



REPUBLIC OF KOSOVO
MINISTRY OF INDUSTRY,
ENTREPRENEURSHIP AND TRADE

VALUE CHAIN STUDY FOR THE NON-METALLIC MINERAL PRODUCTS SECTOR

Prishtina, 2022



REPUBLIC OF KOSOVO

MINISTRY OF INDUSTRY,
ENTREPRENEURSHIP AND TRADE

VALUE CHAIN STUDY FOR THE MINERAL NON-METALLIC PRODUCTS SECTOR

NOTE: This study was funded by the Ministry of Industry, Entrepreneurship and Trade. The views expressed in this report are those of the D&D Business Support Center authors and do not necessarily reflect the views of the Ministry of Industry, Entrepreneurship and Trade. The report was compiled based on data from the survey with micro, small and medium enterprises in the sector of non-metallic mineral products, and their functions in the Value Chain as well as other comparative data. The sample presented provides a rough overview of the dynamics of market trends and the Value Chain but does not claim to represent the entirety of this sector accurately.

List of abbreviations	
KAS	Kosovo Agency of Statistics
EU	European Union
CAGR	Composite annual growth rate
CEFTA	Free Trade Agreement in Central Europe
KC	Kosovo Customs
EFTA	Free Trade Agreement in Switzerland
ILASA	International Institute for Applied Systems Analysis
KIESA	Kosovo Investment and Enterprise Support Agency
MoF	Ministry of Finance
MIET	Ministry of Industry, Entrepreneurship and Trade
MSPI	Ministry of Spatial Planning and Infrastructure
NOX	Nitric Oxide
SME	Small and medium enterprises
SNCR	Selective non-catalytic reduction
SO₂	Sulfur Dioxide
UNCTAD	United Nations Conference on Trade and Development

Contents

EXECUTIVE SUMMARY	7
INTRODUCTION	8
METHODOLOGY	9
SAMPLING FRAME.....	10
OVERVIEW OF NON-METALLIC MINERALS INDUSTRY AT THE GLOBAL LEVEL.....	11
OVERVIEW OF NON-METALLIC MINERAL INDUSTRY IN EUROPE.....	15
POVERVIEW OF NON-METALLIC MINERALS INDUSTRY IN THE REGION	18
OVERVIEW OF NON-METALLIC MINERAL INDUSTRY IN KOSOVO.....	23
ANALYSIS OF PRIMARY DATA FOR THE VALUE CHAIN.....	28
FINDINGS ON SUPPLY (from the perspective of manufacturing enterprises)	29
FINDINGS ON SUPPLY (from the perspective of supply enterprises)	30
ANALYSIS OF PRIMARY DATA - MANUFACTURING ENTERPRISES.....	33
DOMESTIC AND EXPORT MARKETS - (from the perspective of manufacturing enterprises)	36
OBSTACLES IN THE MANUFACTURING AND EXPORT PROCESS	38
NON-METAL MANUFACTURING INDUSTRY TURNOVER.....	38
INNOVATION	39
TRANSPORT	40
EXPORT MARKETS AND REQUIREMENTS.....	42
BUSINESS ENVIRONMENT.....	46
NETWORKING (from the perspective of enterprises)	47
CASE STUDIES - ENTERPRISE A AND ENTERPRISE B.....	48
CASE STUDY: ENTERPRISE A	48
CASE STUDY: ENTERPRISE B.....	49
MAIN RESTRICTIONS OF THE SECTOR.....	50
RECCOMENDATIONS.....	52
REFERENCES	57

List of figures

Figure 1. World map by development status.....	11
Figure 2. Manufacturing distribution at economy level according to IIASA and UNCTAD	12
Figure 3. Total manufacturing of industrial minerals by leading countries for 2018.....	12
Figure 4. Manufacturing of main non-metallic mineral products at the global level (million metric tons)	14
Figure 5. Ceramics manufacturing at the global level, 2019 (billion square meters)	14
Figure 6. Main mineral reserves in Europe	15
Figure 7. Main market of industrial minerals in Europe.....	16
Figure 8. Limestone manufacturing over the years	19
Figure 9. Clay manufacturing	20
Figure 10. Structure of enterprises by region Figure 11. Structure of enterprises by activity....	28
Figure 12. The most frequent country of supply of raw materials	30
Figure 13. Origin of supply of raw materials for supply enterprises	31
Figure 14. Challenges of supply enterprises	32
Figure 15. Challenges of importing enterprises from a supply perspective.....	33
Figure 16. Products produced by manufacturing enterprises.....	33
Figure 17. Average gross wages for the manufacturing, administration and sales sector	34
Figure 18. Difficulties in finding qualified staff.....	35
Figure 19. Professional staff required.....	35
Figure 20. Professional staff not available	35
Figure 21. Quantity exported in 2019 and 2020	36
Figure 22. Quantity produced for the domestic market	37
Figure 23. Challenges for non-utilization of full capacity	37
Figure 24. Obstacles impacting quality manufacturing and export	38
Figure 25. Investment in research and development.....	40
Figure 26. Percentage of investment in innovation out of annual turnover.....	40
Figure 27. New products.....	40
Figure 28. Main criteria for cooperation	41
Figure 29. Challenges in terms of transport of export products.....	42
Figure 30. Identification of new clients	43
Figure 31. Export expectations in 2021 and 2022.....	44
Figure 32. Main incentives for sale in export markets.....	44
Figure 33. Value Chain Map for the non-metallic mineral products sector	45

List of tables

Table 1. Main producers of non-metallic mineral products at the global level	13
Table 2. Countries with the largest manufacturing of Industrial minerals (metric tons)	16
Table 3. Data on manufacturing, employment and financial contribution to the European economy	17
Table 4. Manufacturing and sales indicators of non-metallic minerals for 2018.....	18
Table 6. Data on the most developed activities in the region	18
Table 5. Non-metallic minerals produced in North Macedonia.....	22
Table 7. General overview of the manufacturing of non-metallic mineral products in the local context.....	24
Table 8. Detailed overview of the manufacturing of non-metallic mineral products in the local context.....	24
Table 9. Export value for the manufacturing of non-metallic mineral products in euros and% in CEFTA, EFTA, EU and other countries	25
Table 10. Export value for the manufacturing of non-metallic mineral products in euros and% in CEFTA, EFTA, EU and other countries by sub-sectors	25
Table 11.Import value for the manufacturing of non-metallic mineral products in euros and % in CEFTA, EFTA, EU and other countries	26
Table 12. Import value for the manufacturing of non-metallic mineral products in euros and% in CEFTA, EFTA, EU and other countries by sub-sectors	27
Table 13. Raw material of produced products.....	29
Table 14. Supply of materials in the domestic and international market	31
Table 15. Average turnover value according to the data.	39
Table 16. Turnover value for 2019 and 2020 according to KAS official data.....	39
Table 17. Export by sector, product and export country.	43

EXECUTIVE SUMMARY

Mining of global mineral products has multiplied in the last four decades, from 9.6 billion metric tons in 1985, to 17.9 billion metric tons turnover in 2019¹. Based on the categories, these products are divided into metallic and non-metallic mineral products.

Products produced within the non-metallic mineral products industry, due to their unique properties, continuously generate profit in various fields and industries. Among the main drivers that have influenced the increase in demand for non-metallic minerals are the construction industry, due to rapid urbanization in developing countries such as China, India, Indonesia and Brazil, as well as the wide range of their use in other sectors, including the manufacturing and the energy industry.

The industry of the non-metallic mineral products sector, both at the local level and at the global level, is considered to be one of the industries which has a lot of development potential. Therefore, considering this possibility, the need to research the real situation and improve it remains inevitable. Consequently, the D&D Business Support Center has been supported by the Ministry of Industry, Entrepreneurship and Trade in sector research and at the same time the design of the Value Chain for non-metallic mineral products, which has helped identify the operating structure of enterprises and their obstacles and difficulties.

The findings from this study are based on (120) interviews conducted with SMEs, which constitute a comprehensive sample of this industry, and (5) interviews with relevant stakeholders who support this industry. About 511 enterprises operate currently in the sector of non-metallic mineral products in our country currently, with a total of 5,082 formal employees; these data highlight the increase in the number of enterprises and employees in this sector compared to previous years. In 2019 there were 443 enterprises with a total of 4,454 employees, while in 2018 there were 478 enterprises with 3,796 employees².

These enterprises reached an annual turnover over 281 million euros in 2020, indicating positive results compared to 2019 (annual turnover of EUR 279 million) and 2018 (annual turnover of over EUR 195 million). The enterprises producing, supplying and transporting non-metallic mineral products are mainly concentrated in the regions of Prishtina, Prizren, Peja and Ferizaj.

As part of the design of the Value Chain for non-metallic mineral products, as mentioned in the above section, the operating structure of this sector has been identified as well as the difficulties and obstacles of enterprises in their work, which are as follows: difficulties in the supply of raw materials, obstacles in the export process, vocational training of manufacturing workers, high electricity consumption, the need to invest in machinery, and the impact of the Covid-19 pandemic.

¹Global mining data, 2021

² Report – Processing industry, by the Ministry of Industry, Entrepreneurship and Trade, 2021

INTRODUCTION

The Republic of Kosovo, in order to improve its standard of living as well as to balance its trade balance, needs a much faster pace of growth in manufacturing, exports and investments in industry.

One of the industries which over the years have witnessed a rapid pace of development, due to natural resources, which is an inevitable need for the use of its products, is the non-metallic mineral industry.

The Republic of Kosovo is rich in non-metallic minerals, such as magnesium, cement clay, kaolin for tiles, clay, quartz, bentonite, gravel, etc., the combination of which produces processed products such as glass, ceramics, cement, lime, clay and concrete, etc.

In addition to our country, the sector of non-metallic mineral products is developed all over the world, where it is considered as one of the promising sectors of an activity with high durability and longevity.

Developing countries or economies are among the economies that achieve high values of manufacturing of non-metallic materials for their country but also for export, values which are driven directly by the demand for construction materials, taking into account the rapid trends of urbanization in developing countries, followed by developed economies as well as those in transition.

European Union countries are considered to be countries with high market stability, mainly for the manufacturing of glass, necessary for use in the construction sector. Germany remains the EU's largest producer with about 1/5 of the volume, followed by France, Spain and Italy.

The further development of the non-metallic mineral products industry continuously affects the level of economic development at the local level, the increase in the number of enterprises, the increase in the number of employees and the value of the annual turnover.

The non-metallic mineral products sector, in addition to direct employees in this sector, also has an impact on the number of employees in other sectors, who are indirectly related to this activity.

This Value Chain report is of particular importance in relation to the non-metallic mineral products sector, as it is the first for this sector and aims to support the competitiveness of the sector.

Through this report the missing links, gaps and limitations of the Value Chain will be identified. Also, these data will be used to design new strategies and future policies for this sector.

METHODOLOGY

The value chain research for the non-metallic mineral products sector was mainly based on primary and secondary data, conducted by the consulting enterprise D&D Business Support Center and funded by the Ministry of Industry, Entrepreneurship and Trade.

This Value Chain has been developed in order for the Ministry of Industry, Entrepreneurship and Trade to have clearer relevant and up-to-date data of this sector through which it would support the definition of evidence-based policy measures to address missing links effectively.

It will also serve in the identification of competing products or the group of products of the sector for the manufacturing of non-metallic mineral products, for the determination of adequate support measures, for further growth and development, where it will stimulate the growth of sector, job creation, revenue growth and economic growth in general.

To achieve this goal, the relevant stakeholders of this industry, as well as the manufacturing, supply and transportation enterprises have been identified for interview for the study and design of the Value Chain for non-metallic mineral products.

Primary data were collected through questionnaires and served in the design of this study. The questionnaires used to interview stakeholders and enterprises are divided as follows:

1. Questionnaire for stakeholders of the industry sector for the manufacturing of non-metallic mineral products,
2. Questionnaire for manufacturing enterprises,
3. Questionnaire for supply enterprises,
4. Questionnaire for transport enterprises.

The primary data collected in this research were made through B2B visits with business owners or one of the senior executives, who had sufficient experience in general business activities.

During the collection of primary data after the interview with businesses, two enterprises were considered as case studies, for which the progress of the work has been understood since the establishment of the enterprise.

Whereas, in addition to the primary data which were used to compile the Value Chain study, secondary data were collected which were used as a supplement and analysis of the state of the non-metallic mineral products sector received from relevant institutions such as the Ministry of Industry, Entrepreneurship and Trade, and the Kosovo Agency of Statistics.

SAMPLING FRAME

For the design of the Value Chain, as mentioned in the above part, primary and secondary data were used, while to accurately reflect the state of the non-metallic mineral products industry sector, a list of manufacturing enterprises of this sector was provided by the Ministry of Industry, Entrepreneurship and Trade.

At the same time, the D&D Business Support Center identified the supply and transport enterprises of this sector, in order to understand the work operation process from the beginning to the end of the final product and its sale.

It is worth noting that the sample selection was made including enterprises from all regions of Kosovo. This sample was adapted to the type of activity of the interviewed enterprises in order to be comprehensive and reflect the real situation of the non-metallic mineral products sector and the way they operate.

Part of this sample used for the collection of primary data and their further analysis are considered interviews with 120 enterprises, of which 84% or 101 enterprises whose main function is the manufacturing of non-metallic mineral products, 11% or 13 enterprises whose main function is the supply of non-metallic mineral products and the remaining 5% or 6 enterprises whose main function is the transport of non-metallic mineral products.

Special importance was given to the interviews conducted with 5 relevant stakeholders, including the contribution of the Ministry of Industry, Entrepreneurship and Trade, respectively the Department of Industry, who helped to enrich this study with relevant information related to the sector of non-metallic mineral products.

Consequently, based on the findings of this study, the Value Chain for non-metallic mineral products was developed.

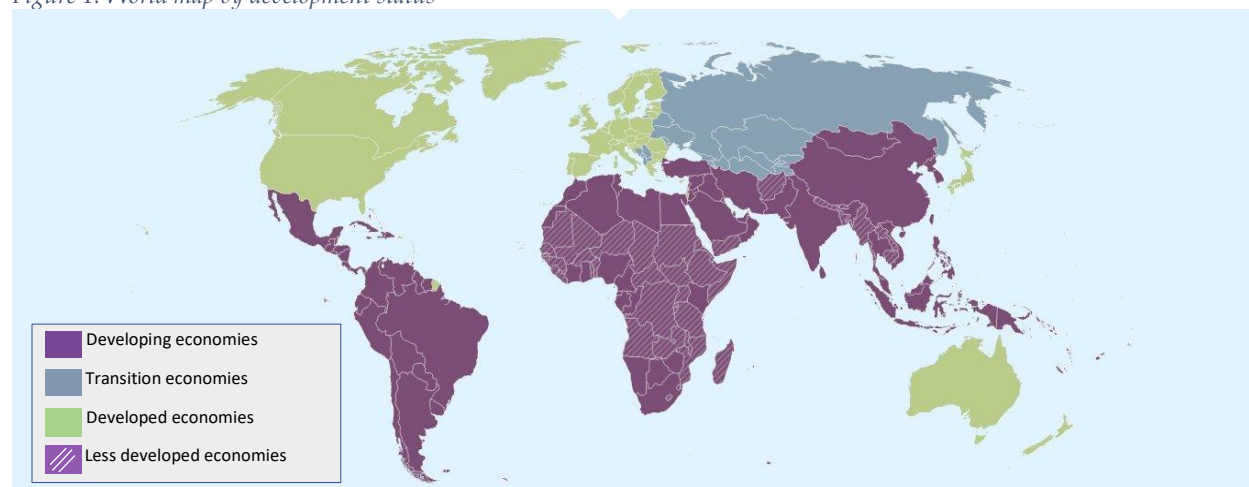
OVERVIEW OF NON-METALLIC MINERALS INDUSTRY AT THE GLOBAL LEVEL

The global Covid-19 pandemic has had a profound effect on changes in distribution and manufacturing chains across sectors, which have had far-reaching economic consequences. Enterprises faced financial difficulties in continuing their operations and retaining jobs as a result of the cessation of import and export activities of products, including non-metallic mineral products. Currently, markets have begun to adapt to the new normalcy, including the non-metallic mineral industry.

The size of the global non-metallic mineral products market is projected to grow at an average Compound Annual Growth Rate (CAGR) of 3.8% from 2021 to 2028. The rise will be driven by growing demand for building materials due to rapid urbanization across developing countries such as China, India, Indonesia and Brazil. At the same time, there is a growing focus of governments and decision-makers on renewable energy sources, as well as the demand for consumer goods with sustainable packaging solutions worldwide, given the preservation of the environment.

Interest in the non-metallic minerals market is constantly growing, which indicates favorable conditions for research, evaluation and development of new deposits. To reflect the activities of the sector globally, this study has taken into account the classification method developed by the International Institute for Applied Systems Analysis (IIASA, Austria) and the United Nations Conference on Trade and Development (UNCTAD), which presents activity based on developed economies, transition countries, developing economies as well as countries with less developed economies.

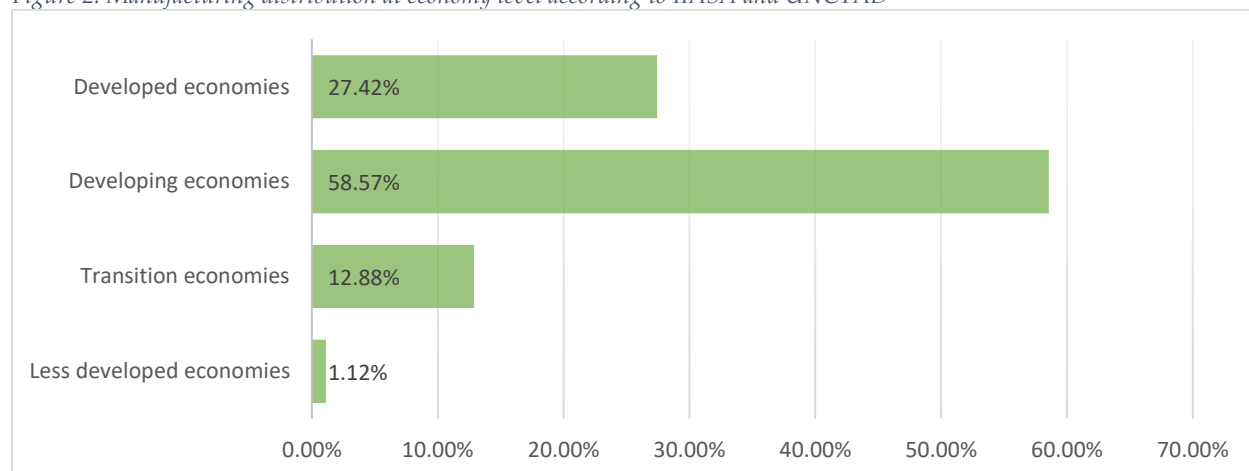
Figure 1. World map by development status



Source: United Nations Conference on Trade and Development (UNCTAD), 2020

The distribution of all mineral manufacturing in the world for 2018 is as follows: countries with the most developed economies mined 27.42% of all minerals, countries with economies in transition mined 12.88%, countries with developing economies mined 58.57%, and countries with less developed economies mined 1.12% of all minerals.

Figure 2. Manufacturing distribution at economy level according to IIASA and UNCTAD

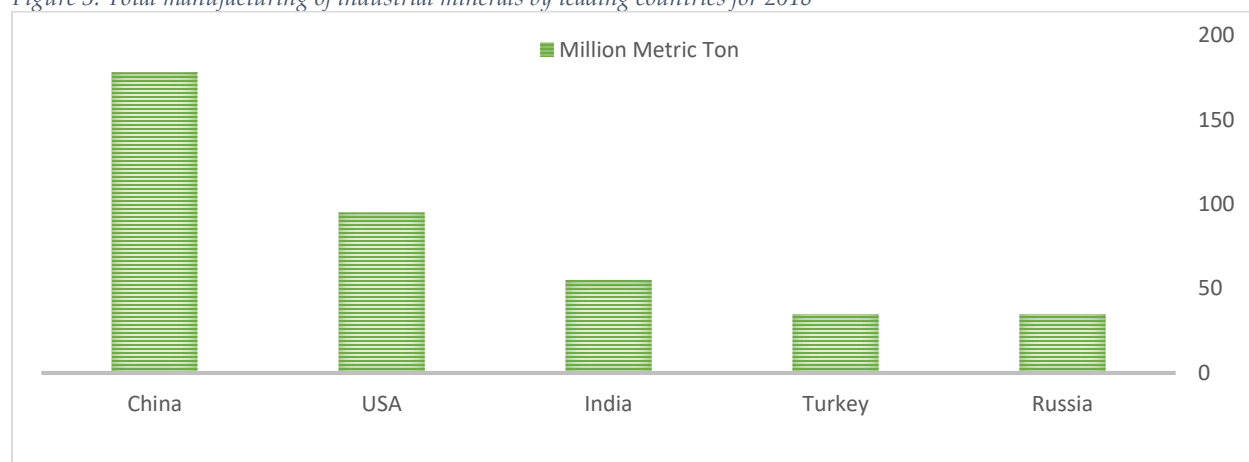


Source: United Nations Conference on Trade and Development (UNCTAD), 2020

Revenues in the manufacturing of non-metallic mineral products are projected to reach \$ 276.10 billion in 2022. The total number of enterprises in 2018 reached 30,539³.

According to the data, developing economies account for more than half of the manufacturing of non-metallic mineral products, consequently at the state level; China, India, Turkey and other developing countries are the leaders in the manufacturing of non-metallic minerals globally; for more details, the data are presented in the following figure.

Figure 3. Total manufacturing of industrial minerals by leading countries for 2018



Source: Kirsanov, A., K., et al., 2022, "Issues of market monopolization in the mining of non-metallic minerals in transition economies".

The non-metallic mineral industry is known for the manufacturing of cement products, ceramics, glass and lime, etc. The range of application of these products and their by-products is quite wide, from construction materials to sanitary equipment. In the context of non-metallic mineral products, with high manufacturing intensity globally we have five (5) main products: sand and gravel, cement, lime, glass and ceramics. It is worth noting that the conversion of non-metallic minerals into these final processed products is often a high-intensity energy process

³Statista, Mar 6, 2022

and which may involve several steps, such as heating, grinding, mixing, cutting, shaping and crushing.

The following table presents the manufacturing of non-metallic mineral products, based on countries and adequate units of measurement according to comparisons.

Table 1. Main producers of non-metallic mineral products at the global level

Ceramics	China	India	USA
Billion square meter	8.47	1.32	0.92
Sand and gravel	USA	Italy	France
Million metric tons	72	13.8	8.7
Glass	China	Germany	USA
Export (in billion US dollars)	18.3	6.6	4.9
Lime	China	USA	India
Million metric tons	310	17	16
Bentonite	USA	China	Greece
Million metric tons	4.6	3.2	1.3
Cement	China	India	Vietnam
Million metric tons	2500	330	100

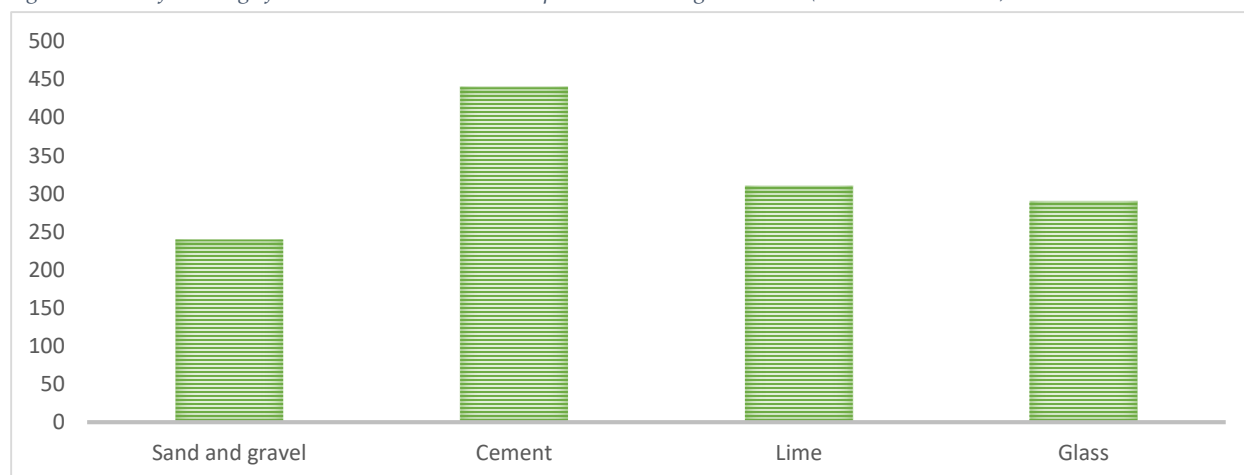
Source: Garside. M., 2022. Statista.

According to the data, China along with the US are among the top leaders globally for mineral manufacturing. China is the largest producer of ceramic tiles, glass, cement and lime worldwide, followed by India with 1.32 billion square meters and the US with 92 million square meters. Whereas, in 2021, for the manufacturing of sand and gravel, the United States is the leading producer worldwide, producing 720 million metric tons, followed by Italy and France. The United States is also a leader in the manufacturing of bentonite with 4.6 million metric tons for 2021.

In addition to the large work, technical and technological force, these countries have high consumption in the domestic market and export to other countries to meet market demands.

The manufacturing of non-metallic mineral products at the global level is similarly presented in the following figure.

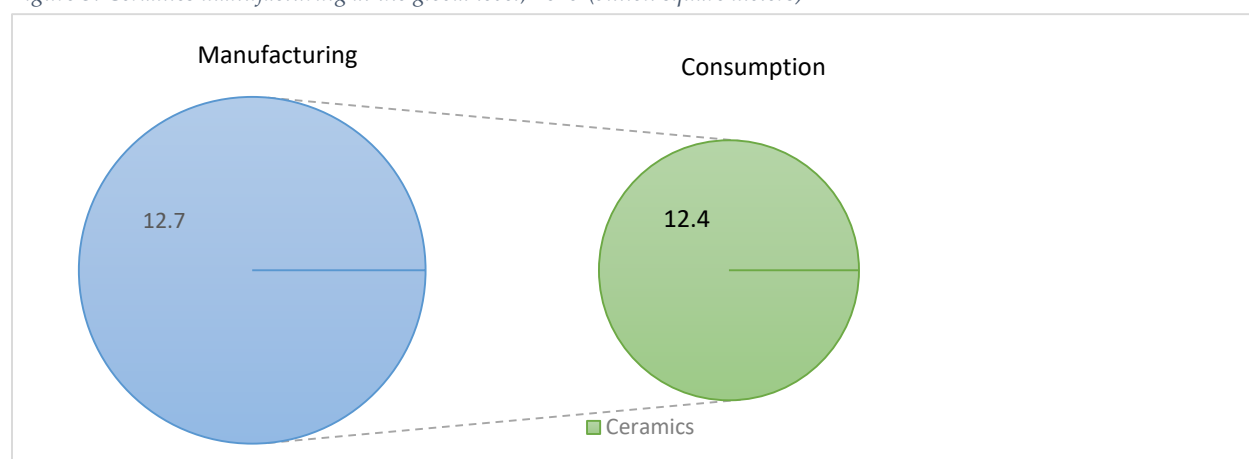
Figur e4. Manufacturing of main non-metallic mineral products at the global level (million metric tons)



Source: UN Comtrade

With regards to global ceramics manufacturing, according to reports in 2019, 12.7 billion square meters of ceramics were produced and about 12.4 billion square meters were used for consumption.

Figure 5. Ceramics manufacturing at the global level, 2019 (billion square meters)



Source: UN Comtrade

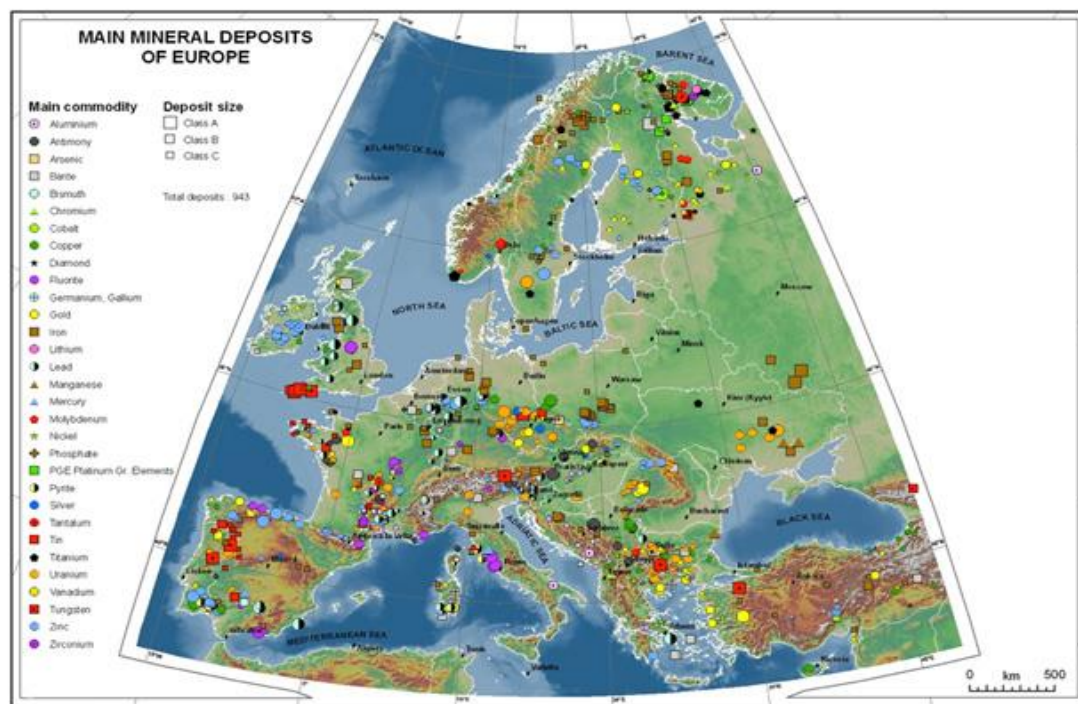
Extraction and processing of mineral resources has a significant impact on soil, water, air and biological resources. As a result, societal pressure on the environment is growing, and this poses an obvious challenge for the non-metallic mineral products sector. Work is undertaken continuously to address the environmental impact and there are action plans which include strategies aimed at stimulating innovation within the sectors. On the other hand, industrial developments and the impact of technology will continue to have a dramatic impact on the manufacturing industry, whether in terms of machine automation, digitalization, artificial intelligence or other advanced technological forms.

OVERVIEW OF NON-METALLIC MINERAL INDUSTRY IN EUROPE

The European mining industry has a long tradition and today it is among the most modern and innovative industrial sectors of the continent. Exploration, mining and extraction of minerals is supported by high level technologies. The industry also promotes advances in the areas of environmental protection, health and safety.

The European market of non-metallic mineral products has a share of about 37% in terms of revenues. The region is expected to maintain its dominance in the future according to forecasts for the period 2021-2028⁴. Europe is home to more than 130 enterprises as an integral part of the non-metallic minerals sector and sub-sectors. Germany and France are two of the leading markets in Europe and will continue to contribute significantly to the growth of this sector during the forecast period⁵. Below is an overview of some of the main non-metallic products developed in European countries, according to data from the European Commission.

Figure 6. Main mineral reserves in Europe



Source: Geological Survey and Mines Bureau

Non-metallic mineral raw materials are characterized by the great variety of rocks and minerals. The application of all raw materials is quite diverse. Depending on the field of application, two groups can be distinguished: agrochemical and chemical raw materials (fertilizers and raw materials for the chemical industry) and geological or industrial building materials.

⁴Intelto, 2020, "Non-Metallic Mineral Products Market Report";

⁵ Ibid

Among the largest producers of non-metallic minerals over the years by countries on the European continent are presented as follows.

Table 2. Countries with the largest manufacturing of Industrial minerals (metric tons)

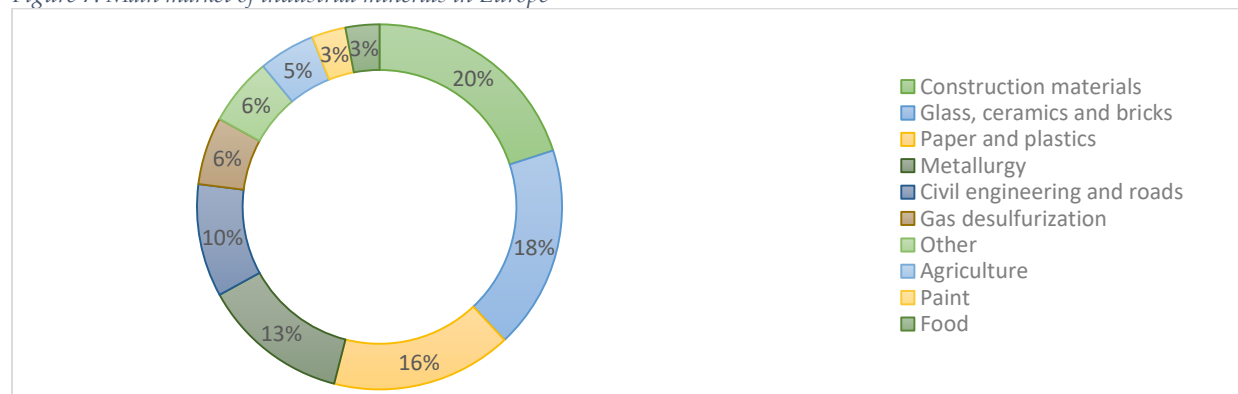
Year	2011	2012	2013	2014	2015	2016	2017	2018	2019
Germany									
Potash	3,214,696	3,149,386	3,075,201	3,126,913	3,056,528	3,056,528	2,906,481	2,754,085	2,615,284
Kaolin	4,898,516	4,347,591	4,348,562	4,275,422	3,733,714	4,740,000	5,168,000	4,930,000	4,760,000
Salt	174,424,265	14,445,261	17,389,096	13,330,692	13,957,574	14,335,123	15,567,990	16,248,784	16,627,893
Spain									
Gypsum	7,825,747	6,313,777	7,388,699	7,200,000	7,790,000	8,770,650	9,428,782	9,500,000	10,643,585
Fluorspar	109,284	100,000	96,810	120,588	130,647	130,131	125,870	110,000	170,000
Greece									
Bentonite	1,188,442	1,235,105	1,000,000	1,011,485	1,123,320	883,220	1,087,800	1,365,374	1,393,958
Bulgaria									
Asbestos	600	600	600	600	600	600	600	600	600
Slovakia									
Magnesia	1,196,600	1,008,460	933,200	887,500	880,000	683,400	975,100	1,053,900	1,015,800

Source: C. Reichl, M. Schatz, *World Mining Data, Volume 36, Vienna, 2021*

(Note: Russia is not included in this data)

Non-metallic minerals, whether processed or natural, are mainly used for building materials, ceramics, detergents, electronics, filtration, glass, medicines and medical devices, paints, paper and plastics, and many other industrial and household products. They, too, are characterized as versatile; most have at least two, sometimes many applications in different sectors and include multiple markets. As a result, their market is quite wide.

Figure 7. Main market of industrial minerals in Europe



Source: Annual Report 2022, IMA Europe

According to the data, the main market for non-metallic minerals at European level is the construction sector, which accounts for 20% of total manufacturing, followed by the sector for the manufacturing of glass, ceramics and bricks. The application of lower intensity minerals is observed in the food and paint sector.

In the economic context, for 2021, 180 million tons of non-metallic minerals have been produced and 42,500 workers have been employed, including 28 European countries. All this has contributed to the European economy with EUR 14 billion.

Table 3. Data on manufacturing, employment and financial contribution to the European economy

Manufacturing	Employment	Financial contribution
180 million tons	42,500	EUR 14 billion

Source: Annual Report 2022, IMA Europe

Europe is rich in natural resources and the extraction and supply of minerals continue to play a crucial role in the economy and economic and social well-being. Currently, Europe meets almost all the requirements in the manufacturing of many industrial minerals and aggregates for consumption. However, the import values of metals and metallic ores are significant.

OVERVIEW OF NON-METALLIC MINERALS INDUSTRY IN THE REGION

The mining sector constitutes a small part of the economies in the Western Balkans; however, it should be noted that the sector is growing positively from year to year. One of the factors may be the dynamism of the real estate sector, the development of urbanism in general in the Western Balkans, where the non-metallic minerals market is expected to have a positive outlook in the coming years. Also, given the pressure and the need to reach agreements on the construction of corridors in the Balkans to increase and facilitate the movement of goods and people, it will stimulate the construction sector, which will indirectly translate into increased demand for non-metallic minerals.

The following table presents the indicators and participation in the manufacturing of non-metallic minerals that includes the countries of the Western Balkans.

Table 4. Manufacturing and sales indicators of non-metallic minerals for 2018.

Country	Manufacturing (output) of non-metallic minerals (thousand ton)	Share of overall manufacturing of non-metallic minerals WB6 (%)	Revenues from the sale of non-metallic minerals (diamond not included), million US dollars
Albania	134	0.2%	5
Bosnia and Herzegovina	1,583	2.5%	185
North Macedonia	264	0.4%	5
Serbia	128	0.2%	20
Montenegro	0	0	0
Kosovo	2,366	-	3.55

Source: Kirsanov, A., K., et al., 2022, "Issues of market monopolization in the mining of non-metallic minerals in transition economies" and the Independent Commission for Mines and Minerals, the authors' calculation.

Also, as part of this analysis, the activities in which the sector of non-metallic mineral products is more developed were identified, thus extracting data which show the position of the Western Balkan countries in this sector.

Table 5. Data on the most developed activities in the region

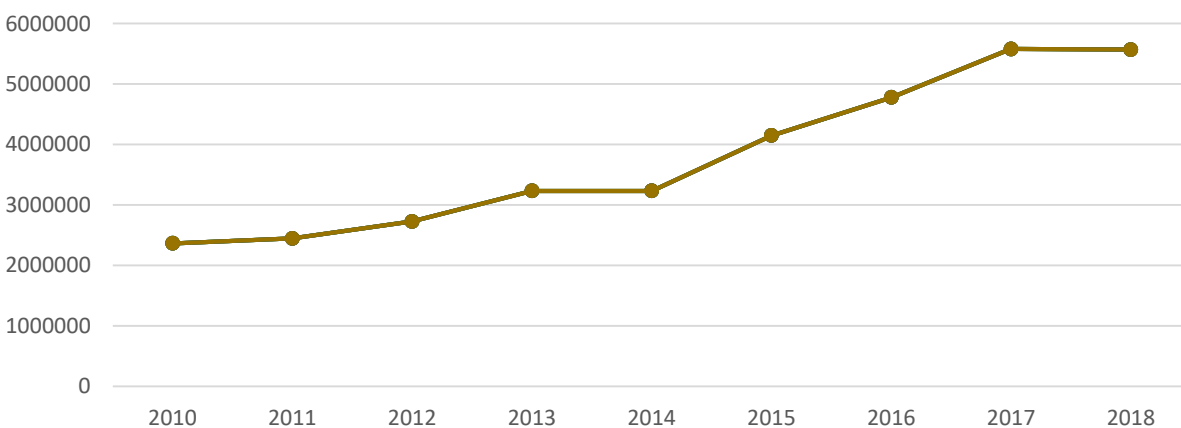
Country	The most developed activities in the sector of non-metallic mineral products
Albania	Manufacturing of bricks and tiles in baked clay Manufacturing of products from cement, lime, clay and concrete

Bosnia and Herzegovina	Manufacturing of glass products Stone crushing Manufacturing of bricks and tiles in baked clay Fire resistant products
Serbia	Manufacturing of glass products Stone crushing Manufacturing of bricks and tiles in baked clay Fire resistant products Manufacturing of ceramic products
North Macedonia	Manufacturing of products from cement, lime, clay and concrete Manufacturing of ceramic products Manufacturing of products from cement, lime, clay and concrete
Montenegro	Manufacturing of products from cement, lime, clay and concrete
Kosovo	Manufacturing of products from cement, lime, clay and concrete Stone crushing Manufacturing of bricks and tiles in baked clay Manufacturing of glass products

Albania

Referring to the Albanian Geological Survey, through research and geological works and its general studies, it has declared data on approximately 32 different types of rocks and non-metallic industrial minerals, expanded throughout the country, in 438 mineral springs and objects. The assessments made so far show significant reservations and with an open perspective for these areas, guaranteeing the strengthening of the Albanian economy.

Figure 8. Limestone manufacturing over the years



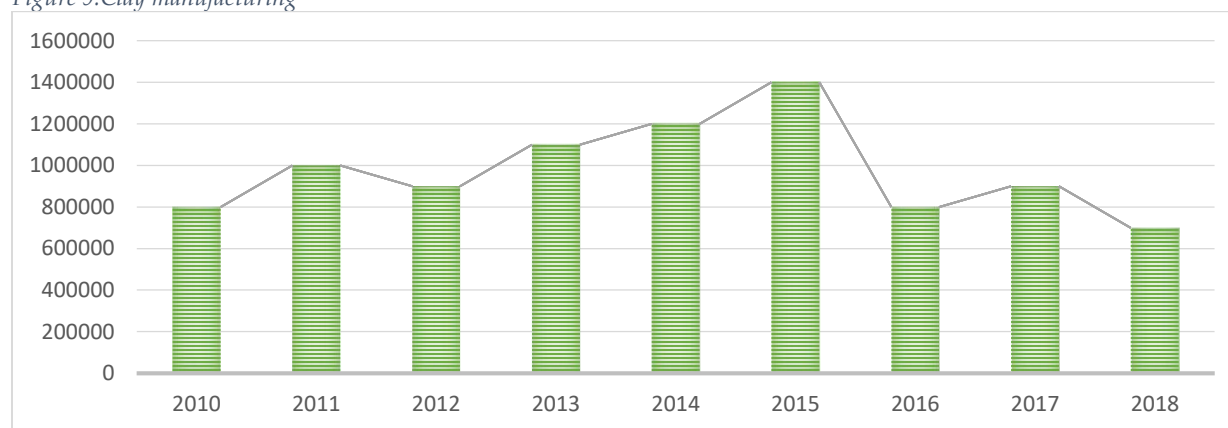
Source: National Agency of Natural Resources

Currently, about 55 limestone deposits are known, with about 450 million geological reserves, with an open prospect for expansion.

Many buildings, columns, statues and relics discovered during archeological excavations prove that Albania has a millennial tradition of stone processing and the use of decorative stones. On the other hand, rocks and sandstones have a large spread in 9 locations throughout Albania. Their exploitation has started since 2005 and their product is mainly in the form of blocks.

Clay produced in Albania is used for the manufacturing of tiles, majolica tiles, bricks, artistic manufacturing and cement manufacturing. Taking into account the areas of use and the qualitative characteristics of the clays, in Albania can be classified into 9 types of discovered clays.

Figure 9. Clay manufacturing



Source: National Agency of Natural Resources

So far there are 46 deposits and facilities which contain an amount of about 260 million tons of geological reserves. The most important sources are: Tarabosh and Drishta in Shkodër in the district of Fushë-Krujë, Brar and Vlora in the district of Tirana, Shën-Vlash in the district of Durrës, Bradashesh in the district of Elbasan, Virova in the district of Lushnje, Qaf Topi in the district of Vlora, etc.

Bosnia and Herzegovina

The non-metallic mineral mining segment is mainly underdeveloped compared to the metal mining sector in the country. Bosnia and Herzegovina has significant natural reserves of non-metallic minerals such as limestone, salt, clay, stones, gravel and aggregates, sand and gypsum. This offers potential opportunities for investors who are willing to invest in the modernization of equipment for the extraction of such minerals, which, in turn, will boost the growth prospects of this market in the coming years.

Breakdown by product type and market analysis of non-metallic minerals in Bosnia and Herzegovina:

- ✓ Glass and glass-based products,
- ✓ Stone based products,
- ✓ Clay based construction products,

- ✓ Other (refractory products, porcelain and ceramics).

During 2015, glass and glass-based products dominated the market and accounted for more than 45% of total market shares in terms of revenue. The non-metallic mineral market in Bosnia and Herzegovina is moderately fragmented, given the presence of domestic and international producers. However, there are many distributors in the country that import cheap products from countries like China. Energy conservation and emission reduction have now become the main focus of organizations across the globe and manufacturers are expected to adopt more advanced and cleaner technologies during the forecast period. Manufacturers compete on the basis of price, innovation, quality and performance.

Serbia

Serbia has a competitive mineral market. The mineral industry occupies an important place in terms of exports, although the industry is highly dependent on imports of raw materials and non-metallic mineral finished products to respond to the high demand in the domestic market and the steadily growing demand of exports.

Actively promoting the mineral industry due to its high growth potential, the market for non-metallic minerals is projected to have a positive outlook over the next four years. More than 90% of mineral resources remain unexplored and this is a tremendous opportunity for new entrants to expand their activities. Furthermore, some policies such as the Mineral Resources Management Strategy in the Republic of Serbia, until 2030 will be implemented to promote the mineral industry and help market growth. Other policies promoting Serbia's mineral industry include providing faster registration for enterprises, single-portal registration and approval for enterprises, tax benefits such as duty-free exports and low VAT, and free trade agreements with export markets. Also, the government has initiated numerous projects for the growth of the mineral industry, which will create a favorable environment for the growth and expansion of the non-metallic minerals market in the country.

Breakdown by product type and market analysis of non-metallic minerals in Serbia:

- ✓ Glass and glass-based products,
- ✓ Stone based products,
- ✓ Clay based construction products,
- ✓ Refractory products,
- ✓ Porcelain and ceramic products.

In terms of revenue, the glass and glass-based products segment led the non-metallic minerals market in Serbia, accounting for close to 51% of the market share. In Serbia, glass and glass-based products are used in applications such as windows and facades of buildings, windshields and windows of automobiles, solar panels and electrical and electronic equipment. Factors such as the relatively low energy costs compared to most EU countries and the introduction and availability of a wide range of products will boost the growth prospects of this market segment in the coming years.

Competition and leading retailers: The non-metallic mineral market in Serbia is quite fragmented and is characterized by the presence of many domestic producers and distributors importing low-cost products from countries like China. The composition of the market is heterogeneous, consisting of multinational, regional and domestic producers. Manufacturers compete in terms of price, innovation, quality and performance.

North Macedonia

North Macedonia is a country rich in mineral resources such as asbestos, gypsum and wood, and presents potential for the country's economy. In 2017 and 2018, the manufacturing of mineral products represented only a small part of the economy of North Macedonia.

Among the non-metallic minerals produced in North Macedonia are gypsum and limestone, where the data represent an amount of 1.5 million tons produced for 2020, which is also one of the only non-metallic minerals, with increased manufacturing, compared with the previous year.

For more details, refer to the following table.

Table 6. Non-metallic minerals produced in North Macedonia

Products	2019/metric tons	2020/metric tons
Marble and other decorative or building limestone	102,128	75,181
Granite, sandstone and other decorative or building stones	15,345	10,349
Limestone and gypsum	1,494,401	1,595,273
Natural sand	252,505	239,424
Crushed and ground stones, used for construction	1,076,160	619,820

Source: Statistical book 2021, Republic of North Macedonia.

Montenegro

Red bauxite is located in the Niksic area, along with coal where they represent the strategic mineral resource in Montenegro.

In addition, gravel and sand deposits are abundant in the Moraca riverbed, near Podgorica, in the Limit valley and in the upper reaches of the Tara River. The mines are concentrated in several areas in this small country, where bauxite exploitation has mainly a visual impact on the natural landscape. Also, gravel and sand excavations are not easy in the south of the country.

In general, the countries of the Western Balkans present sustainable potential in the non-metallic mineral sector. Given that their economies are in transition as well as the long tradition in this sector, as a result the demand for consumption is increasing.

OVERVIEW OF NON-METALLIC MINERAL INDUSTRY IN KOSOVO

The position of the state of Kosovo in the western part of the Balkan Peninsula, natural conditions and favorable geographical position have enabled great potential for economic and industrial development of the country, although Kosovo industry in the 90s had major setbacks in development, manufacturing, employment, exports, as a result of the war which has affected the almost complete decline of industry sectors.

Among the first steps of the processes towards the development of market economy and integration in regional and international institutions is considered the dynamic development of the private sector in small and medium enterprises (SMEs), with special emphasis on the manufacturing sector and privatization initiatives.

Among the sectors that have developed over the years is considered the sector of manufacturing of non-metallic mineral products, where a satisfactory increase has been observed in terms of the number of active enterprises and annual turnover, which has also affected the increase in the number of employees.

The industry of non-metallic mineral products continues to be one of the most developed industries in our country, due to natural resources, such as: magnesium, cement clay, kaolin for tiles, clay, quartz, bentonite, gravel, etc.

According to statistical data, Kosovo mainly produces concrete products for construction purposes, ready-mixed concrete for construction, stone breaking, shaping and final shaping, manufacturing of bricks, tiles and construction products in baked clay, manufacturing of clay, shaping and processing of flat glass, etc.

The number of active enterprises in the sector of non-metallic mineral products for 2020 in Kosovo is 511 enterprises, a number which marks an increase compared to 2019, in which there were 443 enterprises, and in 2018, in which there were 478 enterprises of non-metallic mineral products.

The same enterprises have also increased the number of employees. The year 2020 marks a total of 5,082 employees, compared to 2019 where there were 4,454 employees, and in 2018 in which a total of 3,796 employees were recorded in the sector of non-metallic mineral products.

Similar to the changes over the years for the number of active enterprises and the number of employees, is the increase in annual turnover. In 2020, the sector of non-metallic mineral products was over 281 million euros turnover, in 2019 there were over 279 million euros, while in 2018 over 195 million euros annual turnover, data which prove that the sector of the mineral products industry non-metallic has marked positive changes in the country's economy.⁶

⁶Report - Processing Industry, by the Ministry of Industry, Entrepreneurship and Trade, 2021

Table 7. General overview of the manufacturing of non-metallic mineral products in the local context

Code	Sub-sector (13)- Manufacturing of non-metallic mineral products	Number of enterprises			Number of employees			Turnover		
		18	19	20	18	19	20	2018	2019	2020
23	Manufacturing of non-metallic mineral products	478	443	511	3,796	4,454	5,082	195,005,725.73	279,099,052.93	281,102,702

Source: Kosovo Agency of Statistics, processed by MIET/DI

Further on in Table 4.2, you can find more detailed information regarding the number of enterprises, the number of employees and the annual turnover, comparing the years 2020, 2019 and 2018 according to the sub-activities of this sector.

Table 8. Detailed overview of the manufacturing of non-metallic mineral products in the local context

Sub-sector - Manufacturing of non- metallic products (23)	Number of enterprises			Number of employees			Turnover		
	Year 2018	Year 2019	Year 2020	Year 2018	Year 2019	Year 20	Year 2018	Year 2019	Year 2020
Manufacturing of glass products	37	37	42	235	206	229	5,049,226	6,769,087.93	5,957,893.87
Fire resistant products	4	3	4	31	37	47	2,528,569	2,794,903.09	2,319,932.40
Manufacturing of ceramic products	24	21	27	663	659	677	16,539,453	19,654,990.55	18,667,555.04
Manufacturin g of products from cement, lime, mortar and concrete	254	240	274	1915	2536	2940	96,891,747	159,401,685.33	172,374,767.78
Stone crushing	153	136	155	824	849	1008	62,642,303	76,435,214.95	66,905,128.21
Manufacturing of non-metallic mineral products n.e.c.	6	6	9	128	166	181	11,354,427	14,043,171.08	14,877,424.78
Total	478	443	511	3,796	4,454	5,082	195,005,725.73	279,099,052.93	281,102,702.08

Source: Kosovo Agency of Statistics, processed by MIET/DI

Regarding the export of non-metallic mineral products with the countries of CEFTA, EFTA, EU and other countries, it is noticeable that 2020 has marked an increase in the total value of

exports compared to the values of 2019 and 2018. Value Total exports marked EUR 9.61 million for 2020, EUR 7.59 million for 2019, while EUR 7.84 million export turnover for 2018. These data which mark an increase of 2.15% compared to the previous year and represent the improvement of exports in the sector of non-metallic mineral products.

Out of the total number of 511 active enterprises of non-metallic mineral products, 21.72% of them are exporters of their products.

Non-metallic mineral products produced in our country are mainly exported to Switzerland, Albania, North Macedonia, Germany and Montenegro. On the other hand, it is worth noting that the year 2020 has marked an increase in exports to new markets such as Croatia, Romania and the Republic of Korea.

Table 9. Export value for the manufacturing of non-metallic mineral products in euros and% in CEFTA, EFTA, EU and other countries

Code	Sub-sector - Manufacturing of non-metallic mineral products	Export			Difference (2020>2019)	Difference in % (2020>2019)
		2018	2019	2020		
13	Manufacturing of non-metallic mineral products	7,843,754.76	7,592,128.25	9,613,701.30	2,021,573.05	26.63

Source: Kosovo Agency of Statistics, processed by MIET/DI

The following table presents in detail the data related to the manufacturing of mineral products for export, with the highest potential sub-sectors.

Table 10. Export value for the manufacturing of non-metallic mineral products in Euros and% in CEFTA, EFTA, EU and other countries by sub-sectors

Code	Sub-sector - Manufacturing of non- metallic mineral products	EXPORT			Difference (2019-2020)	Difference in% (2019 -2020)
		2018	2019	2020		
23	Manufacturing of non-metallic mineral products	7,843,754.76	8,185,416.75	9,613,701.30	1,428,284.25	17.45
23.1	Manufacturing of glass and glass products	2,014,804.86	2,053,424.25	3,142,013.00	1,088,588.75	53.01
23.2	Manufacturing of refractory products	62,420.44	3,120.17	8,920.75	5,800.83	185.91
23.3	Manufacturing of clay building materials	1,191,747.78	1,196,343.86	1,444,113.49	247,769.14	20.71
23.4	Manufacturing of other porcelain and ceramic products	228,834.41	292,910.47	251,561.68	(41,348.47)	(14.12)
23.5	Manufacturing of	216,210.46	3,733.78	4,,440.20	706.42	18.92

	cement, lime and plaster					
23.6	Manufacturing of concrete, cement and plaster items	2,488,881.70	3,145,092.37	2,255,432.06	(889,660.37)	(28.29)
23.7	Stone cutting, shaping and finishing	1,218,679.94	1,103,888.96	1,090,174.22	(13,714.96)	(1.24)
23.9	Manufacturing of abrasive products and non-metallic mineral products	422,175.17	386,902.89	1,417,045.90	1,030,143.11	266.25

Source: Kosovo Agency of Statistics, processed by MIET/DI

Given the increase in annual turnover for 2020, the value of imports in our country has similarly increased.

According to data received from the Kosovo Agency of Statistics and processed by the Department of Industry, we note that in 2020 there was EUR 171 million of imports, compared to 2019 in which we had EUR 167 million of imports and in 2018 where we had EUR 166 million of annual imports.

Table 11. Import value for the manufacturing of non-metallic mineral products in Euros and % in CEFTA, EFTA, EU and other countries

Code	Sub-sector - Manufacturing of non-metallic mineral products	IMPORT			Difference (2020>2019)	Difference in % (2020>2019)
		2018	2019	2020		
13	Manufacturing of non-metallic mineral products	166,279,334.09	167,647,853.52	171,245,487.79	3,597,634.27	2.15

Source: Kosovo Agency of Statistics, processed by MIET/DI

In the table below you can find detailed data on the value of imports in our country according to certain sub-activities of non-metallic mineral products.

Table 12. Import value for the manufacturing of non-metallic mineral products in Euros and% in CEFTA, EFTA, EU and other countries by sub-sectors

Code	Sub-sector - Manufacturing of non-metallic mineral products	Import			Difference (2019-2020)	Difference in % 2019- 2020
		2018	2019	2020		
23	Manufacturing of non-metallic mineral products	166,279,334.09	167,647,853.52	171,245,487.79	3,597,634.27	2.15
23.1	Manufacturing of glass and glass products	29,194,730.28	30,481,637.17	28,285,435.94	(2,196,201.2)	(7.20)
23.2	Manufacturing of refractory products	2,692,193.05	2,926,526.09	4,160,601.26	1,234,075.17	42.17
23.3	Manufacturing of clay building materials	53,289,798.56	50,606,094.64	48,897,342.45	(1,708,752.19)	(3.38)
23.4	Manufacturing of other porcelain and ceramic products	9,360,824.72	8,818,755.63	8,290,976.85	(527,778.78)	(5.98)
23.5	Manufacturing of cement, lime and plaster	44,747,445.31	46,857,549.60	53,892,433.78	7,034,884.18	15.01
23.6	Manufacturing of concrete, cement and plaster items	8,700,035.17	9,376,613.60	11,580,562.74	2,203,949.14	23.50
23.7	Cutting, shaping and finishing the stone	8,648,503.62	6,983,705.80	6,358,725.29	(624,980.51)	(8.95)
23.9	Manufacturing of abrasive products and non-metallic mineral products	9,645,803.38	11,596,970.99	9,779,409.48	(1,817,561.51)	(15.67)

Source: Kosovo Agency of Statistics, processed by MIET/DI

According to these data, the sector of manufacturing of non-metallic mineral products, according to the analysis at the local level, shows that it is a sector that has further development potential in the number of active enterprises, number of employees and also in the value of annual turnover.

ANALYSIS OF PRIMARY DATA FOR THE VALUE CHAIN

The design of the Value Chain analysis for the sectors of the non-metallic mineral products industry is mainly based on the primary data found through interviewing 120 manufacturing, supply and transportation enterprises. On the other hand, it is noteworthy that during the interview of these enterprises we realized that some of them exercise more than one function which means that an enterprise producing non-metallic mineral products can exercise on its own basis the transport or supplier function and vice versa. Also, 5 interviews were conducted with relevant stakeholders of these sectors, including institutions which have supported this sector.

In order to reflect the real situation of the sectors of the non-metallic mineral products industry, in the interviews conducted with enterprises, the following 4 questionnaires were used:

1. Questionnaire for stakeholders of the industry sector for the manufacturing of non-metallic mineral products.
2. Questionnaire for manufacturing enterprises.
3. Questionnaire for supply enterprises.
4. Questionnaire for transport enterprises.

Whereas, in order for the research to be as comprehensive as possible, the interviewed manufacturing, supply and transportation enterprises include 30 municipalities from the Republic of Kosovo, in which the non-metallic mineral products industry sector is more developed.

Based on the total number of 120 interviews conducted for this research, 84% or 101 are manufacturing enterprises, 11% or 13 are supply enterprises, while the remaining 5% or 6 are transport enterprises of non-metallic mineral products.

Figure 10. Structure of enterprises by region

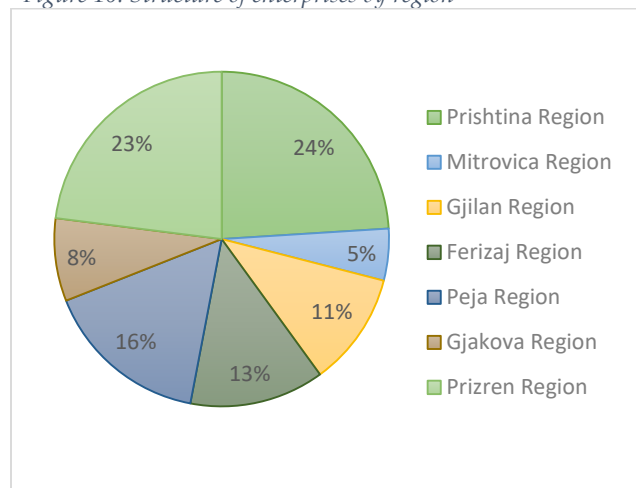
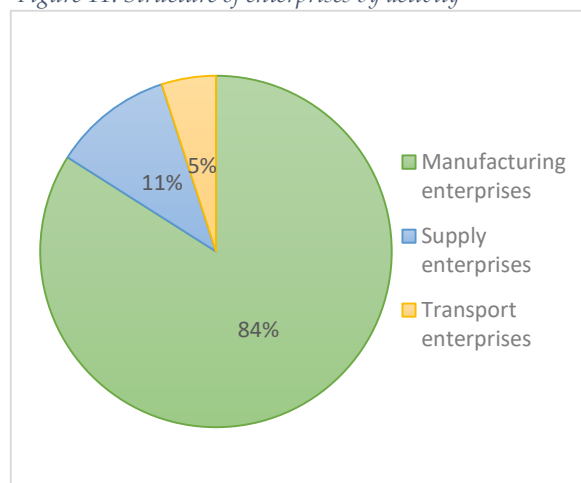


Figure 11. Structure of enterprises by activity



FINDINGS ON SUPPLY (from the perspective of manufacturing enterprises)

During the interviews conducted with the manufacturing, supply and transportation enterprises of the non-metallic mineral products sector, it was understood that some of these enterprises perform more than one function of the Value Chain.

According to the findings of this research, we understand that manufacturing enterprises have cooperation with suppliers/importers from which they are supplied mainly with raw materials. Regarding the way manufacturing enterprises organize their supply, out of the total number of respondents, most of them or 90% cooperate with up to 3 suppliers/importers, 7% of manufacturing enterprises cooperate with up to 6 supply enterprises, 2% of them cooperate with up to 9 supply enterprises, while only 1% cooperate with more than 10 supply enterprises.

Regarding the organization of supply transport for manufacturing enterprises, 52% of them find importing through intermediaries more favorable, while 48% think that it is better to organize imports on an own basis. Some of the basic reasons that enterprises organize transportation through intermediaries are cost, security of supply and time.

Regarding the supply of products of manufacturing enterprises by suppliers, 52% of them have reported that they are supplied with raw materials and necessary materials from the external market, while the rest or 48% of them have indicated that they are supplied with raw materials or materials needed only from the local market.

The raw materials that are mostly used by enterprises for the manufacturing of their products are: cement with 24%, raw stone with 22%, gravel with 21%, then we have granite with 10%, followed by raw glass with 9%, marble with 7%, clay with 6%, as well as granules 1%.

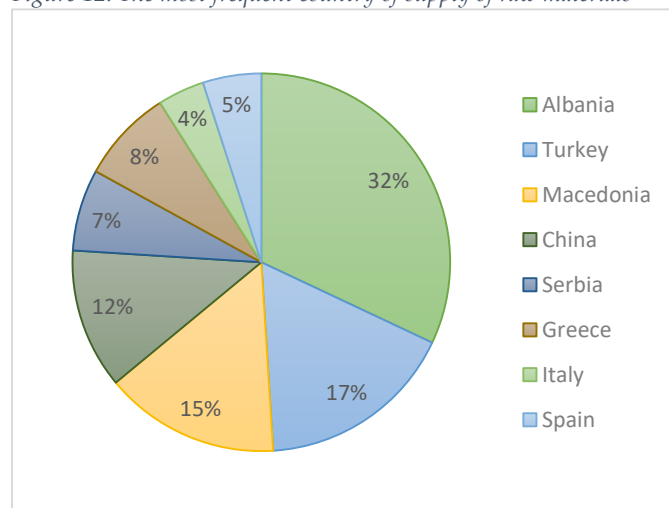
Table 13. Raw material of produced products

Manufactured products	Raw material
Glass products	Raw glass
Ceramic products	Clay, clay
Cement products	Gravel, cement, mortar, pofix
Products from lime and mortar	Insulation / plastering mortar, lime and cement
Concrete products	Gravel and cement
Products from stone crushing	Raw stone, marble and granite
Fire resistant products	Special powder, fire-resistant parts

Source: Data from the research, calculation of the authors

The origin of the raw material is of special importance in the manufacturing of non-metallic products. As mentioned in the above section, from this study we have understood that not all enterprises producing non-metallic mineral products import the raw material or materials needed from the international market.

Figure 12. The most frequent country of supply of raw materials



Of the total number of enterprises interviewed, which reported that the raw material or necessary materials are imported, where the most frequent place for supply is from Albania, which includes 32% of respondents, then Turkey with 17%, followed by Macedonia with 15% and China with 12%. On the other hand, the countries with the lowest percentage of imports are Serbia, Greece, Italy, Spain, etc. which comprise 24% of the total percentage.

It is worth noting that the Covid-19 pandemic has greatly affected the decline in imports, while in terms of the quantity of materials or raw material which was imported from the interviewed manufacturing enterprises, 12 enterprises imported the necessary materials in 2019, compared by 2020 where it had fallen to 8 enterprises that have imported.

The cost of the necessary materials used by the manufacturing enterprises presents a challenge in itself in the process of supplying raw materials. According to the findings from this study, 34% of respondents have highlighted such a problem, while 33% of responses from manufacturing enterprises consider the time of supply of raw materials as a challenge, while administrative and customs procedures with 13% of responses, obstacles in transport with 12% of respondents and also the quality of imported raw material which was mentioned by 8% of the responses of the interviewed enterprises.

FINDINGS ON SUPPLY (from the perspective of supply enterprises)

In order to include all functions of the Value Chain in the sector of non-metallic mineral products, in this study were interviewed enterprises which have the main activity of supplying raw materials or necessary materials. 13 enterprises or 11% of the total number of interviews were interviewed with the supply enterprises.

In terms of supply, out of a total of 13 interviewed enterprises, 8% of them supply the necessary materials from the domestic market, while from the foreign market with 61%, and 31% with materials are supplied only from the international market.

The following table presents the raw material or materials with which the interviewed enterprises are supplied mainly from the domestic market and the international or foreign market.

According to the table below, the main materials that enterprises supply from the domestic market are mainly: cement with 44%, raw stone with 34% and blocks with 22%.

Whereas, among the materials or raw materials which are considered necessary for import, according to interviews 56% of enterprises have stated that they need to import cement, 28% raw stone, while 16% final products.

Table 14. Supply of materials in the domestic and international market

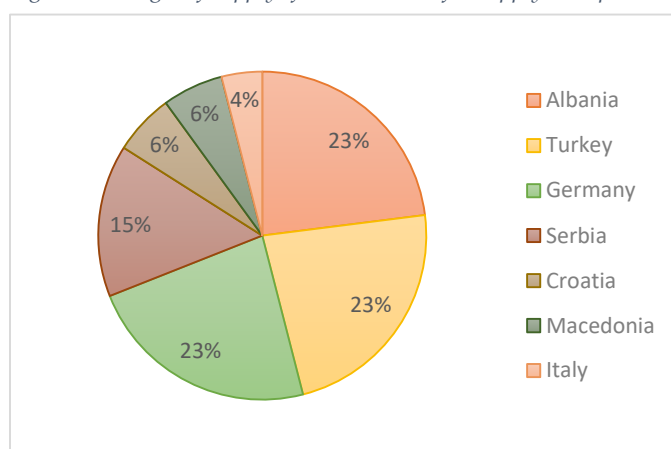
DOMESTIC MARKET		INTERNATIONAL MARKET	
Cement	44%	Cement	56%
Raw stone	34%	Raw stone	28%
Final product	22%	Final product	16%
Total	100%	Total	100%

Source: Data from the research, calculation of the authors

Of particular importance for supply enterprises is the origin of imports. From this study we understood that Albania, Germany and Turkey are the dominant countries which represent 23% of import supplies, then we have Serbia which includes 15% of imports of interviewed enterprises and with 16% each scored Croatia, Italy, North Macedonia, etc.

In terms of import costs from other countries, the cost of customs procedures is considered higher along with transport costs which are considered to be moderately high.

Figure 13. Origin of supply of raw materials for supply enterprises



The main reasons which make enterprises supplied from the international market are the most optimal benefits. From the imported materials, 52% of the respondents consider the most satisfactory benefits, while the least satisfactory benefit is considered that of the local market with 48%.

The interviewed enterprises were also asked about the way of organizing the import of raw materials. Of the total number of enterprises interviewed, 42% of supply enterprises which import necessary materials or raw materials stated that they perform the supply entirely on their own basis.

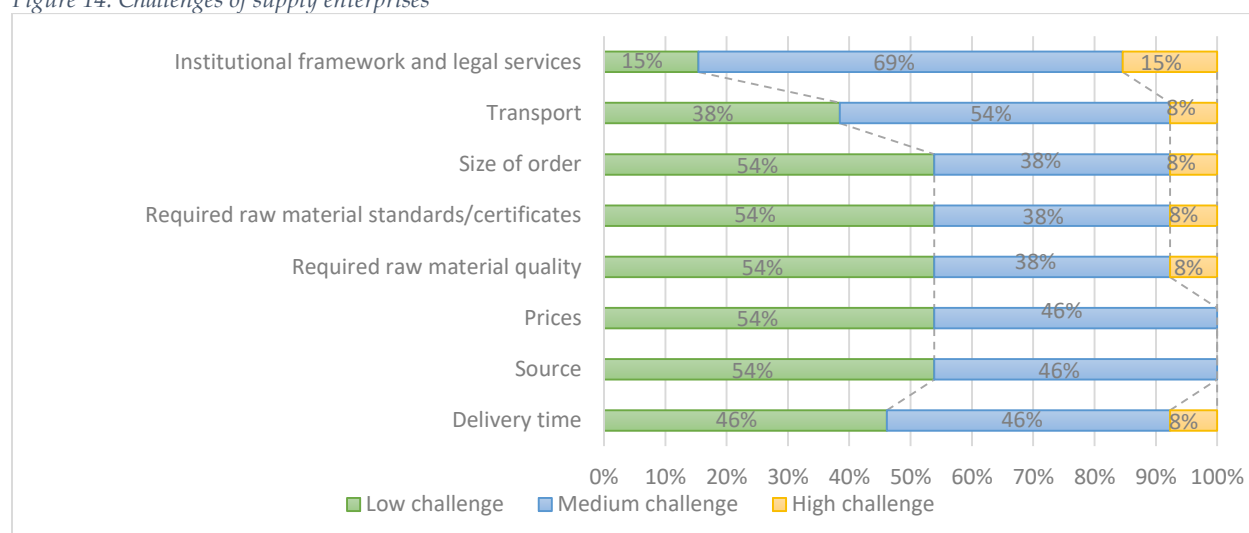
Out of 25% of the enterprises, they organize the import partly on their own basis, 25% of the enterprises organize the import with intermediaries, while 8% of them organize the import with the mix method or as needed.

From the data on disposal, it is understood that 69% of enterprises organize disposal completely on their own. 23% of them carry out the deposition process partly on their own, while the rest or 8% organize the deposition through intermediaries.

Despite the way of organizing the import for the raw material which is already used by the interviewed supply enterprises, they have also indicated the most appropriate form to carry out this process. Through the findings from this research, it is understood that the most appropriate form for import organization is the mixed one (as needed) which represents 50% of enterprises, then as another preferred form that includes 33% of enterprises is considered import based own, as well as the rest or 17% of enterprises prefer to organize imports through intermediaries.

The challenges that supply enterprises face are different. The following table presents some of the challenges stated by the interviewed enterprises. The highest obstacle of supply enterprises is considered the institutional framework and legal and legislative services, followed by the size of the order, transport, quality of raw materials, etc.

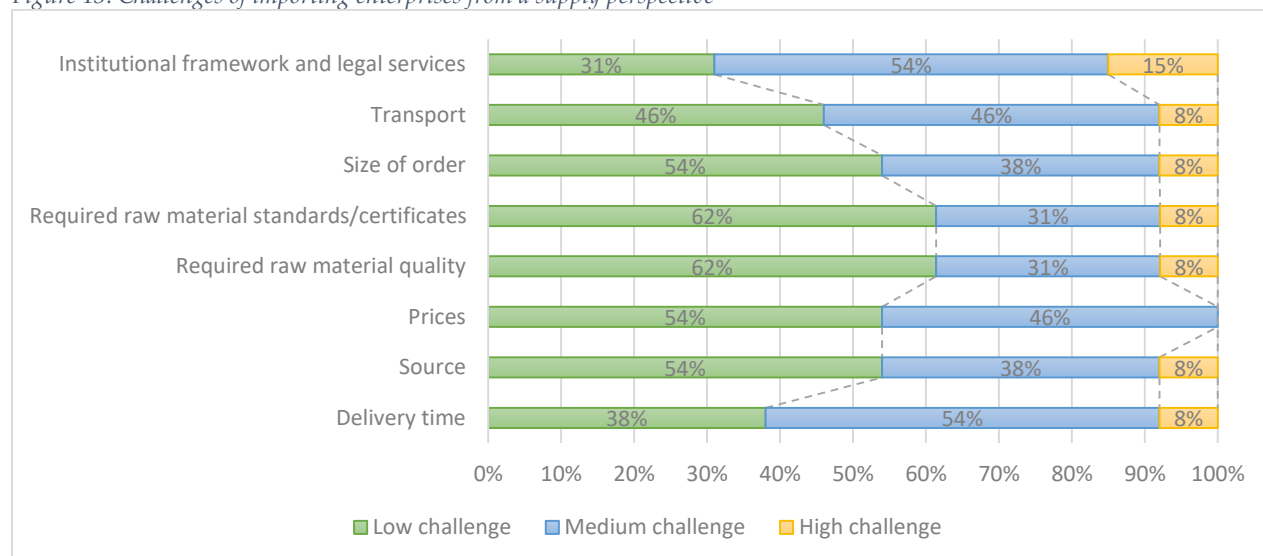
Figure 14. Challenges of supply enterprises



Source: Data from the research, calculation of the authors

Regarding the obstacles of the importing enterprises qualified by the supplying enterprises, as the institutional framework and legal and legislative services, the required standards/certificates of the raw material, the size of the order, etc. are considered as the most significant obstacles. More detailed data on the barriers of importing enterprises from the perspective of suppliers are presented in Figure 11.

Figure 15. Challenges of importing enterprises from a supply perspective

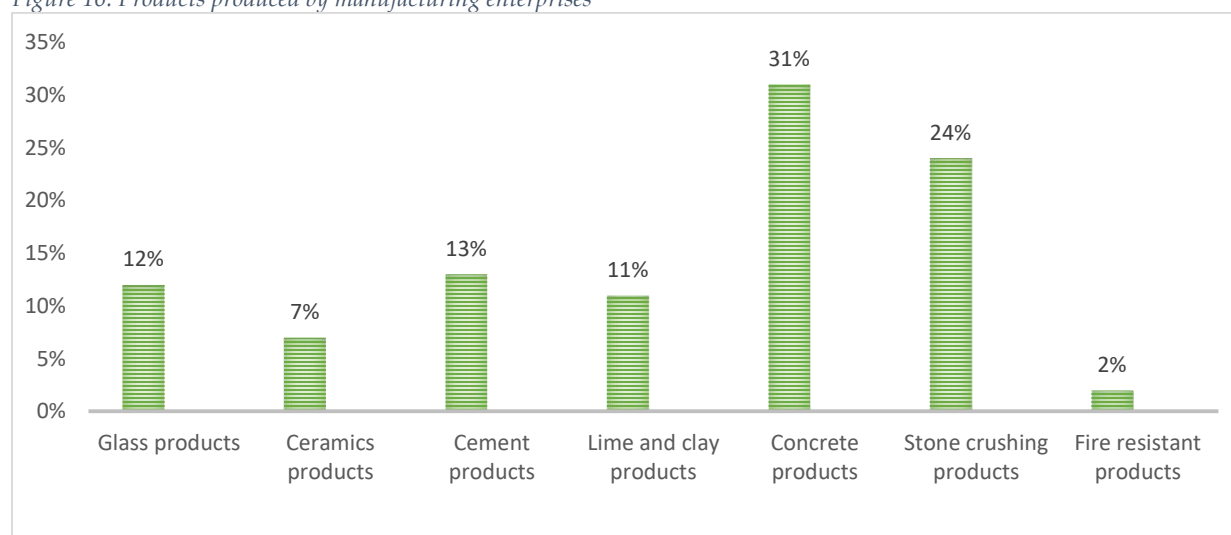


Source: Data from the research, calculation of the authors

ANALYSIS OF PRIMARY DATA - MANUFACTURING ENTERPRISES

The Value Chain study for non-metallic mineral products from the total number of interviews conducted, includes 84% or 101 manufacturing enterprises, which according to their activity are divided into the following manufacturing sectors: products produced from concrete 31% of enterprises, products from breaking (processing) stone 24%, glass products 12% of enterprises, manufacturing of cement products which constitutes 13% of enterprises, products of lime and clay with 11% of manufacturing, manufacturing of ceramic products which includes 7% of enterprises, as well as the manufacturing of fire-resistant products representing 2% of manufacturing enterprises interviewed for this research.

Figure 16. Products produced by manufacturing enterprises



Source: Data from the research, calculation of the authors

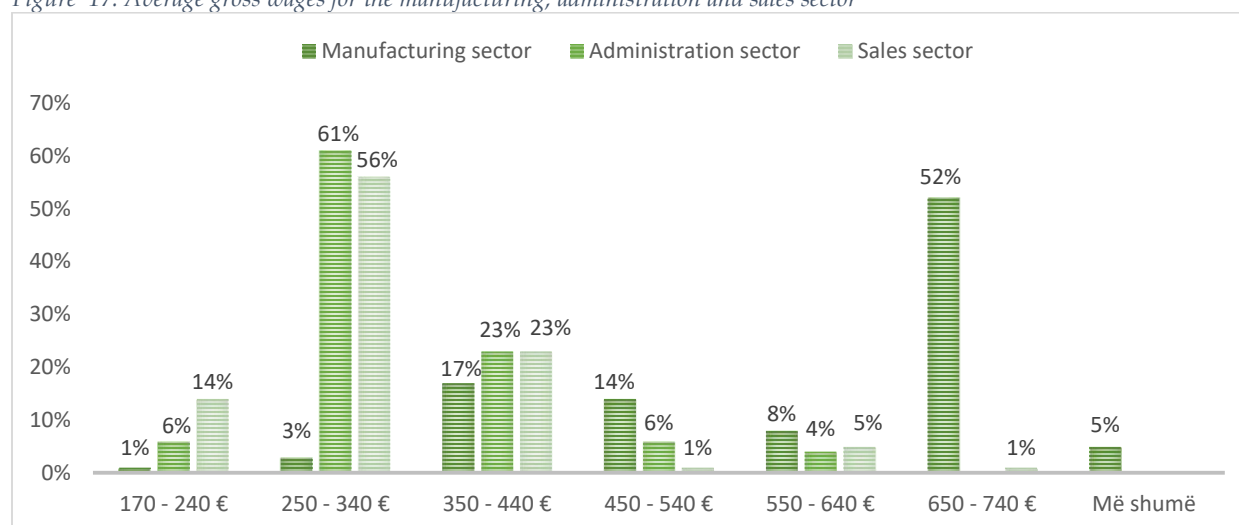
As part of this research, special importance was given to employees in these enterprises. From this research it has been noticed that the highest number of employees are in the manufacturing sector, considering it as the main process of operation of these enterprises. While, the rest of the employees are oriented in the sales and administration sector, which is characterized by a much smaller number compared to the previous sector. In terms of gender, in this activity most of the employees belong to the male gender, with an average age of 26-45 years, who mainly have completed high school.

According to the Value Chain study for non-metallic mineral products, data are presented regarding the average gross wage in three sectors: manufacturing, sales and administration. In the manufacturing sector from the answers received, 52% of the interviewed enterprises stated that the average gross dominant wage is EUR 650-740, 17% stated the average gross wage for employees in the manufacturing sector EUR 450-540, 14% enterprises have stated that the average gross wage for the manufacturing sector is EUR 350-440, 8% have expressed the value of EUR 550-640 average gross wage, 5% of enterprises have stated that they pay more than EUR 740 average gross wage, 3% pay with an average gross wage of EUR 250-340, while the rest, which includes 1% of manufacturing enterprises, pays employees in the manufacturing sector EUR 170-240.

In the administration sector, 61% of non-metallic mineral manufacturing enterprises pay staff with an average gross wage of EUR 250-340, 23% pay administration staff with EUR 350-440, 6% of manufacturing enterprises pay staff an average gross wage of EUR 170-240, 6% pay EUR 450-540 and the rest or 4% pay EUR 550-640 as average gross wage.

Regarding the sales sector, 56% of manufacturing enterprises pay sales staff with EUR 250-340 average gross wage, 23% of enterprises pay staff with EUR 350-440, 14% of manufacturing enterprises pay employees an average gross wage of EUR 170- 240, 5% pay EUR 550-640, 1% pay EUR 450-540 and 1% pay the average gross wage EUR 650-740.

Figure 17. Average gross wages for the manufacturing, administration and sales sector



Source: Data from the research, calculation of the authors

One of the most dominant challenges of these enterprises is finding qualified staff with the required professional knowledge and experience. Of the interviewed enterprises, 71% of them stated that they have many difficulties in finding qualified staff, 25% of the enterprises described it as a challenge with few difficulties, while only 4% of them indicated that they have no difficulty in finding qualified staff.

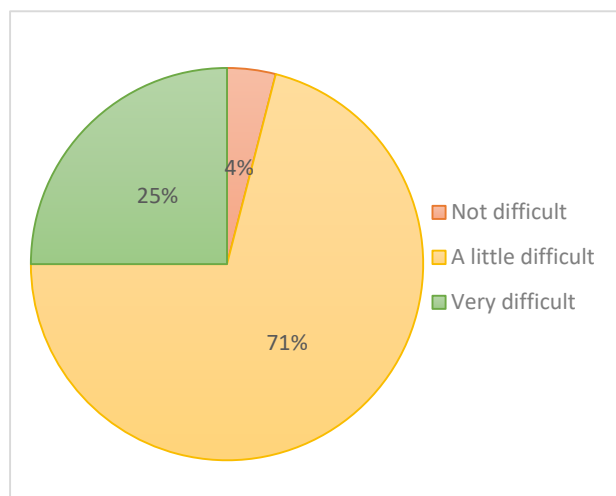


Figure 18. Difficulties in finding qualified staff

As mentioned above, most enterprises have found it difficult to find qualified staff, where the reasons behind this are emigration and lack of knowledge or skills in certain areas, as a result of which enterprises are obliged to request such staff from other countries as well. Although these enterprises provide training and practical work in these areas for vocational training in the manufacturing process, there is still a lack of interest of the workforce.

Some of the most demanded and necessary professional staff for enterprises producing non-metallic mineral products are in the manufacturing sector, where 90% of the interviewed enterprises have expressed that they need more professional staff in the manufacturing process, as required staff are and sales and administration represented by 5% of the interviewed enterprises. Regarding the professional staff which in our country are not available in the local market, the most dominant are innovation with 47%, research and development with 42%, manufacturing with 6% and the other less emphasized are design, sales, administration.

Figure 19. Professional staff required

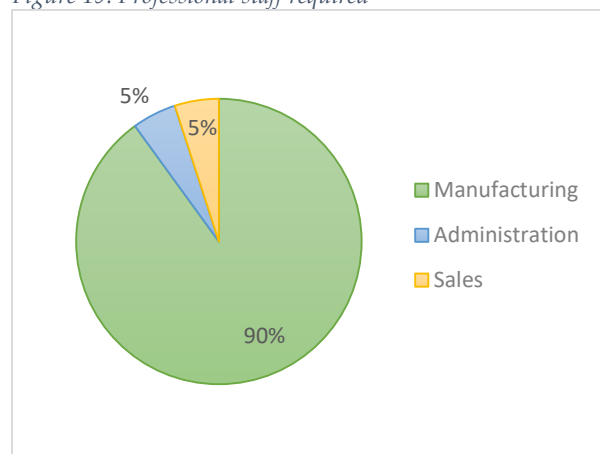
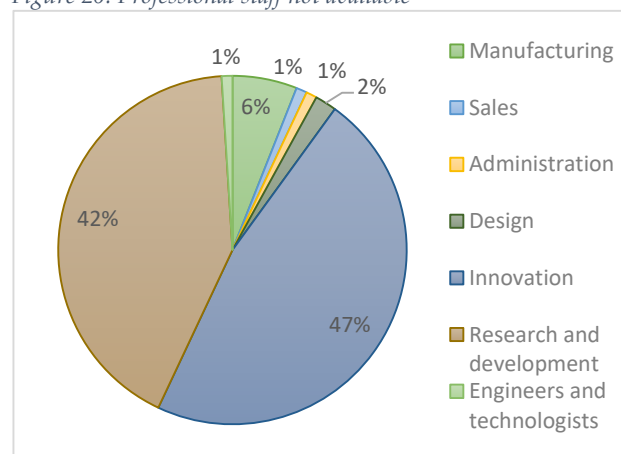


Figure 20. Professional staff not available



Source: Data from the research, calculation of the authors

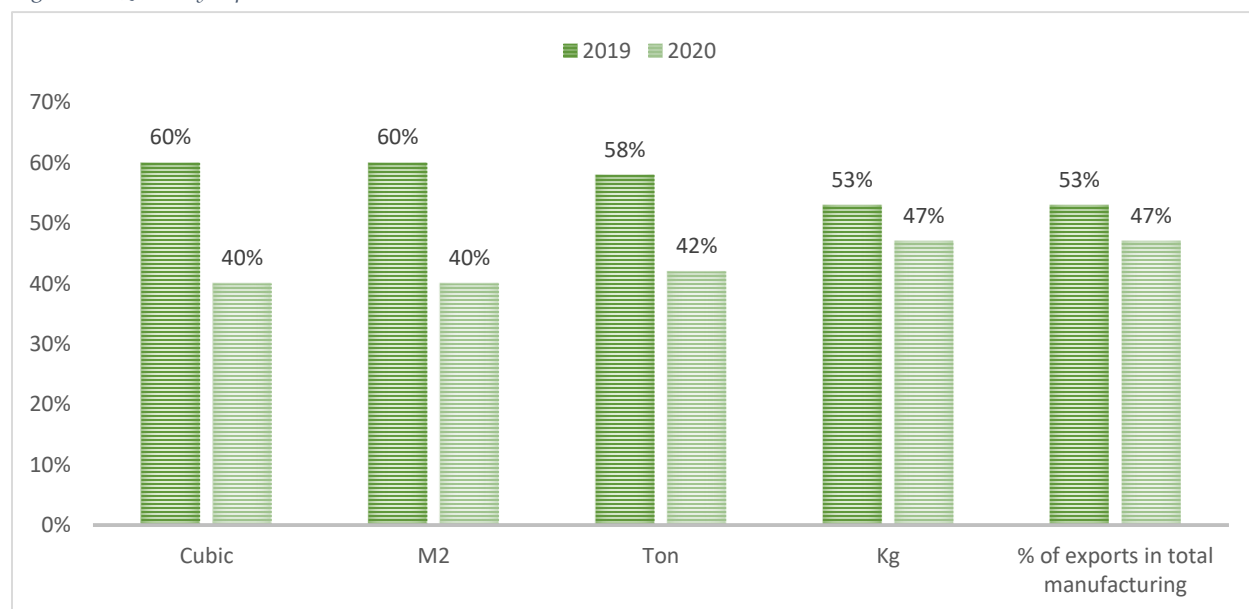
The level of employees in the professional aspect in the sector of non-metallic mineral products plays a very important role in the process of operation and well-being of these enterprises.

Therefore, considering this fact, manufacturing enterprises constantly seek to hold trainings which would improve the activity of enterprises and at the same time the export process. Among the areas for which the need for training is mentioned are: 32% of manufacturing enterprises need training for innovation, 26% training for research and development, 20% for the use of technology, 10% training for manufacturing, while in percentage with it networking and emerging market training is required, with 12% training in management and marketing, out of the total responses of the interviewed enterprises.

DOMESTIC AND EXPORT MARKETS – (from the perspective of manufacturing enterprises)

In addition to the Value Chain study, the exports of manufacturing enterprises were compared between the two years, 2019 and 2020, although not all manufacturing enterprises that export their products have agreed to declare the quantity they export. From the data received, we see that in 2020 there is a significant decline in exports, whereas the most significant reasons for this decline are considered the cessation of work during the Covid-19 pandemic and high transportation costs.

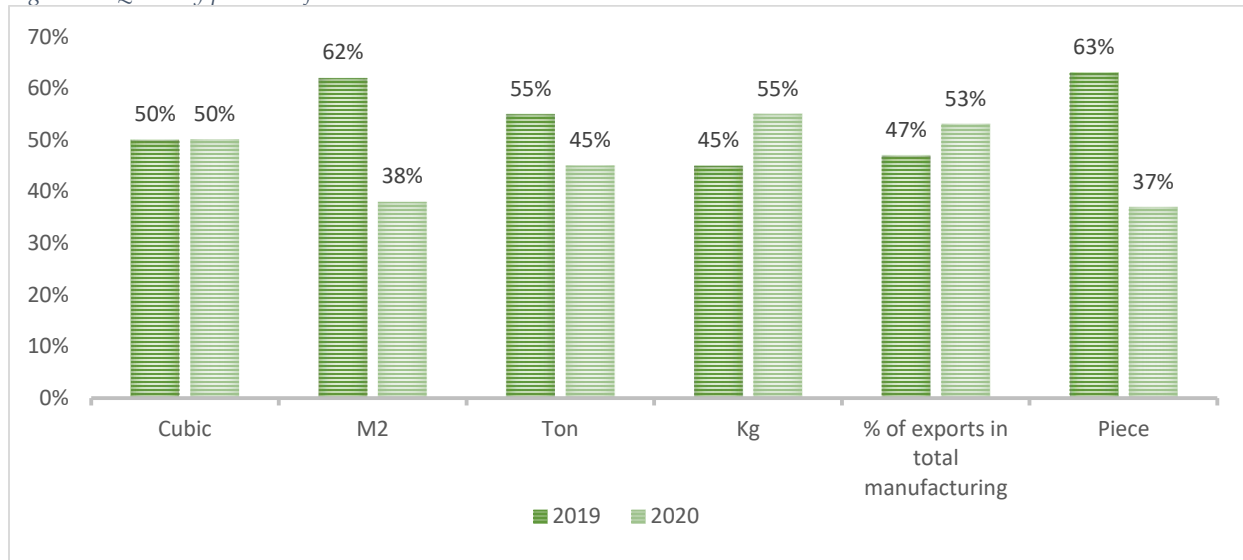
Figure 21. Quantity exported in 2019 and 2020



Source: Data from the research, calculation of the authors

On the other hand, the quantity produced by the enterprise for the local market has decreased compared to the two years 2019 and 2020, which is also justified as a result of the Covid-19 pandemic.

Figure 22. Quantity produced for the domestic market



Source: Data from the research, calculation of the authors

The level of capacity utilization of manufacturing enterprises is classified as a percentage, where 21% of them stated that they use only up to 50% of capacity as enterprises, 74% of them reported using up to 80% of capacity, while the rest or 5 % have stated that they use up to 100% of the capacity as a manufacturing enterprise.

Based on the data on capacity utilization, as a result of the fact that most of the full capacities are not used, some causes of this situation have been defined by the manufacturing enterprises. The primary reason is the market opportunities in which the market demand for product processing is included, which represents 36% of the responses of manufacturing enterprises. The second challenge is considered the competition, which represents 21% of them, followed by the lack of market knowledge with 13% and the lack of workers considered as a challenge for not using full capacity by 10% of manufacturing enterprises, etc.

Figure 23. Challenges for non-utilization of full capacity



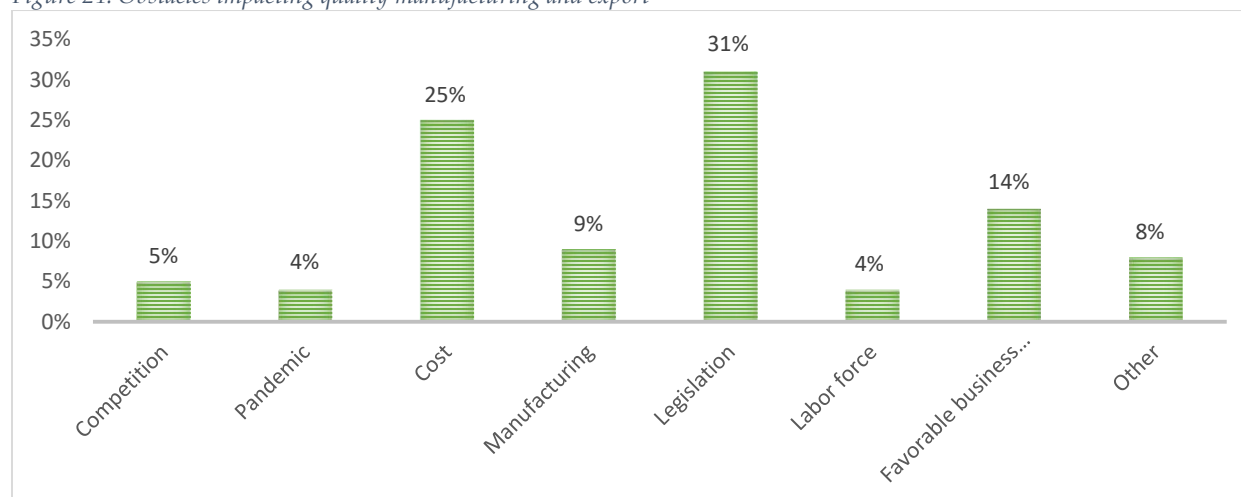
Source: Data from the research, calculation of the authors

OBSTACLES IN THE MANUFACTURING AND EXPORT PROCESS

Regarding exports to Kosovo, there is a very significant trade deficit which reflects a low level of competition in the domestic and international market, resulting in the lack of many types of products.

The study presents data from each of the manufacturing enterprises that have shown the barriers that affect quality manufacturing and exports. According to them, the primary obstacle is classified legislation that represents 31% of manufacturing enterprises. It should be noted that domestic exporters face domestic challenges in exporting their goods, bureaucratic procedures that make manufacturing and export more difficult and costly. The second challenge is classified as cost with 25%, favorable business environment representing 14% of manufacturing enterprises, while with 9% due to the weaker level of manufacturing. We can say that manufacturing enterprises in Kosovo find it more difficult to be competitive outside the domestic market, in a wider range of products, etc.

Figure 24. Obstacles impacting quality manufacturing and export



Source: Data from the research, calculation of the authors

NON-METAL MANUFACTURING INDUSTRY TURNOVER

Data on the average value of annual turnover of non-metallic mineral products enterprises are derived from interviews conducted and data received from the Kosovo Agency of Statistics. These data are analyzed by comparing the years 2019 and 2020. Regarding the data from the interviewed enterprises, we note that from the total number of enterprises, not all of them have declared their turnover. Based on the data received from the interviews conducted, the average value of turnover for the domestic market in 2020 was over EUR 15 million compared to the previous year, where there is a decrease in 2019 with a turnover value that was over EUR 17 million. In 2019, the interviewed enterprises declared over EUR 2 million in export turnover, while in 2020 over EUR 1 million in exports were declared as the average value of annual turnover by manufacturing enterprises.

Table 15. Average turnover value according to the data.

Average annual turnover of interviewed enterprises	Year 2019	Year 2020
Domestic market	17,096,470	15,389,485
Export	2,588,550	1,783,400
Total	19,685,020	17,172,885

Source: Data from the research, calculation of the authors

Whereas, despite the data received from the interviewed enterprises, the data obtained from the Kosovo Agency of Statistics regarding the domestic market and exports at the national level show an increase compared to 2019 and 2020.

According to these data, it is understood that for 2019 over EUR 270 million of turnover have been achieved for the local market, while for 2020 the turnover of the local market has reached the value of over EUR 271 million. In terms of exports, over EUR 8 million of exports were recorded in 2019, while in 2020 over EUR 9 million of exports were recorded.

Table 16. Turnover value for 2019 and 2020 according to KAS official data

Average annual turnover	Year 2019	Year 2020
Domestic market	270,913,636.18	271,489,000.78
Export	8,185,416.75	9,613,701.30
Total	279,099,052.93	281,102,702.08

Source: KAS and MIET/DI

INNOVATION

In the last 3 years 6% of manufacturing enterprises have made investments in research, development or innovation-related activities for the manufacturing of new products or manufacturing lines, while the remaining 94% have denied that they have made any investment in the field of innovation.

Out of 6% of enterprises that have invested in research and development, 66% of them have invested in R&D 10% of the annual turnover, 17% of the enterprises have used up to 7% of the annual turnover in research & development and 17% of them have invested only 1% of annual turnover.

Figure 25. Investment in research and development

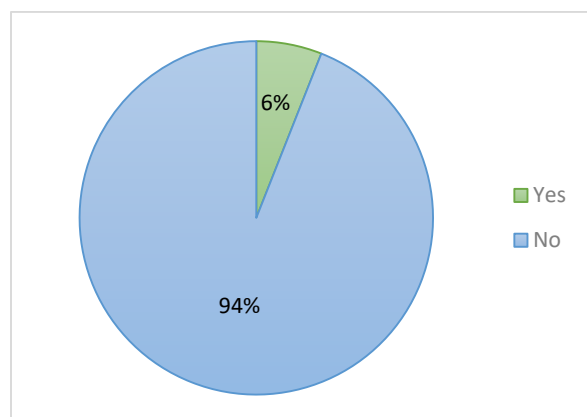
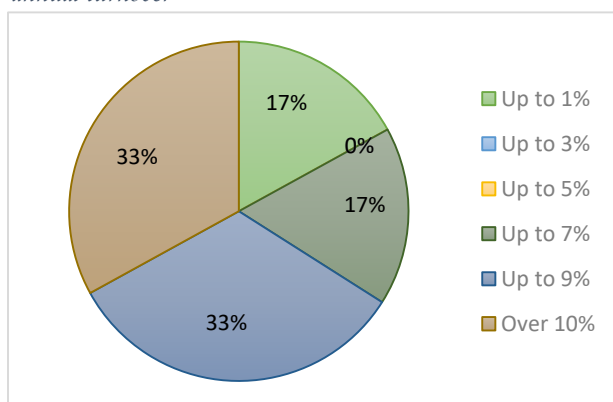


Figure 26. Percentage of investment in innovation out of annual turnover

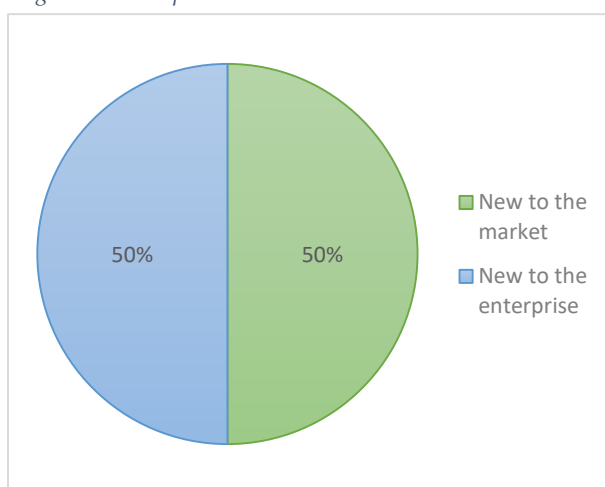


Source: Data from the research, calculation of the authors

From enterprises that have invested in new products or services, it is understood that 50% of them are considered new to the market, which means that these products did not exist before, while the rest or 50% stated that their products are considered existing for the market while being new to the enterprise.

Enterprises that have added new products or services have reported that investments in research, development or innovation-related activities are made solely by the enterprise without any cooperation with an external partner.

Figure 27. New products



Enterprises of non-metallic mineral products continuously express cooperation between them which is considered hopeful for a better smooth running of the work process. Most of the enterprises that declare cooperation are the ones with micro enterprises with 50%, followed by 38% of them that cooperate with small enterprises. Cooperation with medium enterprises represents 9% of them and 3% stated that they cooperate with large enterprises.

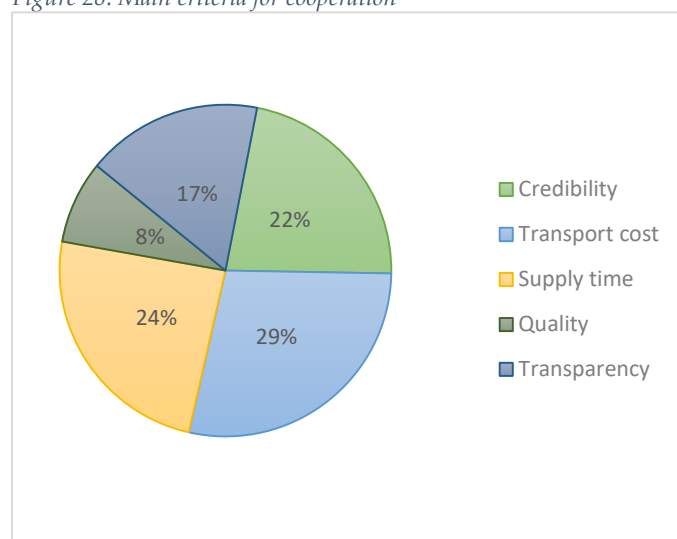
TRANSPORT

The Value Chain study contains data from transport and from the angle of transport enterprises, which represent 5% of the total sample in this research.

The data of this research show different forms of transport organization such as the organization of transport on an own basis, the organization of transport with an intermediary and enterprises that use both of these forms of transport arrangement.

Of the manufacturing enterprises that were interviewed, 61% of them stated that they organize the transport of products on their own basis, 20% indicated that they make transport arrangements only through intermediaries, 13% said that they use both forms to organize their transport, and 6% said they do not transport at all. Regarding the supply enterprises interviewed in the organization of transport, 67% of them stated that they organize transport completely on their own basis, 25% stated that they perform transport through intermediaries and 8% said that they use both forms of organization of transport as needed.

Figure 28. Main criteria for cooperation



The enterprises that transport their products have mentioned some of the main criteria that must be met in order to have cooperation: transport cost, supply cost, reliability, transparency and quality.

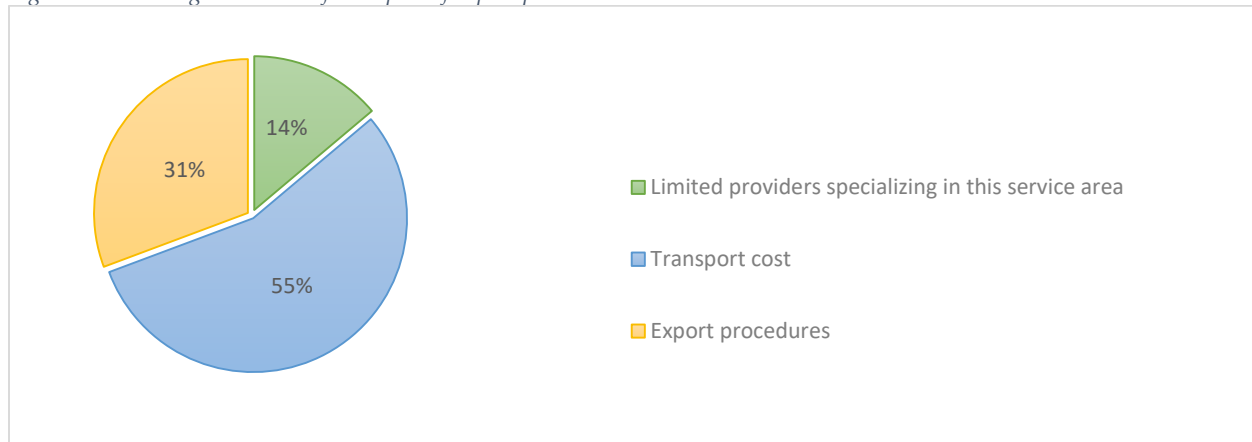
Regarding transport costs, 67% of the total enterprises interviewed reported that transport of goods to neighboring countries is up to EUR 1,000 per 20 tons, while 33% indicated that their costs for transport of goods are from EUR 1,000 to 2,000 for up to 30 tons.

Also, during the interview, about the costs of transporting goods to other countries, 33% stated that these costs range up to EUR 1,000 for 10 tons, 33% said that these costs range from EUR 1,000 to 2,000 for up to 20 tons, although this value of the quantity is justified by different distances between the destination countries, while the remaining 33% have reported that they transport only within the local market.

Of the total turnover of the enterprise, the average cost of transport is calculated up to 9% of the total value for 83% of the interviewed enterprises, another 14% of enterprises have shown that the average cost they spend on transport is up to 19% of annual turnover, while up to 39% of the annual turnover stated as an average transport cost 3% of the interviewed enterprises.

Also, some challenges have been identified regarding the transport of products for export, which enterprises have identified as the most important. The first obstacle classified as such by 56% of enterprises is the cost of transport, as a secondary barrier are export procedures with 31% of enterprises and another challenge from enterprises are limited providers who specialize in this field of service with 14 % of respondents in total.

Figure 29. Challenges in terms of transport of export products



Source: Data from the research, calculation of the authors

EXPORT MARKETS AND REQUIREMENTS

In addition to the study on the Value Chain, the export analysis of manufacturing enterprises in the domestic market has been done. From this survey of all manufacturing enterprises that were interviewed, 26% of them stated that they send their goods to the international market. The export of these enterprises has a higher focus on European countries, specifically the country where it is traded the most is Germany. On the other hand, 74% of them stated that they do not export abroad, even though they are interested in exporting.

To do exports, the following basic documents are required:

- Customs declaration of goods;
- Commercial invoice;
- Certificate of origin of the goods;
- A certificate is required for strategic goods;

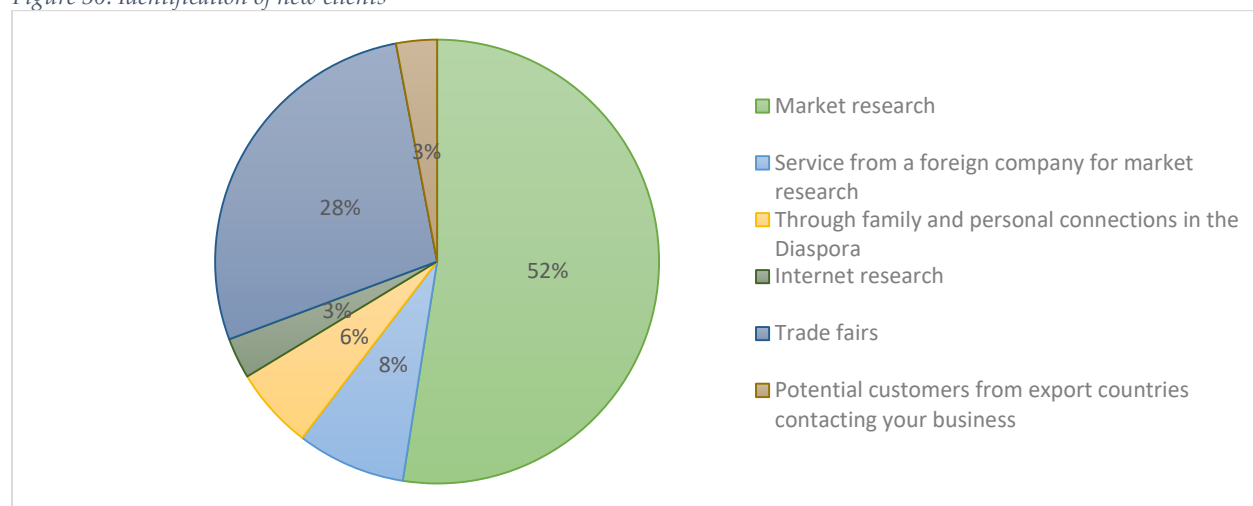
Some of the documents/certificates required for export mentioned by manufacturing enterprises are:

- Commercial invoice;
- Certificate of origin of the goods;
- Quality description, ISO - Standards;
 - ISO 23936 - describes the general principles and provides requirements and recommendations for the selection and qualification of non-metallic materials for service in equipment used in oil and gas manufacturing facilities, where the failure of such equipment may pose a risk to health and safety of the public and staff.
- Declaration on goods that are not harmful to the environment and animals.

Among the uninterrupted work of enterprises which is directly related to their success is the identification of new customers, while based on their responses to finding new customers they

use several forms. 52% of the interviewed enterprises use market research to identify new customers, 28% of fairs and 8% through Diaspora, etc.

Figure 30. Identification of new clients



Source: Data from the research, calculation of the authors

The export orientation of manufacturing enterprises is more towards European countries, mainly Germany, which accounts for 30% of the exports of these enterprises, while 24% of exports are to Switzerland. The lowest percentage is in Austria, France, Belgium, etc., which include 13% in total. As for the Balkan countries, it is mainly exported to Albania with 13% of enterprises, North Macedonia with 9% of enterprises, Serbia with 4% of enterprises and Montenegro with 7% of enterprises. Among the main reasons they export to the countries of the region is the cost of transport, which also depend on the distance of export of goods.

Some of the documents required for export are customs declaration of goods, commercial invoice, certificate of origin, for strategic goods a special certificate is required, the description of quality, specifically for non-metallic products is the ISO 23936 standard, as well as the declaration for goods that are not harmful to the environment and animals, etc.

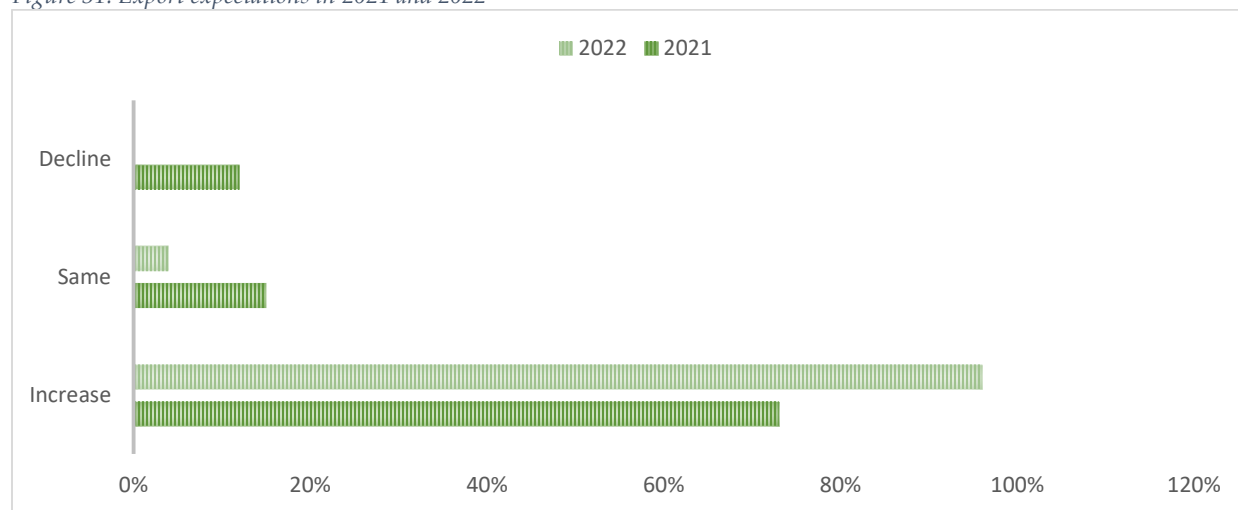
Table 17. Export by sector, product and export country.

Sector	Exported products	Main countries for export	Reason for success	Certificates
Non-metallic products	Concrete products, Cement products, Glass products, Products from stone breaking, etc.	Germany, Switzerland, Albania, North Macedonia, Austria, etc.	Quality and cost	ISO 23936 standard, as well as declarations for goods that are not harmful to the environment and animals.

Source: Data from the research, calculation of the authors

Enterprise expectations regarding exports for 2022 are positive, with 96% of enterprises planning to have an increase in exports, while 4% do not expect changes in this regard.

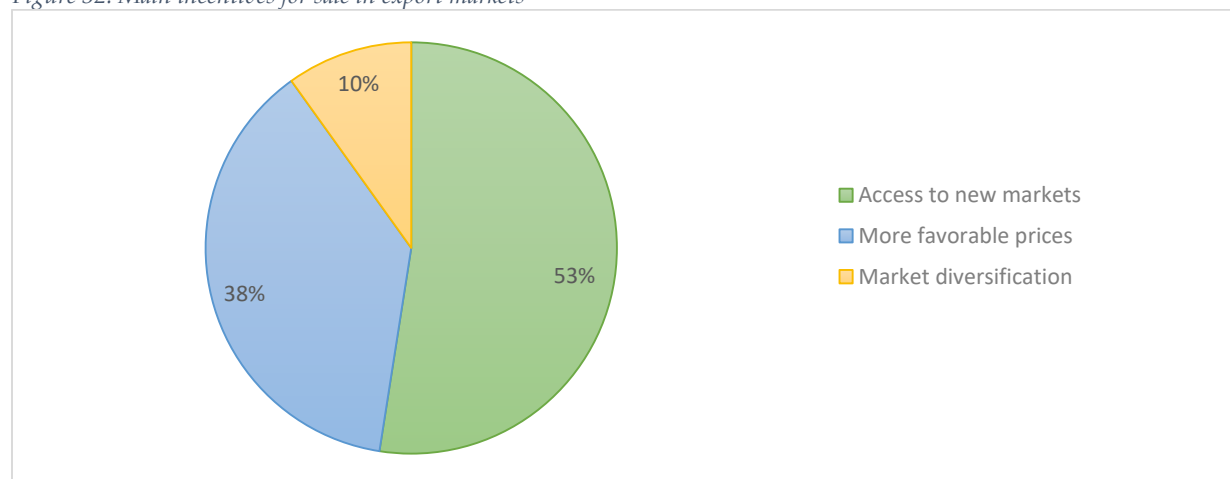
Figure 31. Export expectations in 2021 and 2022



Source: Data from the research, calculation of the authors

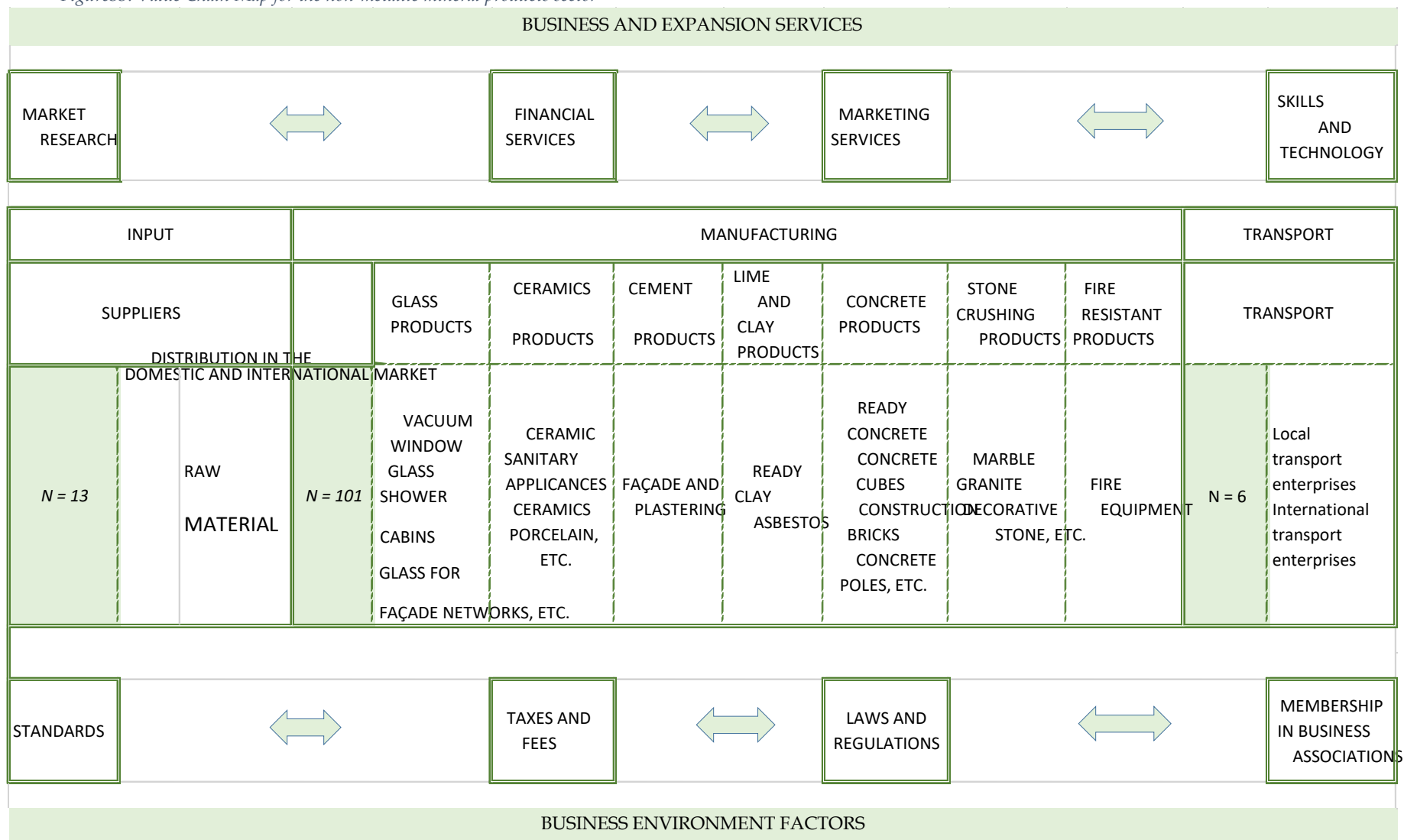
The main reasons for easier access to exports, where 53% of the interviewed enterprises value access to new markets, 38% more favorable prices, and 10% of enterprises stated that the reason is market diversification.

Figure 32. Main incentives for sale in export markets



Source: Data from the research, calculation of the authors

Figure33. Value Chain Map for the non-metallic mineral products sector



BUSINESS ENVIRONMENT

The legal provisions affecting the non-metallic mineral products industry sector are regulated by the Ministry of Industry, Entrepreneurship and Trade, the Ministry of Environment, Spatial Planning and Infrastructure and the Ministry of Finance, Labor and Transfers, according to which the Tax Administration of Kosovo and Kosovo Customs operate.

The Ministry of Industry, Entrepreneurship and Trade is responsible for developing policies related to the industrial sector, fostering private sector growth, with a focus on SMEs, and promoting policies that improve the business environment.

The Ministry of Environment, Spatial Planning and Infrastructure is the institution responsible for environmental issues. Whereas, taking into account the social and institutional pressure, as well as social awareness in general, the development of business practices must be adapted to current requirements related to environmental protection. Non-metallic mineral products play an important role which should be pursued in improving the overall pollution of the environment.

The Ministry of Finance, Labor and Transfers and the Tax Administration of Kosovo are the legal institutions responsible for fiscal policies and taxes. It is important to note that fiscal policy in Kosovo is based on good EU practices. Kosovo Customs is responsible for the implementation of customs regulations, especially for the collection of customs duties as well as the description of trade and protection of trademarks and others. As Kosovo operates in accordance with CEFTA agreements and aspiring EU integration, Kosovo Customs operates in accordance with its standards.

Similarly, as in fiscal policies and taxes, in the Republic of Kosovo there is a law on construction products, which is also created based on the relevant legal provisions of the regulation of the European Parliament No. 305/2011/EU. This regulation sets out the conditions for making the construction products available on the market, including the use of the CE mark, which is affixed in cases where the country of destination of a product so requires. It can also be applied for products in the Kosovo market and the use of the confirmation mark which is applied in cases when the manufacturer meets the requirements for its placement or other equivalent mark of conformity according to the ratified international agreement.

Regarding the recycling of non-metallic mineral products, some of them are such which represent a positive future in this sector, based on the daily increase of human awareness on the recycling, use and impact of these products on the environment. A concrete example is the increase in the use of glass as a result of greater opportunity for recycling than other products, which is positive even on economies which have a wider use of glass in this case as a product. Conversely, if care is not taken on these products and discarded again without any identification, improper handling will cause environmental pollution.

NETWORKING (from the perspective of enterprises)

Manufacturing, supply and transport enterprises of non-metallic mineral products and their cooperation with various institutions greatly affects the progress of the work process, as well as acquaintances with new opportunities and new customers.

Although these enterprises are not members of any association, they are constantly looking for opportunities offered by associations or institutions, including MIET/KIESA and its contribution by providing opportunities to participate in various fairs, which in it at the same time offer networking with other businesses as well as identifying new clients for export.

Also, enterprises producing non-metallic mineral products are looking for liaison with relevant partners, and do research related to getting acquainted with the trends and requirements of the sector.

The industry of non-metallic mineral products, in addition to the interest shown to local enterprises for operation in the manufacturing, supply or transport function, has continuously shown interest to foreign enterprises for investment in this industry in our country.

The Republic of Kosovo offers several benefits to potential foreign and domestic investors including:

- Taxes in Kosovo are very low compared to neighboring countries;
- The tax system has been kept extremely simple;
- Population - young and motivated, 70% under the age of 35;
- A young and motivated workforce with strong entrepreneurial spirit and skills and also general knowledge of most European languages;
- Envious natural resources;
- Free access to the European Union market and neighboring markets;
- Modern institutions in business support;
- Simple and fast procedure for registering businesses (within 3 days);
- Secure banking system;
- Modern legal structure and in accordance with the EU;
- The official currency in Kosovo is the Euro, which eliminates the risk of Eurozones.⁷

⁷ Investment in Kosovo. European Integration

CASE STUDIES - ENTERPRISE A AND ENTERPRISE B

CASE STUDY: ENTERPRISE A

In the framework of this research, the enterprise interviewed as a case study was established in 2010, initially as an enterprise which deals with trade in goods, while after a few years it started operating as a manufacturing enterprise of construction materials, which falls into the category of mineral products not metallic.

It mainly produces clay, Styrofoam, facades and paints for outdoor or indoor environment, depending on the demand of its customers, while for their manufacturing has continuously invested in machinery used by staff and at the same time has conducted training with employees in the manufacturing sector so that the latter are trained in the use of machinery.

Enterprise A currently has about 40 employees, of which the highest number are engaged in work in the manufacturing sector, while the rest are engaged in sales and administration service.

In the early days of this enterprise, its main market was considered the local market and wholesale. Subsequently, this enterprise has started exporting to various countries, mainly European, although export conditions are often considered difficult for local enterprises.

Although this enterprise until this period of operation counts many successes, various challenges have been constantly presented to it, among which is mentioned the lack of interest of the labor force for work in the manufacturing sector.

CASE STUDY: ENTERPRISE B

Enterprise B, which during the interview was considered as a case study, is the enterprise for which the investment in the construction of the factory started in 1983 and ended in 1988 when it commenced operation.

The latter is considered the only factory in the region for the manufacturing of thermal insulation blocks which are considered non-metallic mineral products, and which were widely used in the construction sector. The products that this enterprise expressly produces are light construction materials, which are produced industrially, with a certain brand of aerated concrete, different volumetric mass, easy and fast manipulation in construction.

This enterprise currently has over 90 employees, who are mainly employed in the manufacturing department, being considered as the main link in the operation of this business. The rest of the employees are divided into marketing, legal and administration, financial accounting and commercial and sales departments.

The same, mainly as a main market has the domestic market, but at the same time as it is the only factory in the Balkans for the manufacturing of these bricks and exports goods to neighboring countries, including Macedonia, Albania, Montenegro and Serbia.

MAIN RESTRICTIONS OF THE SECTOR

The following section presents the analysis of the main areas and constraints of the sector for non-metallic mineral products. The limitations and obstacles identified in this study will serve as a reference point to further delve into the root causes and propose adequate interventions to improve the existing situation of this sector.

This study highlights the limitations identified as follows:

1. Difficulties in the supply of raw materials,
2. Obstacles in the export process,
3. Professional training of employees in manufacturing,
4. High electricity consumption,
5. The need to invest in machinery,
6. Impact of the Covid-19 pandemic.

Difficulties in the supply of raw materials: The study of the Value Chain for non-metallic mineral products, highlights the fact that the whole manufacturing process of these products is mainly dependent on the supply of enterprises with raw materials as essential material for manufacturing.

Given that there are often delays in the transport process, this fact often suspends the manufacturing activity of the enterprise as a whole and affects the slowdown of the manufacturing process and the reduction of the quantity produced by the enterprise.

Obstacles in the export process: This study has consistently presented the interest of domestic market enterprises for export to EU countries and other countries, but despite this manufacturing enterprises encounter numerous limitations which often complicate this process.

Given the fact that enterprises producing non-metallic mineral products, mainly identifying new customers or markets through self-based research, is often not done properly. At the same time it is worth noting the impact of insufficient and unreliable market data.

The export process is greatly influenced by the exact fulfillment or adaptation of export requirements, including quality, quantity and timely arrival of manufacturing to order, as well as the lack of institutional support for participation in regional or international fairs specific to this sector and study visits or similar.

Vocational training of employees in manufacturing, safety at work: Considering the fact that the main process of operation for enterprises producing non-metallic mineral products is the manufacturing itself, it is worth noting that the need for employment of professional staff in this activity is necessary.

The Value Chain study for non-metallic mineral products highlights the lack of interest of workers in training and developing their skills in the manufacturing process of non-metallic mineral products.

Another limitation is considered the lack of professional staff needed in the manufacturing process, including engineers and technologists, professional staff in design, innovation, research and development, emphasized by the enterprises participating in this study.

Considering it as hard work, it is worth noting that in the operation of many of the manufacturing enterprises there is a lack of safety and working conditions for employees, which affects inappropriate working conditions and circumstances, which affects the injury of workers.

High electricity consumption: The process of operating as a manufacturing enterprise of non-metallic mineral products in addition to the need for raw materials, machinery and labor is extremely highly related to electricity.

The manufacturing enterprises of this sector are large consumers of electricity, considering it as a key part of the way of operating and often this causes great costs to these enterprises.

The need to invest in machinery: One of the challenges identified by this study is the need of enterprises to invest in machinery.

The process of processing non-metallic minerals also affects the environment, so the enterprises producing these products must constantly change the machinery used in more environmentally friendly machinery.

In addition to the impact on environmental pollution, enterprises constantly show difficulties in the quantity produced as some machines impose the number of quantity produced similarly as well as the quality and precision during the manufacturing process.

Impact of the Covid-19 pandemic: The pandemic situation is also considered a constraint on enterprises in this sector. As a result of its deterioration and limitations, the year 2019 was less profitable for almost all types of operating businesses in our country and worldwide.

RECOMENDATIONS

The Value Chain study for non-metallic mineral products has helped identify limitations for the non-metallic mineral products sector. Based on these identified limitations, the necessary interventions have been proposed, which could potentially improve the situation for the non-metallic mineral products sector.

Main restrictions of the sector	Reason of restriction	Proposed interventions
Difficulties in the supply of raw materials:	The manufacturing process of non-metallic mineral products is mainly dependent on suppliers of raw materials and materials which in our country are largely imported from different countries. Given that there are often delays in the transport process, this fact often suspends the manufacturing activity of the enterprise as a whole and affects the slowdown of the manufacturing process and the reduction of the quantity produced by the enterprise. In addition to the amount of imported raw material for enterprises which are supplied by the local market, there is also a significant lack of mechanisms that protect the mining sector at the local level.	Cooperation between importing and domestic manufacturing enterprises should be as close as possible so that enterprises are able to place larger orders and at the same time receive more appropriate prices. Further promotion of links helps in better integration of the RA of the raw material. Investing in technology (software) which enables the forecast of time for raw material consumption and the calculation of transport time for new orders. As well as to review the possibilities for changing the mode of transport in other alternative forms. Establishment of cooperation agreements between local manufacturing and importing enterprises through information systems, where products can be ordered by customers by valuing the stocks of the importing enterprise. Take steps that strengthen the monitoring mechanism of the mining sector.

		To protect the areas in which the mineral resources are located by the relevant institutions, not to allow their misuse but the construction of infrastructure facilities in the vicinity.
Obstacles in the export process:	Local manufacturing enterprises which have as their main function the manufacturing of non-metallic mineral products continuously express interest in the export of their products. However, despite this fact, the latter encounter numerous limitations which often slow down the export process. Considering the fact that enterprises producing non-metallic mineral products mainly identify customers or new markets through self-based research, through internet research and trade fairs, as a limitation is considered the way of finding new markets as often not done in the right way. At the same time, it is worth noting the impact of	Supporting local enterprises through trainings which increase the knowledge for identifying the most successful ways to find new export markets. Conducting regular talks between the Value Chain and the supporting stakeholders of this sector in order to identify the requirements, improve the connections, restructure the costs and save the supply/logistics chain and other issues that affect the improvement of the current situation. Capacity building through training for the manufacturing sector in the enterprise to meet and adapt export requirements including quality, quantity and achieving custom manufacturing time.

	insufficient and unreliable market data. Furthermore, the export process is greatly influenced by the exact fulfillment or adaptation of export requirements, including the quality, quantity and timely arrival of manufacturing to order, as well as the lack of institutional support for participation in regional or international fairs specific to this sector and study visits or similar.	Support the necessary measures that enable local producers to liaise with foreign markets, including participation in various fairs of non-metallic mineral products which are considered necessary for networking.
Vocational training of employees in manufacturing, safety at work:	Lack of professional staff needed in the manufacturing process, including engineers and technologists, as well as professional staff in design, innovation, research of new markets. Lack of interest of workers to be trained and develop their skills in the manufacturing process of non-metallic mineral products, considering the fact that the manufacturing process requires the acquisition of the necessary skills in this sector. Lack of professional and experienced managerial, administrative and sales staff. Failure to provide incentive salaries to employees such as performance-based or other. Lack of security in the workshops of manufacturing enterprises.	Providing conditions and opportunities for specialized education or training, which affects the training of employees as technologists, engineers, designers, drivers of innovation and research of new markets. In addition to theoretical training, trainees are provided with instruction or practical additions that enable them to apply new skills and gain more ownership in their workplace. Regular assessment of training needs for all categories of employees including employees in the sector of manufacturing, sales, administration. Improving public-private partnerships between training schools and enterprises. Improving curricula and teaching materials related to the skills needed to work with a focus on the

		manufacturing sector, but not limited to this sector. Capacity building of managerial, administrative and sales staff through in-house or out-of-enterprise training. Implement attractive payment schemes for key enterprise personnel. Creating conditions and increasing safety at work in manufacturing enterprises of this sector.
High electricity consumption:	Electricity has continuously created dependence for enterprises producing non-metallic mineral products, but despite this fact the manufacturing process of these products is extremely high consumer of electricity.	Offering projects that enable the use of alternative energy for manufacturing enterprises without being limited only to the sector of non-metallic mineral products. Involvement in solar, hydropower or wind energy projects. Utilization of more economical work machines which consume less electricity during the manufacturing process.
The need to invest in machinery	Machinery used for the manufacturing of non-metallic mineral products causes high pollution in the environment. Investing in machinery enables precision and quality during manufacturing.	Offering projects that enable the use or investment in ecological machinery, which during operation cause less pollution while protecting the environment. Investment of enterprises in machinery which are ecological and enable environmental protection. Investment in machinery that enable serial manufacturing and at the same time quality and precision, adapting to export requirements
Impact of the Covid-19	The pandemic situation is	Providing institutional

pandemic	also considered as a constraint on enterprises in these sectors. As a result of the deteriorating situation with the Covid-19 pandemic the previous year was generally less profitable. In addition to being less profitable, this situation has caused panic and affected the efficiency of workers.	support to enterprises in these sectors. Adapting business strategies and doing business to current trends affected by the Covid-19 pandemic. Capacity building through training and consulting on online sales forms. Capacity building through training and consulting on forms of online communication.
------------------------	--	--

REFERENCES

- Glass Alliance Europe, year 2021, "Statistics Report 2020-2021" - <https://www.wko.at/branchen/industrie/glasindustrie/statistical-report-glass-alliance-europe-2020-2021.pdf>
- DataIntelto, Non-metallic mineral products at the global level, 2020 - <https://dataintelto.com/report/non-metallic-mineral-products-market/>
- World Mining Data, 2021, Federal Ministry Republic of Austria Agriculture, Regions and Tourism, International Organizing Committee for World Mining Congresses - <https://www.world-mining-data.info/wmd/downloads/PDF/WMD2021.pdf>
- Ibid
- Intelto, 2020, "Non-Metallic Mineral Products Market Report" - <https://dataintelto.com/report/non-metallic-mineral-products-market/>
- Investment in Kosovo, European integration - <https://www.mei-ks.net/sq/kosova/investimet-ne-kosove>
- Kirsanov, A., K., et al., 2022, "Market monopolization issues in the mining of non-metallic minerals in transition economies" - <https://jdmlm.ub.ac.id/index.php/jdmlm/article/view/1036>
- Manufacturing Industry Report, year 2020, Ministry of Industry, Entrepreneurship and Trade - Department of Industry - <https://MIET.rks-gov.net/desk/inc/media/E32FFB54-40EA-415F-8577-98E0711C4980.pdf>
- Renaund. M., K., et al., 2020, "Minerals Yearbook 2017-2018" - <https://d9-wret.s3.us-west-2.amazonaws.com/assets/palladium/manufacturing/s3fs-public/atoms/files/myb3-2017-18-mk.pdf>
- Statista, Mar 6, 2022