awareness:** Limited awareness and knowledge of modern technologies and their benefits among Afghan farmers and producers may result in weak adoption. For example, in many parts of the world, including Iran, excessive use of chemical inputs to achieve higher yields has increased production costs while degrading soil, water, and biological resources. The seriousness of environmental degradation resulting from improper practices has drawn expert attention to ecologically sound and sustainable farming systems. Addressing the many issues associated with sustainable agricultural production and reducing adverse environmental impacts requires careful planning, a multi-systems approach, and collective cooperation (17).

Lack of Adequate Infrastructure

The lack of adequate infrastructure in the industrial and agricultural domains is one of the most important barriers to technological cooperation and sustainable development between Iran and Afghanistan. In Afghanistan, shortages of essential infrastructure such as roads, transport networks, storage facilities, and modern irrigation systems reduce the efficiency of agricultural and industrial production (18). In addition, limited access to high-speed internet and well-equipped research centers obstructs the transfer of modern technologies and the adoption of advanced methods in agriculture and industry. These infrastructural deficiencies not only negatively affect product quality, but also discourage investors and specialists from entering the Afghan market, thereby restricting international cooperation in this field.

The absence of adequate infrastructure is also reflected in several key dimensions:

A) **Technical and technological infrastructure:** Many regions of Afghanistan lack the necessary infrastructure to adopt and utilize modern technologies, including high-speed internet access, research centers, and equipped laboratories.

B) **Transportation infrastructure:** Weak transportation and logistics infrastructure can lead to difficulties in product distribution and technology transfer. This can raise operating costs and reduce supply-chain efficiency.

C) **Limited financial resources:** Insufficient access to financial resources for investing in technological projects and infrastructure development constitutes a major barrier to cooperation (19).

Ultimately, the existing challenges and barriers to technological cooperation in the industrial and agricultural sectors between Iran and Afghanistan require careful attention and strategic planning. By identifying and managing these challenges, it becomes possible to establish effective and sustainable cooperation in this domain. Creating

enabling frameworks, strengthening diplomatic relations, and improving cultural and social awareness can facilitate such cooperation and contribute to sustainable economic and social development in both countries.

Proposed Strategies

Enhancing technological cooperation in the industrial and agricultural sectors between Iran and Afghanistan requires comprehensive and effective strategies. Such strategies can facilitate and improve the conditions of cooperation. The following key strategies are proposed.

Strengthening Diplomatic and Trade Relations

In strengthening diplomatic and trade relations, the following measures can be considered:

A) **Establishing cooperation agreements:** Signing formal agreements on technological cooperation can facilitate the cooperation process and provide the necessary legal frameworks (8).

B) **Holding trade meetings:** Organizing joint meetings and conferences between officials and business communities in both countries can help identify opportunities and challenges and enable effective networking.

Technology Transfer and Technical Knowledge

In the area of technology transfer and technical knowledge, the following measures are relevant:

A) **Developing knowledge-exchange programs:** Organizing training courses and practical workshops for Afghan farmers and producers by Iranian specialists can enhance technical knowledge and essential skills.

B) **Establishing joint research centers:** Creating joint research centers for applied research in agriculture and agro-processing industries can contribute to improving processes and outputs (20).

Investment in Infrastructure

In the area of infrastructure investment, the following measures may be pursued:

A) **Developing transport and logistics infrastructure:** Investment in improving transport and logistics infrastructure can facilitate product distribution and technology transfer.

B) **Establishing technical infrastructure:** Building technology centers and well-equipped laboratories in Afghanistan can support the adoption of modern technologies and improve production quality.

Supporting the Private Sector and Entrepreneurship

In supporting the private sector and entrepreneurship, the following measures can be emphasized:

A) **Encouraging private investment:** Providing financial incentives and banking facilities to Iranian investors for investing in Afghanistan can contribute to job creation and economic development (21).

B) **Supporting startups:** Establishing support programs for startups active in agriculture and modern technologies can stimulate innovation and sectoral growth.

Strengthening Public and Cultural Awareness

In strengthening public and cultural awareness, the following measures can be adopted:

A) **Conducting educational campaigns:** Running educational campaigns on the benefits of modern technologies and modern agricultural methods can increase awareness among Afghan farmers and producers.

B) **Promoting a culture of cooperation:** Designing cultural and social programs to strengthen people-to-people relations can reduce cultural and social barriers.

Establishing Regional Cooperation Networks

In establishing regional cooperation networks, the following measures are suggested:

A) **Forming regional unions:** Establishing regional unions and institutions for cooperation in agriculture and agro-processing industries can support the sharing of resources and experiences.

B) **Cooperation with neighboring countries:** Developing joint cooperation with neighboring countries in agriculture and agro-processing industries can strengthen supply chains and expand export markets (22).

By implementing these strategies, technological cooperation in the industrial and agricultural sectors between Iran and Afghanistan can be enhanced and developed. Such cooperation will not only increase productivity and product quality, but can also contribute to job creation and sustainable economic development in both countries. Considering the latent capacities of both countries, technological cooperation can be regarded as a strategic opportunity to improve their economic and social conditions.

Conclusion

Given the current state of industry and agriculture in Iran and Afghanistan, technological cooperation between the two countries can pave the way for significant progress. Iran, with its more advanced industrial infrastructure and experience in modern agriculture, can transfer its knowledge and technologies to Afghanistan. On the other hand, Afghanistan, endowed with rich natural resources and extensive agricultural land, can provide a suitable platform for the effective utilization of these technologies. In the realm of technological cooperation, areas such as the transfer of modern agricultural technologies—including smart irrigation systems, improved seed varieties, and advanced cultivation methods—deserve particular attention. Similarly, in the industrial sector, cooperation in the production of agricultural machinery, industrial equipment, and even technologies related to renewable energy can be pursued. Among the key advantages of such cooperation are increased productivity in agriculture and industry, the creation of new employment opportunities, reduced dependence on imports, and the strengthening of economic and political relations between the two countries. Nevertheless, certain challenges remain, including cultural differences, financial and infrastructural constraints, and security issues in some regions. Through effective management of these challenges and optimal use of existing potentials, technological cooperation between Iran and Afghanistan can make a substantial contribution to the sustainable development of both countries.

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Authors' Contributions

All authors equally contributed to this study.

Declaration of Interest

The authors of this article declared no conflict of interest.

Ethical Considerations

All ethical principles were adhered in conducting and writing this article.

Transparency of Data

In accordance with the principles of transparency and open research, we declare that all data and materials used in this study are available upon request.

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References

1. Shakeri A. The position of agricultural sector in the country's economic development process. 2004;12(48).
2. Saikia D. Trends in agriculture-industry interlinkages in India: pre and post-reform scenario. MPRA Paper No. 31204; 2010.
3. Paytakhti Oskoue SA. Interrelationship between agriculture, industry, and service sectors in the Iranian economy: A Bayesian Vector Autoregression (BVAR) approach. *Journal of Applied Economics*. 2023;12(42).
4. Nikzad M, Hosseini SS, Salami H, Chizari A, Ahadi A. Analysis of spatial correlation of agricultural and non-agricultural sector growth in agro-economic regions of Afghanistan. *Agricultural Economics (Economics and Agriculture)*. 2020;14(4).
5. Golmohammadi F, Nemati M, Nurmohammadi S, editors. Afghanistan and Iran's regional position in its security and sustainable development of agriculture and tourism (Farah border province and its students studying in South Khorasan universities). 6th International Congress on Development of Agriculture, Natural Resources, Environment, and Tourism of Iran; 2023.
6. Ziaei Z, Sardar Shahraki A, Safdari M. Formulating strategies for developing water cooperation between Iran and Afghanistan. *Scientific-Research Journal of Irrigation and Water Engineering of Iran*. 2024;13(13).
7. Sharifzadeh A. Identifying the current and desirable position of various stakeholders in the national agricultural research system. *Journal of Science and Technology Policy*. 2011;4(1).
8. Sinaei V, Jamali J. Economic diplomacy of the Islamic Republic of Iran in Afghanistan and management of the two countries' water disputes (Applying the institutional economics approach). *Strategic Studies of Public Policy Quarterly*. 2018;8(28).
9. Byerlee D. The Search for a New Paradigm for the Development of National Agricultural Research Systems. *World Development*. 1998;26(6). doi: 10.1016/S0305-750X(98)00037-0.
10. Shah Moghadam C, editor Examining factors effective on the development of Afghanistan's agricultural exports to other ECO member countries. 7th Annual International Congress on Development of Agriculture, Natural Resources, Environment, and Tourism of Iran; 2024.
11. Karami Dehkordi E, Pezeshki Rad G, Sedighi H. Attitudes of agricultural researchers towards participation with extension workers and farmers. *Journal of Agricultural Economics and Development*. 2000(29).
12. Talebzadeh O, Hassan-Nejad Divkolaei H, editors. Modern irrigation technologies and plans in reducing water consumption and management in agriculture. 4th National Conference on Knowledge and Technology of Agricultural Sciences, Natural Resources, and Environment of Iran; 2019.
13. Divjan H, Divjan Z, Mohammadifar F, editors. The role of agricultural economics in rural development. 9th International Conference on Environmental Sciences, Agriculture, Natural Resources, and Food Industries; 2024.
14. Helpman E, Krugman P. Market structure and Foreign Trade. Cambridge, MA: MIT Press; 1985.

15. Pouya M. Investigating the consequences of instability in Afghanistan on political, social, economic, and cultural issues of Sistan and Baluchestan Province. *Scientific-Research Journal of Geography (Regional Planning)*. 2019;9(3).
16. Rostami A, Partovi MT, Zarrinkolah H. Security factors effective in the emergence of hybrid warfare by terrorist groups in West Asia. *Scientific Journal of War Studies*. 2021;3(9).
17. Farahbakhsh AN, editor Sustainability in agriculture and new technologies. *International R&D Centers Conference (Globalization of R&D)*; 2007.
18. Abtahi SE, Kardoost AA, Sedaghat Shayegan D. Providing an evaluation and risk management model for water and wastewater infrastructure with a passive defense approach (Case study: A border province). *Journal of Water and Sustainable Development*. 2024;10(4).
19. Tehran Regional Water C. Pathology of the reasons for lack of interest among domestic investors in financing and implementing water resource projects. *Sharif University of Technology*, 2021.
20. Shahebrahimi SS, Lork A, Sedaghat Shayegan D. Knowledge Management to Investigate The Failure Factors in Managing of Gas and Oil Industry Transmission Lines Projected. *Iran University of Science & Technology*. 2022;12(2):215-33.
21. Kelich S, Kadkhodaei A, editors. The necessity of strengthening the private sector in agriculture and its role in entrepreneurship and job creation. *National Conference on Entrepreneurship and Knowledge-Based Business Management*; 2012.
22. Mashhadi Haji-Ali F, Alvani SM, Kameli SJ, Memarzadeh Tehran G. Designing an effective knowledge collaboration network model in research organizations (Case study: Defense Industries Research Institute of I.R. Iran). *Journal of Amad Thought*. 2020;19(74).