



ELECTROTECHNICAL INDUSTRY AS AN IMPORTANT DRIVER OF THE ECONOMY OF UZBEKISTAN

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Abstract. *In the article, the economic development of the electrotechnical industry, the rate of growth of the production volume of electrotechnical products, and the export indicators of electrotechnical products are studied over the years, and the geography of product export is highlighted. Development prospects for the next period have been defined.*

Keywords: *Export of electrical engineering industry, tax benefits, cable and wire products, household appliances, power equipment, capitalized investments.*

Introduction.

As we all know, the electrical engineering industry, which is becoming an important driver of our economy, has changed radically in the last 3-4 years. This industry is youngest and at the same time one of the rapidly developing industries. As a result of the reforms carried out in New Uzbekistan, the electrical engineering industry has become one of the important sectors of our country. Today's fast-paced era and the rapid development of market mechanisms in the economy are causing the steady growth of the electrical engineering industry as well as other industries. Naturally, this presents us with the most pressing tasks of radically improving the industry, introducing new market mechanisms, increasing production capacity, and ensuring employment of the population. The share of the production of electrical engineering products in the republic's industry is also increasing year by year.

In the decree of the President of the Republic of Uzbekistan dated 02.03.2021 No. PD-5011 "On additional measures to further develop the electrical engineering industry and increase the competitiveness of local products" defined to increase the volume of deep processing of copper raw materials to 70,000 tons in 2022, production to 19 trillion sums in 2022, the volume of exports of products in 2022 to 600 million US dollars, to increase the number of jobs in the network to 34,000 in 2022. (Presidential decree, 2021)

This decree adopted by our country's president opened the door to new opportunities for the future of the industry. It is noteworthy that a new era has begun for the enterprises of the electrical engineering industry. It is no exaggeration to say that it was mutually beneficial for both local entrepreneurs and foreign investors.

According to the decree of the President of the Republic of Uzbekistan dated 04.01.2019 No. PD-4090 "On measures to increase the export volume and production of the electrical engineering industry", in 2021, it is planned to increase the export volume of finished electrical engineering and electrical household products to the amount of 400 million dollars. (Presidential decree, 2019)

Over the past five years, in order to develop the electrical industry, a number of Presidential resolutions (PD-2772, PD-4090, PD-4348, PD-5011, PD-5128, etc.) investment projects for the technical and technological renewal of existing and creation of new industries in the industry, as well as the creation of the Fund for the Development of the Electrical Industry. Issues related to the prospects for the development of the electrical industry were also discussed at meetings held under the chairmanship of the head of our state on May 6 and September 26.

Literature review.

Petrochenkov (2014) in his work on the energy-information model of electrotechnical industrial production proposed two stages: obtaining the models of the first stage, and the interaction model of the new stage.

In his scientific research, Khrenov (2021) studied the export activity of non-ferrous metallurgy in the electronics industry.

Semukhin's (2019) researches are devoted to the peculiarities of entering the foreign market of electrical engineering enterprises. In his opinion, the basis of the effectiveness of foreign economic activity is the development of a comprehensive strategy, taking into account the specific characteristics of the importing country. It is also necessary to take into account the features of the manufacturing process of electrical equipment. In this regard, the factors affecting the activity of electrical engineering enterprises were considered, and the ways of adapting the products to the requirements of the foreign market were determined.

In his research, Tursunkhojaev (2022) studied the issues of improving the use of marketing tools to ensure the economic security of electrical engineering enterprises in Uzbekistan.

However, foreign and local scientists have not sufficiently studied the export potential and external economic mechanisms of electrical engineering enterprises. Conducting research in this area shows the need to ensure "green" economy, achieve green economic growth, increase the export potential of electrotechnical industry products, which is rapidly developing in the country's industrial products export, and improve organizational and economic mechanisms.

Research methodology.

As a result of our research, a scientific-methodical proposal and practical recommendations have been developed aimed at developing the products of the electrical engineering industry, expanding the export geography, and improving the ways of effective use of our existing opportunities. Methods such as space and time, quantity and quality, abstract thinking, logical approach, comparative analysis and prospective forecasting were widely used in conducting the research.

Results and discussion.

Currently, about 500 manufacturing enterprises operate in the electrical engineering industry, most of them are small, which produce products of more than 2 thousand items. The number of employees in the industry has reached 32 thousand people. The largest 88 enterprises in the industry, which produce more than 95% of the volume of all electrical products, are members of the "Uzeltexsanoat" association, 18 of them produce cable and wire products, 36 - household appliances and 34 - electric power equipment and other products. It should be noted that almost all enterprises in the industry are private.

A number of customs and tax benefits, as well as subsidies, have been provided to enterprises in the industry. For example, until January 1, 2025, they are exempt from paying customs duties for raw materials, materials, components and equipment imported for their own production needs. Thanks to this, over the past 5 years, \$ 560 million have been invested in the industry, 163 new projects have been launched. Currently, 205 projects worth \$1.2 billion are being implemented. As a result, the volume of production increased by 5 times, exports by 3 times, and the number of jobs increased by 2 times.

Industry in production indicators. For the period 2017-2021 the volume of products manufactured by enterprises in the electrical industry increased 5 times, from 3.4 trillion. sum. up to 16.7 trillion sums, household appliances - 6 times, cable and wire products - 1.5 times, power equipment and other products - 8.7 times.

At the end of 2022, it is expected that the volume of production of electrical products will grow by 19% and amount to about 19.9 trillion. sum. At the same time, the largest growth is expected in the production of cable and wire products by 46.2% - up to 6.9 trillion. sum. and the production of household appliances by 20.5%, up to 6.8 trillion. UZS., and the volume of production of power equipment and other products may decrease by 2.5% - up to 6.2 trillion sums. In 2022, according to preliminary data, the volume of exports of electrical products increased by 42.4% and reached a record high of \$800.8 million, of which exports of cable products amounted to \$518.1 million (an increase of 34.0%), household appliances — \$226.5 million (up 67.5%), power equipment and other products — \$56.2 million (up 38.1%).

Table 1.

Electrotechnical products production volume indicators ²⁷ (billion sums)							
	2017	2018	2019	2020	2021	2022	Growth in 2022 to 2021
Total	3375.4	4432.3	7944.4	12618.0	16695.9	19871.0	119.1%
Cable products	1717.9	1617.2	2628.9	2645.0	4738.7	6926	146.2%
<i>Share in total</i>	50.9%	36.5%	33.1%	21.0%	28.4%	34.9%	
Household appliances	927.0	1040.0	2097.0	4730.0	5598.6	6748.5	12.05%
<i>Share in total</i>	27.5%	23.5%	26.4%	37.5%	33.5%	34.0%	
Power equipment and other products	730.5	1775.1	3218.5	5243	6358.6	6196.5	97.4%
<i>Share in total</i>	21.6%	40.0%	40.5%	41.6%	38.1%	31.2%	

At the same time, more than half of the total export volume was cable and wire products - 64.7%, about one third - household appliances (28.3%), the rest - power equipment and other products (7.0%).

At the end of 2022, in the structure of the total production of electrical products, the share of cable and wire products will be 34.9%, household appliances - 34.0%, and power equipment and other products - 31.2%.

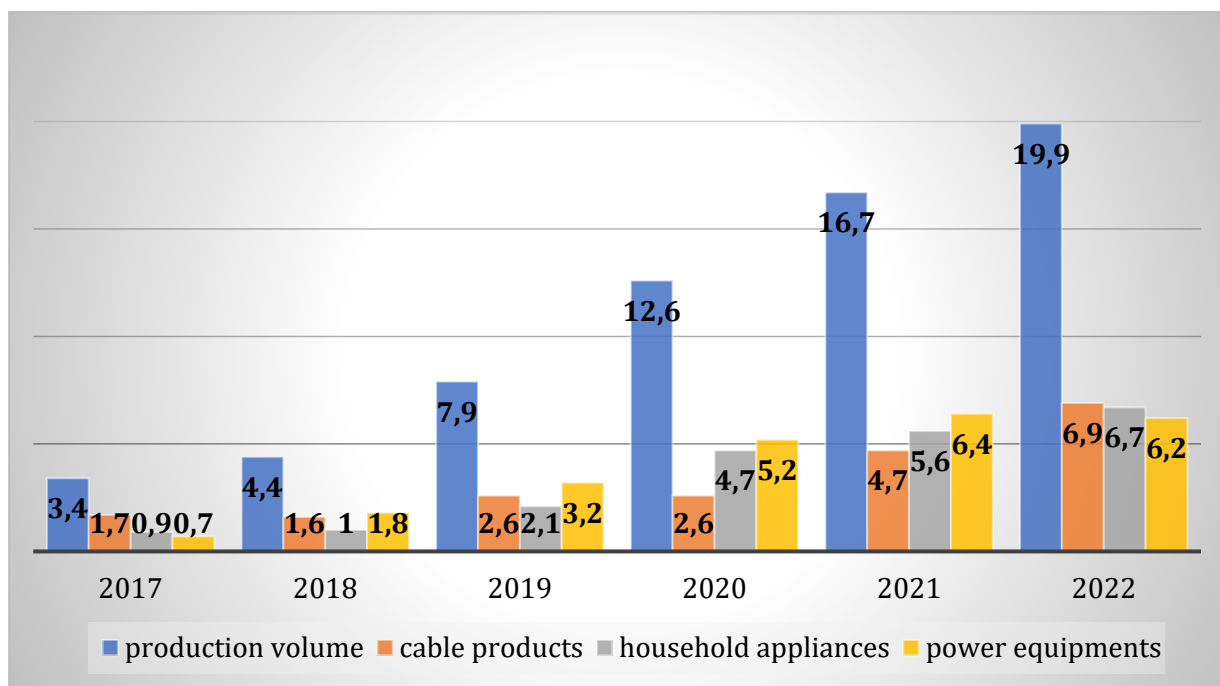


Figure 1. Indicators of the volume of production of electrotechnical products

At the same time, according to the results of the current year, the enterprises of the Uzeltekhsanoat association plan to produce an electric cable of 24.4 thousand km (an increase of 20% by 2021), a LAN cable for Internet networks - 48.3 thousand km (+ 17%), TVs - 510 thousand pieces. (+18%), household refrigerators - 355 thousand units. (+18%), air conditioners - 240 thousand units. (+18%), washing machines - 500 thousand units. (+24%), vacuum cleaners — 350 thousand units. (+17%), kitchen stoves — 1.33 mln. (+26%) and others.

Expansion of export opportunities. It should be noted that over the course of 5 years, both the range of export products of the industry's enterprises and the geography of export countries have expanded. In order to enter new markets, the industry enterprises received more than 40 international certificates, the number of exported goods additionally included water pumps, elevators and escalators, industrial coolers, solar water heaters and other products.

²⁷ Information of the "Uzeltekhsanoat" association

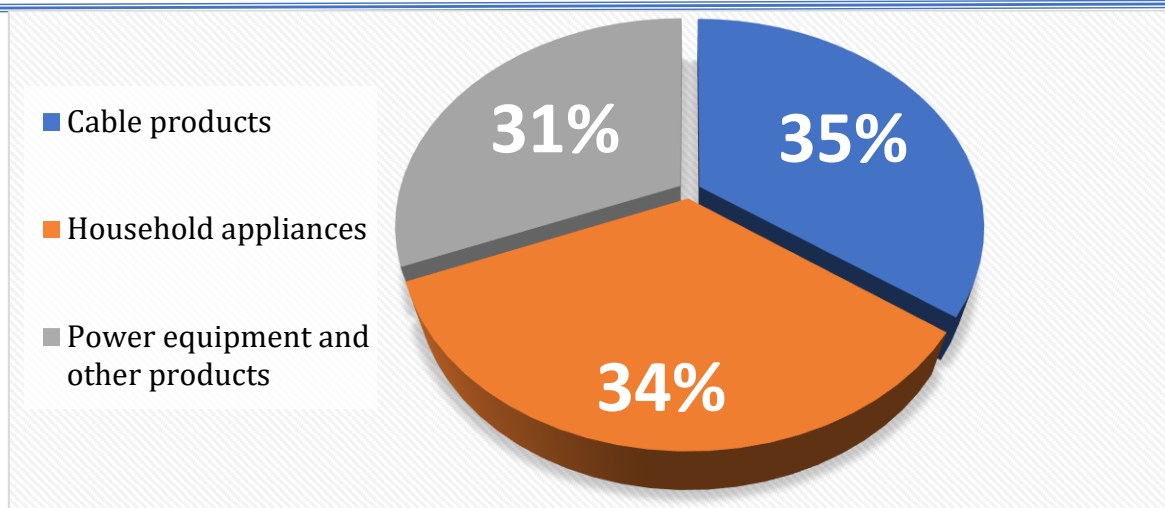


Figure 2. Structure of production by types of electrotechnical products

In the current year, the enterprises of the industry have exported more than 120 types of electrical goods to 48 countries, while in 2017 the export structure included only about 25 types of goods, which were mainly supplied to the CIS countries. For the first time, 13 enterprises from Fergana, Samarkand, Kashkadarya and Tashkent regions entered the foreign market. The list of new export countries includes the EU countries — Great Britain, Romania, Slovenia, the Czech Republic, Hungary, etc., where products are delivered under the preferential trade regime (GSP +), as well as several countries in the Middle East, Africa and Mongolia.

The growth in the production of electrical products contributed to the growth in exports, which over the past 5 years have increased 3 times - from \$189.7 million (in 2017) to \$562.5 million (in 2021). At the same time, the export of household appliances grew 6.6 times - from \$20.6 million to \$135.2 million, cable and wire products - 2.6 times - from \$146.9 million to \$386.7 million, power equipment and other products by 1.8 times - from \$22.1 million to \$40.7 million.

Table 2.

Export indicators of electrotechnical products (billion sums)

	2017	2018	2019	2020	2021	2022	Growth in 2022 to 2021
Total	189.7	116.5	250.2	326.5	562.5	808.8	143.8%
Cable-wire products	146.9	65.5	157.5	164.9	386.7	518.1	134%
<i>Share in total</i>	77.4%	56.2%	62.9%	50.5%	68.7%	64.7%	
Household appliances	20.6	26.4	45.3	94	135.2	226.5	167.5%
<i>Share in total</i>	10.9%	22.7%	18.1%	28.8%	24.0%	28.3%	
Power equipment and other products	22.1	24.6	47.4	67.6	40.7	56.2	138.1%
<i>Share in total</i>	11.6%	21.1%	18.9%	20.7%	7.3%	7.0%	

It should be noted that the largest share in the total export volume in 2022 is cable-wire products - 64.7%, household appliances - 28.3%, power equipment and other products occupies 7.0%.

The geography of export products has expanded, and currently available in 48 countries, including Austria, Hungary, Romania, Netherlands, Finland, Czech Republic, Africa is being delivered. Over the past period, industry enterprises received 41 international certificates to enter new markets. The export nomenclature has also been expanded, about 200 types of exported products include water pumps, elevators and escalators, industrial chillers and solar water heaters were also included.

At the end of 11 months In 2022, compared to the same period last year, 276 thousand refrigerators were exported. (growth by 55 thousand units), TV sets 210 thousand units. (growth by 15

thousand units), washing machines 204.3 thousand units. (growth by 19 thousand units), air conditioners 54.3 thousand units. (an increase of 16.1 thousand units), the volume of exports of these types of products amounted to \$68.3 million, \$36.7 million, \$22.1 million and \$13.9 million, respectively.

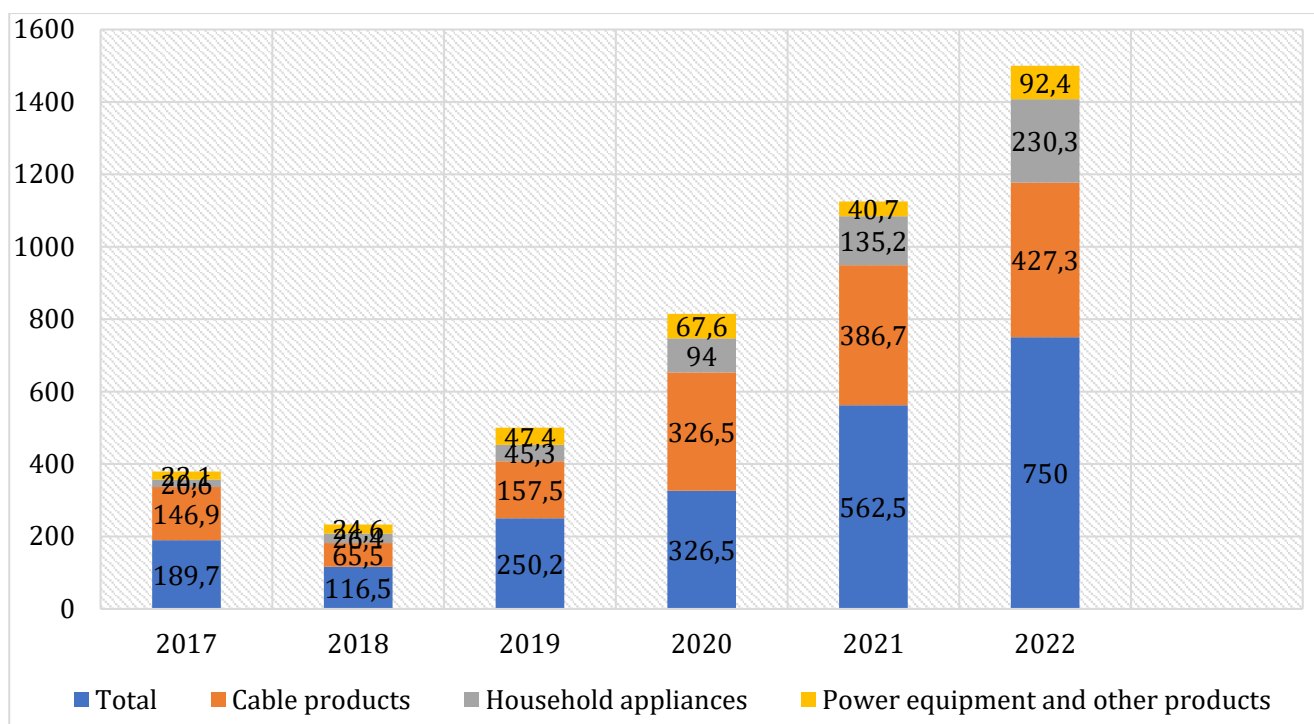


Figure 3. Export dynamics of electrical engineering products (billion sums)

The main export countries of electrical products are Turkey (38% of total exports), Russia (20%), Kazakhstan (12%), China (5.4%), Tajikistan (5.4%), Azerbaijan (4.1%), Kyrgyzstan (4.0%), Georgia (1.8%), Belarus (1.0%), Lithuania (1.0%), Turkmenistan (1.0%), Hungary (0.6%) and other. At the same time, it should be noted that the share of Turkey in exports is the highest due to the supply of the main volume of exported copper wire and copper pipes to this country. At the same time, the main volume of finished electrical goods is exported to the CIS countries.

Attracted investments. During 2017-2021 the total volume of assimilated investments in the electrical industry amounted to \$561.0 million. As a result of the implementation of investment projects in the electrical industry, the production of new types of products that were previously imported was mastered. In particular, the production of modern models of TVs, household washing machines, electric ovens and gas stoves, air conditioners, refrigerators, electric and solar water heaters, LED lamps, electric and gas meters, transformers, modern electrical cables and LAN wires has been launched.

Table 3.

Total indicators of investments in the electrotechnical network²⁸

	2017	2018	2019	2020	2021	2022	2023 (expected)
The volume of capitalized investments (million dollars)	99.7	46.9	70.0	193.8	150.6	169.7	191.5

At the end of 2022, the volume of capitalized investments amounted to 169.7 million dollars, of which 46.4 million dollars are foreign direct investments, due to which 36 new projects were launched and More than 2.5 thousand additional jobs were created.

In accordance with the "Investment Program of the Republic of Uzbekistan for 2023-2025" approved by the Decree of the President PP-459 dated December 28, 2022 in the electrical industry in

²⁸ Information of the Statistics Agency under the President of the Republic of Uzbekistan

the next three years, it is planned to master only \$604.9 million of investments, of which \$183.0 million is foreign direct investment. At the same time, in 2023, as part of the implementation of 29 new investment projects and 7 projects for the modernization and reconstruction of enterprises, it is planned to master \$191.5 million of investments, of which \$58.0 million will be foreign direct investment.

Conclusion and suggestions

Despite the fact that the local electrical engineering industry is rapidly developing in terms of increasing the volume of manufactured products, its assortment and competitiveness in the foreign market, there are still a number of problems facing the industry, the solution of which determines the prospects for its further development. In particular, taking into account the geographical location of the Republic of Uzbekistan, it is necessary to focus on the production of industrial goods that have high added value, but do not have high transportation costs. In addition, the industry has a high threshold for market entry. Given that Uzbekistan is gradually increasing its focus on integration into World Federation of Trade Unions (for example, the WFTU), joining these integration unions will lead to the emergence of large global players in the local market, which will significantly affect the dynamics of the industry. can show.

The experience of the countries where the electrical engineering industry of Uzbekistan managed to significantly increase the share of electrical engineering products in the export structure shows that the amount spent on research and development is 1% of the average GDP. In the Republic of Uzbekistan, this indicator is about 0.1% of the country's GDP.

The electrical engineering industry continues to develop steadily. In this case, significant state support will be provided to branch enterprises in the form of tax and customs benefits, subsidies, creation of favorable conditions for participation in state procurement, and exporters will be provided with transportation costs and funds spent on holding exhibitions of their products in foreign countries. A certain part of 's will be covered.

It is necessary to introduce competitive intelligence in the enterprises of the electrical engineering industry, to optimize the production program by product type based on the study of changing market requirements and the external environment.

The potential of our country in the field of electrical engineering is still high. Giant projects are being implemented in the direction of green energy will open new markets worth at least \$1 billion a year to local producers. It will create a thorough ground for the establishment of an electrical engineering cluster and open the way to thousands of new jobs.

At the same time, the following factors will play a key role in increasing the volume of exports of products manufactured by enterprises in the industry: ensuring the quality and certification of products in accordance with international standards, the production of goods under well-known brands, as well as price competitiveness in the foreign market of exported goods.

The electrical engineering industry is one of the driver sectors of the economy of Uzbekistan and demonstrates accelerated development. The Development Strategy of New Uzbekistan provides for 2022-2026. increase the volume of industrial production by 1.4 times, including high value-added products in the electrical industry by 2 times and exports by 3 times.

Uzbekistan imports electrical goods worth \$1.3 billion. Demand for semiconductors and electronic boards is growing in our country and neighboring markets, which is estimated at \$6 billion. In the next 5 years, it is planned to increase copper production in the country by 3 times and bring the share of its processing finished products by 2026 to 70%.

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