THE IMPROVEMENT OF CLUSTER SYSTEM IN SERICULTURE IN UZBEKISTAN

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Abstract: *The article is stated the implementation of comprehensive investment projects for development of silk industry in our country. Therefore, studied conception of «cluster», and its essential features. In addition, analyzed international experience of countries that have created clustering from various industries. Considered questions improvement of cluster system in sericulture and methods of ensuring necessary conditions.*

Key words: *Reconstruction and modernization of enterprises, attracting foreign investors, investment projects, modern methods in sericulture, cluster, the concept of cluster, geographic territory, group of firms, complementary companies, group of institutes, technological chain, clusterization on different industry, increasing and its competitiveness.*

INTRODUCTION

Nowadays, sericulture plays an essential role in economic development of the Republic of Uzbekistan. Uzbekistan is one of the leading silk producers in the world. Certainly, this is connected with presence raw materials resource. Especially, sericulture develops economies by generating employment, incomes as well as foreign exchange.

As we know, if we pay attention to a history of sericulture. Sericulture is both an art and science of raising silkworms for silk production. Silk as a weavable fibre was first discovered by the Chinese during 2640 B.C. and its culture and weaving was a guarded secret for more than 2,500 years by the Chinese. Silk was a profitable trade commodity in China. Being a rural and agro based industry, the production and weaving of silk are largely carried out by relatively poor sections of the society and this aspect of sericulture has made it popular and sustainable in countries like China and India [1].

The major activities of sericulture comprises of food-plant cultivation to feed the silkworms which spin silk cocoons and reeling the cocoons for unwinding the silk filament for value added benefits such as processing and weaving. We should mention that silk has been found to be effective as impenetrable clothing against insect bites. Traditional uses for silk, ranging from royal wardrobes to silk bedding, have branched out further into many brand new commercial and industrial applications. For instance, some of these uses are in the electronic industry as insulation coils for wireless receivers and telephones. Medical uses include suture materials and medical dressings. In the automotive industry, silk is also used as component for tires. Military use includes parachutes and artillery gunpowder bags. More modern uses have incorporated silk into the manufacture of holograms and

drug delivery systems. From the extraordinary to the ordinary, silk has become an essential component, and is even used in the manufacture of disposable cups.

LITERATURE REVIEW

In this article is used the laws of the Republic of Uzbekistan, the resolution of the President of the Republic of Uzbekistan, as well as the theoretical foundations of clusters and its features. Analyzed scientific works and publications of the professors in the Commonwealth of Independent Countries. As a methodology of research, theoretical and practical analysis and observation methods were used. What is a cluster? Clusters have long been part of the economic landscape with geographic concentrations of trades and companies in particular industries dating back for centuries. The intellectual antecedents of clusters date back at least to Alfred Marshall (1890/1920), who included a fascinating chapter on the externalities of specialized industrial locations in his “Principles of Economics” [3].

Therefore, knowledge about cluster theory has advanced on the publication of the Competitive Advantage of Nations by Michael Porter who helped trigger a large and growing number of formal cluster initiatives in countries, states, cities, and even entire regions. As it is said above, the conception of "cluster" has been entered into the economic literature by Michael Porter according to his scientific research that cluster is the groups of the interconnected companies concentrated to a geographical attribute, specialized suppliers, suppliers of services, firms in corresponding branches, and also the organizations connected to their activity in certain areas competing, but at the same time leading teamwork.

Today, the word "cluster" is multiple-valued, uniform term. The clusters began to develop in the foreign countries, we may see a lot of scientific researches about theory of the cluster that belongs to foreign scientists. Firstly, we need to mention about a professor of the Harward Business School M. Porter, who considered theories about clusters. Secondly, in addition to the problems of functioning clusters are engaged by other foreign economic scientists S. Stern, M. Delgado, G. Lindvist, S. Silvell, A. Saxenian, T. Anderson, S. Schwaag, E. Bergman, E. Feser, Ch. Ketels, etc. On researches, these foreign scientists show that the laws and features of functioning cluster are enough described.

DATA COLLECTION

At the present time, in the Republic of Uzbekistan are carried out transition on cluster method on agricultural branches. The head of the state of our country has especially paid attention to step by step to proceed on cluster ‘s method on silk branches and the organizations of manufacture.

There is no doubt in a rich and powerful country demand for development of industry. The President of the Republic of Uzbekistan Shavkat Mirziyayev pay a attention to increase a silk products and signed a resolution "On Measures to Establish Activity of the Association of Uzbekipaksanoat" on March 29 in 2017 [2].According to resolution, in

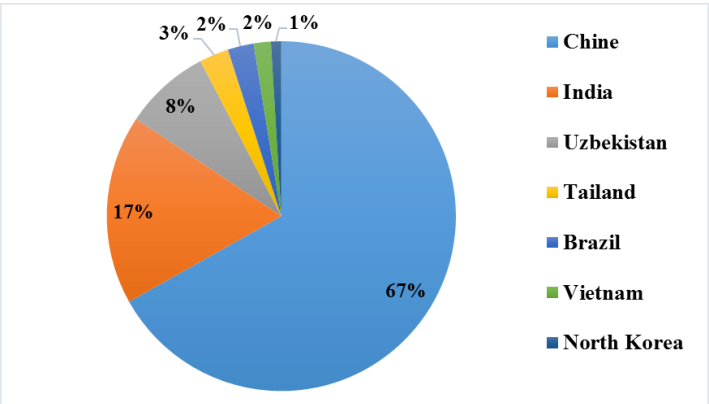
purpose of the ensuring the complex development to silk branch on base of the creation united full-fledged organizing-technological chain, directed on intensive development of the stern base, constant improvement of the processes bringing, stocking up cocoon silkworm, broad introducing the efficient methods production and deepened conversions cocoon silkworm, silk-product in its raw state, silk yarn, adjustment of the issue of the final products from silk, increase the export potential to branches, as well as increasing level to employment and income of the population in rural terrain.

During the short period of existence of the association, a significant increase in the export of silk products was achieved, as well as the expansion of its geography. For 2018, the Association “Uzpakipaksanoat” increased the volume of exports of silk products by 165 percent. According to the results of the first quarter of 2018, coconut processing enterprises produced industrial products worth 165 billion soums and consumer goods worth 19.7 billion soums, as well as 683.3 tons of natural silk, 1034 thousand meters. silk fabrics [8].

Today, government conducts a comprehensive investment policy in each branches, specially sets up production targets, this is one of the most important factors that ensure the sustainability of the country's economy.

Therefore, several years, President Sh. Mirziyoev adopted a number of resolutions relating to the silk industry of our country. Especially, on December 4, 2018, Resolution №.PP-4047 “On Additional Measures to Support the Accelerated Development of the Silk Industry in the Republic of Uzbekistan” was issued [3]. Investments policy is also directly related to technological, organizational and social processes in the silk industry. investment projects is directed in processing of cocoon raw materials, creation of new production capacities in regions where silk production is not available. In 2020, total investments amount of 50.7 mln. $ was attracted which 20.4 mln. $ was invested from foreign investment.

As we know, the major silk producing countries in the world are; China, India, Uzbekistan, Thailand, Brazil, Vietnam and DPR Korea. We give the following diagram which shows the top seven of the world’s most productive in silk production [10].



Pic.1. World leaders in Silk production

In turn, people coveted these luxury fabric as it was the most lucrative item traded along the Silk Road. This added to the incentives of silk production that continued to maintain its role as fabric fit for royalty.

Silk production is being maintained according to traditional methods and newer methods as well. China leads at 142,000 metric tons of silk produced annually. Second is India at 31,906 metric tons in annual silk production. Third is Uzbekistan at 1,200 metric tons of silk produced annually. Fourth is Thailand at 680 metric tons of annual silk production. Fifth is Brazil at 600 metric tons of annual silk production. Sixth is Vietnam at 520 metric tons of silk produced yearly. Seventh is North Korea at 365 metric tons of annual silk produced [11]. (see table.1.)

Table.1.

Global Silk Production (in Metric Tonnes)

	Countries	2020	2021	2022	2023	2024
	Chine	130,000	146,000	170,000	158,400	142,000
	India	26,480	28,708	28,523	30,348	31,906
	Uzbekistan	980	1,100	1,200	1,256	1,520
	Tailand	680	692	698	712	680
	Brazil	550	560	600	650	600
	Vietnam	475	420	450	523	520
	North Korea	300	320	350	365	365
	Iran	123	110	120	125	120
	Bangladesh	43	44,5	44	44	41
0	Japan	30	30	30	32	20
1	Turkey	25	32	30	32	30
2	Indonesia	16	10	8	9	10
3	Bolgary	8,5	8	8	9	10

4	Madacascar	18	15	5	6	7
5	South Korea	1,6	1,1	1	1	1

Note: the table is based on International sericulture commission materials.

Few other countries are also engaged in the production of cocoons and raw silk in negligible quantities; Kenya, Botswana, Nigeria, Zambia, Zimbabwe, Bangladesh, Colombia, Egypt, Japan, Nepal, Bulgaria, Turkey, Uganda, Malaysia, Romania, Bolivia, etc. Even though silk has a small percentage of the global textile market - less than 0.2% (the precise global value is difficult to assess, since reliable data on finished silk products is lacking in most importing countries) - its production base is spread over 60 countries in the world. While the major producers are in Asia (90% of mulberry production and almost 100% of non-mulberry silk), sericulture industries have been lately established in Brazil, Bulgaria, Egypt and Madagascar as well. Sericulture is labour-intensive.

Thus, about 1 million workers are employed in the silk sector in China. Silk Industry provides employment to 7.9 million people in India, and 20,000 weaving families in Thailand. China is the world's single biggest producer and chief supplier of silk to the world markets. India is the world's second largest producer. Sericulture can help keeping the rural population employed and to prevent migration to big cities and securing remunerative employment. It requires small investments while providing raw material for textile industries.

The major silk consumers of the world are; USA, Italy, Japan, India, France, China, United Kingdom, Switzerland, Germany, UAE, Korea, Vietnam, etc.

World’s practice shows that cluster is not only means towards to the goals of the industrial policy, but is a powerful tool for the stimulation of regional development that finally can lead to the improvement of the trade balance of region, reinforcement of the employment

Economic geography during an era of global competition involves a paradox. It is widely recognized that changes in technology and competition have diminished many of the traditional roles of location. Yet clusters, or geographic concentrations of interconnected companies, are a striking feature of virtually every national, regional, state, and even metropolitan economy, especially in more advanced nations [4].

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Firstly, we need to mention about a professor of the Harward Business school M.Porter, who considered theories about clusters. Secondly, in addition to the problems of functioning clusters are engaged by other foreign economic scientists S. Stern, M. Delgado, G. Lindvist, S. Silvell, A. Saxenian, T. Anderson, S. Schwaag, E. Bergman, E. Feser, Ch. Ketels,

etc. On researches, these foreign scientists shows that the laws and features of functioning cluster are enough described.

In our opinion, various definitions of the term "cluster" available on economic literature of scientific foreign countries were most successfully systematized:

- a cluster is a geographically proximate group of interconnected companies and associated institutions in a particular field, linked by commonalities and complementarities. The geographic scope of clusters ranges from a region, a state, or even a single city to span nearby or neighboring countries;
- more than single industries, clusters encompass an array of linked industries and other entities important to competition;
- clusters - groups of firms within the limits of one branch that located in one geographical area;
- regional clusters are industrial clusters which firms participants in close affinity to each other.
- clusters also often extend downstream to channels or customers and laterally to manufacturers of complementary products or companies related by skills, technologies, or common inputs;
- cluster means a big group of firms in the connected branches in separate district [6].

Accordingly, submitted definitions which have been investigated on the foreign literature we should give a concrete definition about a cluster. A cluster is a geographically proximate group of interconnected companies and associated institutions in a particular field, linked by commonalities and complementarities. The geographic scope of clusters ranges from a region, a state, or even a single city to span nearby or neighboring countries.

Within two last decades process of formation of cluster occurred rather actively. As a whole, according to experts, a present time clustering is covered about 50 % of economy of the leading countries of the world [7].

- Great Britain – 168;
- Germany – 32;
- Danish – 34;
- Italy - 206;
- India – 106;
- Nederland - 20;
- USA - 380;
- France – 96;
- Finland – 9;
- Russian - 25.

In addition, industrial cluster appears the new generation that engaged in computer science, design, ecology, logistic, manufacture of biomedical preparations. Active

development of cluster is considered an effective direction of innovative enterprise activity in the countries with the advanced economy where basic direction of realization cluster concepts the establishment of interrelations between corporate structures acts, investment, intermediary, scientific, educational, public organizations of region. In general, clusters approach to the economic development of countries provides a good tool for regional analysis. The study of modern scientific literature by foreign scientists M. Porter, B. Fezer, K. Ketels, and others suggests that cluster industrial analysis reveals consistent steps to identify which clusters are present in the regional economy, and also makes it possible to evaluate the strong and weak regional clusters compared with the national economy.

We suggest that implementation of cluster policy in the country may allow to increase productivity and innovation activity of enterprises in the cluster as well as the intensity of small business development and private entrepreneurship, enhancing the attraction of direct investments, ensuring accelerated socio-economic development of cluster-based region.

RESULT AND DISCUSSION

Nowadays, on the agriculture sectors of our republic are carried out transition on cluster system. Government pay attention to step by step to proceed on cluster‘s method on silk branches and the organizations of manufacture. However, it is necessary to note that the current mechanism the development of the branch for the silk industry of industry weakly stimulates the organization and development of enterprises for some reason:

- firstly, today, the development of the industry is the technical and technological backwardness of the silk production enterprises from their foreign competitors;
- secondly, the strategy of the silk industry in the republic is aimed to restructuring, technical and technological renewal of enterprises, which implies the installation and use of high-performance, modern equipment. However, the process of updating the domestic technical base is not so fast
- thirdly, issue is associated with a low level of innovation and investment, due to the lack of research and development in the industry.

In this case, in order to carry out actions to create a cluster mechanism of management and organization in the sericulture, we need to carry out scientific research in this industry:

- review and study scientific work and research in the silk industry;
- consider the essence of the cluster approach, determine its role in the general system of state regulation of the silk industry;
- explore the theoretical foundations of cluster structures;
- study the mechanisms and principles of organization, management and functioning of clusters;
- analyze the foreign experience of cluster formation in sericulture;

- investigate and study the existing problems of managing the mechanism of organization in silk enterprises.

- develop a proposal for improving the mechanism of management and organization of the cluster in sericulture;

- attract foreign investment to reconstructing and modernization enterprises;

- equip new technologies from foreign investment under clusters projects.

In a result, we suggest that a cluster is process objective, however, great value of industrial policy has a creation. The purpose of stimulation of unifying processes on cluster are attraction of business great value various privileges, acceleration of process on taking credits, a different type of the investment under the cluster projects. This will help to provide steady development and increase competitiveness of the sericulture in the country.

REFERENCES:

1. Axmedov. N., Abduraxmonov A. Preparation and preliminary processing of cocoons. Tashkent. 2006. P 4-5

2. Resolution of the President of the Republic Uzbekistan. . №.PP-2856 «On Measures to Establish Activity of the Association of Uzbekipaksanoat».T. 29.03.2017 .

3. Resolution of the President of the Republic Uzbekistan. №.PP-4047 “On Additional Measures to Support the Accelerated Development of the Silk Industry in the Republic of Uzbekistan. T. 4.12. 2018,

4. Porter, M. The competitive advantage of nations. New York: Basic Books.1990. P.32.

5. Porter, M.E. (2000) Location, competition, and economic development: local clusters in a global economy. Economic Development Quarterly, 2000. P.44

6. Tukel , I., Golubev S. Methods and instruments of management innovation development of industrial enterprise. Basic Books. Sank Petrburg, 2013. 78-79.

7. Lenchuk E. Cluster approach in strategies innovation developments of the foreign countries. Article. Moscow. 2016.

8. http://uzbekipaksanoat.uz/en/index.php/the-glory-of-uzbek-silk-industry

9. https://telegra.ph/uzbekipaksanoat-uyushmasi/faol investisiyalar

10. https://www.worldatlas.com/.../world-leaders-in-silk-producti.

11.https://inserco.org/en/statistics