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Republic of Serbia

COMMISSION FOR PROTECTION OF COMPETITION

REPORT ON THE SECTORAL ANALYSIS OF THE STATE OF COMPETITION IN THE DISTRIBUTION CHANNELS OF CERAMIC TILES AND SANITARY WARE ON THE MARKET OF THE REPUBLIC OF SERBIA, IN THE PERIOD FROM 2018 UNTIL 2020

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INTRODUCTION

Pursuant to Article 47 of the Law on Protection of Competition ("Official Gazette of the Republic of Serbia", number 51/09 and 95/13, hereinafter referred to as: the Law) and Council Decision no. 1/0-05-355/2021-3 as of March 29, 2021, the Commission for Protection of Competition conducted a sectoral analysis of the state of competition in the distribution channels of ceramic tiles and sanitary ware.

The reasons that affected the choice of this sector as a market that will be the subject of sectoral analysis were the dynamic growth of the construction industry, which, owing to the rapid expansion of residential, business (commercial) and factory premises, leads to increased construction consumption, i.e. of construction materials in the Republic of Serbia. Further urbanization and growth of the city's population is expected, which implies an increase in demand in the construction of a large number of residential buildings, business facilities and factory halls, thus boosting the growth of this market. According to the data of the Ministry of Construction,Transport and Infrastructure of the Republic of Serbia, in September 2020, there were 62,000 active construction sites in the Republic of Serbia, which is 16,000 more than in the previous year. Also, the demand for ceramic tiles used in residential buildings has increased because they can be used as a substitute for paints, marble and other similar products. In this regard, we can say that the cost of ceramic tiles and sanitary ware represents a significant part of the total cost of construction of residential and commercial buildings, while the focus of the analysis is the state of competition in distribution channels and identification of potential problems and/or constraints in this market, in terms of the Law.

1. ANALYSIS SUBJECT AND SCOPE

A comprehensive analysis of the distribution channels of ceramic tiles and sanitary ware was conducted, in the market of the Republic of Serbia. This also implied determining the relationship between competitors - manufacturers, importers, wholesalers and retailers in the market of ceramic tiles and sanitary ware, assessing their market share and relative strength, analysis of contractual relationships, and the effects that these relationships may have on competition.

The subject analysis includes the process of identifying vertically integrated retailers, determining their market strength (power), and the effects of their business on competitors, clients and consumers, ie at all levels of the distribution (sales) channel.

1.1. METHODOLOGY

The conducted research is a combination of office and field research (survey method). Office research included an analysis of the legal framework and relevant literature. The majority of the research was conducted on the basis of primary data collected through questionnaires by market participants, competent state authorities as well as available (secondary) data.

The sectoral analysis covers a period of three years, in 2018, 2019 and 2020, and when it comes to geographical coverage, the subject of research covers the territory of the Republic of Serbia.

1.2. SUBJECT MARKETS

Relevant products observed in the analysis are the **ceramic tiles and sanitary ware (sanitary ceramics).** Ceramic tiles are[1] thin tiles made of clay or other inorganic raw material, intended for interior and/or exterior cladding of floors and walls. Ceramic tiles, owing to their characteristics such as: strength, water resistance, easy maintenance, reliability and high durability, are an ideal and durable option for floor coverings. They have significant application in health centers, sports centers as well as in residential buildings. Their water-resistant and easy-to-clean properties make them the best solution for kitchen and bathroom floors. In addition to ceramic tiles, the subject analysis also included sanitary ware. The term sanitary ware (sanitary ceramics) implies: sinks or washbasins, toilet bowls, bidets, toilet seat boards and urinals. The subject product groups include quite diverse products, and in addition, there are a large number of product variations within the same product, in terms of dimensions, technical characteristics, quality, shapes, design, so these are extremely differentiated products. For this reason, it would be practically impossible to make comparisons by quantitative indicators for the segment of sanitary ceramics, and the value parameters of the market were primarily analyzed.

The focus of the analysis was **on the wholesale market of ceramic tiles and sanitary ware**, while the market for the production of ceramic tiles and sanitary ware and the retail market of ceramic tiles and sanitary ware were processed in certain segments, solely in order to fully understand the distribution chain of the subject products. Namely, only a few companies are active in the market of ceramic tiles and sanitary ware, while most of the products in question in the Republic of Serbia come from imports, and focusing on only a few manufacturers of their products and their shares in the production market, would give a distorted picture of the overall offer of the subject products on the territory of the Republic of Serbia. In that sense, the data on imports and sales revenues of domestic producers were processed, and an assessment of the total supply of the products in question was performed. When analyzing the sales market, the focus of the analysis was wholesale, not sales to final consumers, although

[1] According to the definition of the Rulebook on technical requirements for ceramic tiles ("Official Gazette of the Republic of Serbia", no.90 as of December 20, 2019).

several participants who are active exclusively in the retail market of the products in question were interviewed, noting that the largest wholesalers in the market are also retailers.

1.3. ANALYSIS SAMPLE SELECTION

In the process of selecting companies to which it would address requests for data submission, the Commission started from data on companies according to the registered predominant activity in the register of the Business Registers Agency. Thus, according to the registered predominant activity under code **2331 - Production of ceramic tiles and slabs**, and the status of active company with realized business income in the last calendar year for which data were processed, 5 companies are listed. In addition to the production of ceramic tiles, the sample also includes companies registered according to the predominant activity code **2342 - Production of sanitary ceramic fixtures,** and in particular 3 companies and one company that is in bankruptcy, but has the stated predominant activity and generated business income.

The analysis of the relevant products included all companies that, as a registered predominant activity, perform the production of ceramic tiles and the production of sanitary ceramic products, which by their status are active companies that generated business revenues in the last calendar year for which financial reports are submitted, which include the following companies:

1. Društvo sa ograničenom odgovornošću Keramika Kanjiža, Kanjiža;
2. Zorka-keramika, društvo sa ograničenom odgovornošću za proizvodnju keramike, Beograd;
3. Listello and decor tiles doo Gornja Bresnica;
4. Polet - keramika, društvo sa ograničenom odgovornošću, Novi Bečaj;
5. Društvo za proizvodnju, trgovinu i usluge MBS Keramika doo, Međulužje;
6. Društvo za prizvodnju keramičke sanitarije Sanitarna keramika Leskovac doo, Bratmilovce;
7. Akcionarsko društvo za proizvodnju građevinske keramike - Keramika Mladenovac - in bankruptcy
8. Toza Marković doo Kikinda

In addition to companies engaged in production, a significant part of the market is represented by companies engaged in wholesale, ie retail sale of ceramic tiles and sanitary ceramics. In this regard, the Commission requested information from the largest retailers of the products in question, members of the Section of Traders in Ceramic and Sanitary Equipment at the Serbian Chamber of Commerce, which include:

1. Društvo sa ograničenom odgovornošću za proizvodnju i trgovinu Koral, Pančevo;
2. Društvo sa ograničenom odgovornošću Kera Trade, Kruševac, Veliko Golovode;
3. Društvo za spoljnu trgovinu inženjering i projektovanje, S.A.B. Ambijent d.o.o. Beograd;
4. Trgovina Čavra doo, Valjevo;
5. Privredno društvo Inoker doo Beograd - Čukarica ;

6. Društvo za trgovinu, proizvodnju i usluge Nantes doo, Beograd - Čukarica;
7. Društvo za trgovinu, proizvodnju i usluge DIM TRADE doo - Beograd - Novi Beograd;
8. Keramika Jovanović doo Zrenjanin;
9. Predstavništvo Geberit prodajno podjetje doo, Beograd - Voždovac;
10. Enmon doo Beograd - Voždovac;
11. Društvo za proizvodnju, unutrašnji i spoljno trgovinski promet i usluge Alvos doo Ugrinovci and
12. Preduzeće za trgovinu i usluge Diplon doo Beograd - Zemun.

The Commission forwarded requests for information to retailers of ceramics and sanitary ware, as follows:

1. STR BG - SANITARIJA, Beograd;
2. Privredno društvo za proizvodnju i trgovinu na veliko i malo BGA KERAMIKA doo, Beograd;
3. Trgovina na veliko i malo BEL KERAMIKA, Sremska Mitrovica;
4. Preduzeće za trgovinu LIBAR HOME doo, Rajkovac-Mladenovac;
5. Zanatsko trgovinska radnja Keramika Kovin, Kovin;
6. Trgovina na veliko i malo AQUA PROMET doo Jagodina;
7. Nena-keramika doo, Sevojno;
8. Privredno društvo za trgovinu na veliko i malo CALYPSO CO doo Niš;
9. Privredno društvo POBEDA MIT doo Niš
10. Društvo sa ograničenom odgovornošću AQVA THERM doo Subotica;
11. DOO za proizvodnju, trgovinu i usluge QUADRA LINE doo Novi Sad
12. DOO za proizvodnju, trgovinu i usluge LEMIT doo Novi Sad
13. Preduzeće za proizvodnju, promet i usluge VIZANTIN doo Loznica
14. Privredno društvo za proizvodnju trgovinu i usluge SAYA GROUP doo Beograd
15. Preduzeće za proizvodnju, promet i usluge SKALA, Šabac
16. Proizvodno trgovinsko preduzeće Savić doo Smederevska Palanka.

The afore specified companies were asked to submit data on the value of goods sold in the categories of ceramic tiles and sanitary ware; annual average percentage changes in purchase and sale prices, with reasons for changes, photocopies of contracts with suppliers of ceramic tiles and sanitary ware as well as their own view of possible problems that they believe have affected or may affect the development of competition in the market.

2. RELEVANT LEGAL FRAMEWORK

The basic regulation regulating the legal relationship on the market of ceramic tiles and sanitary ware is the **Law on Construction Products** ("Official Gazette of RS", No. 83/18) which regulates the conditions for market placement and market availability of construction products, making a declaration of performance and affixing the conformity mark on construction products, obligations of economic entities, technical regulations for construction products and Serbian technical specifications, simplified procedures, technical assessment bodies, bodies for assessment and verification of constancy of performance of construction products, validity of documents on assessment and verification of constancy of construction performance products and conformity marks issued abroad and other issues of importance for the field of construction products.

Article 5 of the said law, sets forth that a construction product is placed on the market or made available on the market if it complies with the technical requirements established by the Serbian technical specification or technical regulation. Obligations of importers are regulated by Article 16, according to which the importer places on the market of the Republic of Serbia only construction products that comply with the requirements established by this Law.

Article 20 of the Law, sets forth that the technical regulation and/or the Serbian standard referred to in the technical regulation provides methods and criteria for evaluating the performance of construction products in relation to their essential characteristics.

Article 56 sets forth that implementation of this Law and regulations adopted on the basis of this law, is carried out by the ministry responsible for construction and that supervision includes supervision over the work and permanent fulfillment of prescribed requirements of technical assessment bodies, appointed and notified bodies for assessment and verification of performance while Article 57 of the Law that if market surveillance authorities take measures in accordance with the law governing market surveillance or if they have a reasonable suspicion that a construction product does not possess the performance specified in the declaration of performance and poses a serious risk of meeting basic requirements for facilities, market surveillance authorities shall conduct product verification which includes the verification of compliance with the relevant requirements established by this Law and regulations adopted on the basis of this Law.

2.1. BYLAWS

Pursuant to Article 30, paragraph 5 of the Law on Construction Products, **the Rulebook on the Manner of Conducting Assessment and Verification of Constancy of Performance of Construction Products** ("Official Gazette of RS", no. 59 of August 23, 2019) was adopted, which more closely defines the manner of conducting the assessment and verification of constancy of performance, types of bodies for assessment and verification of constancy of performance and contents and types of documents on assessment and verification of constancy of performance depending on the applied system of assessment and verification of constancy of performance determined by technical specification or technical regulation.

Article 2 stipulates that the procedure of assessment and verification of constancy of performance of construction products, preparation and issuance of documents on assessment and verification of constancy of performance is carried out in accordance with the Law on Construction Products, technical regulations adopted on the basis of the Law, technical specifications and this Rulebook.

Assessment and verification of the constancy of performance of a construction product in relation to its essential characteristics is carried out in accordance with one of the systems of assessment and verification of constancy of performance (hereinafter: the System) set forth by the technical specifications or the technical regulation and this Rulebook.

Pursuant to Article 21, paragraph 1 and Article 30, paragraph 5 of the Law on Construction products, The Ministry of Construction, Transport and Infrastructure has adopted **the Rulebook on Technical Requirements for Ceramic Tiles** ("Official Gazette of RS" no. 90 as of December 20, 2019) which prescribes technical requirements that must be met by ceramic tiles, which are placed on the market and which are available on the market, then the procedure of evaluation and verification of the constancy of performance of ceramic tiles, marking of ceramic tiles, mark of conformity and the safeguard clause.

According to the definition from the said Rulebook, ceramic tiles are thin slabs made of clay or other inorganic raw materials, intended for internal and/or external covering of floors (including stairs) and walls, shaped by extruding or dry pressing at room temperature, and then dried and subsequently fired at the required temperature to achieve the required performance, intended for interior and/or exterior cladding of floors (including stairs) and walls. Ceramic tiles can be glazed (GL) or unglazed (UGL).

Pursuant to Article 35 of the Law on Construction Products, the Ministry of Construction, Transport and Infrastructure passed the Rulebook on requirements for the appointment of technical assessment bodies ("Official Gazette of RS", no. 87 as of 12 December 2019). Article 1 of this Rulebook prescribes in more detail the requirements for the appointment of a technical evaluation body that conducts performance evaluation and the issuance of a technical evaluation for one or more areas of construction products. The Rulebook regulates, among other things, the determination of the required performance of a construction product; determination of data for verification by testing and / or calculations, required performance of the construction product; technical assessment preparation procedures; evaluation of the results of the verification of the required performance of the construction product for the intended use; compiling a list of issued technical assessments and publishing them at least once a year on the website of the technical assessment body; forwarding the issued technical assessments to all other bodies for technical assessment and to the ministry in charge of construction affairs; informing other technical assessment bodies and ministries about the withdrawal of the Serbian technical assessment. The application of this rulebook could in the future also regulate potential problems when tiles of poor quality from imports are found on the market.

Ceramic tiles and sanitary ware are products that are in the regime of free circulation, ie there are no restrictions in their circulation. According to Article 23 **of the Law on value added tax in the Republic of Serbia** ("Official Gazette of the Republic of Serbia, no.84 as of July 24, 2004, 86 as of 30 July 2004 - corrigendum, 61 as of 18 July 2005, 61 as of 30 June 2007, 93 as of 28 September 2012, 108 as of 6 December 2013, 68 as of 3 July 2014 - state law, 142 as of 25 December 2014, 83 as of 3 October 2015, 108 as of 29 September 2016.) ceramics and sanitary ware are taxed at a general tax rate of 20%.

2.2. PROBLEMS IDENTIFIED IN RELATION TO THE RELEVANT LEGAL FRAMEWORK

The research of publicly available data on the sector in question identified certain topics that are listed as problems in the sector, and relate to the lack of bylaws that would regulate the market in question. As a significant problem, it is stated that the Rulebook on technical requirements for ceramic tiles, which was adopted at the end of 2019, and was practically in application in August 2020, left a significant number of open issues, especially regarding the Serbian mark of conformity, defining families of ceramic tiles, implementation of a system for evaluating and verifying the constancy of performance of construction products. Tile manufacturers[2] claim that there is a problem of unfair competition in the sector, which is reflected in the import of poor quality tiles (usually lower class rests from Italy and Spain) from warehouses, often from factory waste, such as defective goods or rebound batches, whereas these are designates as raw material in the import documentation.[3] It is further stated that such imported products do not respect the regulation that imported goods require a certificate, so the quality document is not required upon import, and domestic factories must pay certificates for each tile. Domestic manufacturers, on the other hand, cannot count on their place on the shelves without significant costs for certificates and quality certification, and it is proposed that the state establishes control from border to trade, which would ensure that everyone in the market works under the same conditions. Also, one of the surveyed participants stated that each importer is expected to fulfill its legal obligation in terms of

[2] https://www.keramikakanjiza.com/uploads/main/downloads/digitalna_stampa_osvojila_i_keramicarsku_industriju.pdf
[3] https://www.danas.rs/ekonomija/drzava-ne-obezbedjuje-svima-iste-uslove-za-rad/

proving compliance or testing of goods at the IMS Institute to obtain a certificate, so the applicant doubts whether all importers actually do so, and whether perhaps importers of local character have “less” of tendency to be subjected to the system of control.

In this regard, it is noted that the Law in Article 17, paragraph 4 sets forth that if the construction product poses a risk, the distributor is obliged to notify the manufacturer or importer and the competent market surveillance authority, whereas the application of provisions may affect the resolution of potentially prominent problems.

At the end of 2020, the Section of Traders in Ceramic and Sanitary Equipment was formed in the Serbian Chamber of Commerce within the Group of Traders in Specialized Non-Food Goods. According to publicly available information,[4] 12 companies supported the initiative to form this section and in particular: Koral OD, Kera Trade doo, S.A.B. Ambijent doo, Čavra doo, Inoker doo, Nantes doo, Dim Trade doo, Keramika Jovanović doo, Geberit prodaja doo, Enmon doo, Alvos doo, Diplon doo. At the meeting held in March 2021, questions were raised about the possibility of improving the bylaws in the field of sanitary equipment, which relate to the impossibility of obtaining a certificate from an accredited body for certain products in the field of sanitary equipment, and stated that this should be a topic for a working meeting with representatives of the Ministry of Construction, Transport and Infrastructure.

Base on the analysis of regulations, and in connection with the observed shortcomings in relation to bylaws (issues such as testing the continuity of product performance and inspection over the application of regulations), it can be concluded that the competent authorities are in charge of construction.

In addition to the above, during the analysis of the relevant legal framework, no problems were noted in the sector in question regarding possible regulations that restrict, distort or prevent competition. Entry into the subject market is regulated by laws and bylaws which elaborate technical regulations in the subject area, and apart from operations in accordance with the above regulations, there are no administrative barriers to market entry.

[4] https://pks.rs/vesti/odrzana-sednica-sekcije-trgovaca-keramickom-i-sanitarnom-opremom-4062
https://pks.rs/dogadjaj/unapredenje-poslovanja-trgovaca-keramickom-i-sanitarnom-opremom-1454

3. MARKET FEATURES

Growing construction consumption is a major factor driving both global and domestic demand for ceramic tiles. Ceramic tiles have become an important part of furnishing not only bathrooms and kitchens in households, but are also used for decorative purposes, both in stores and shopping malls. The market for ceramic tiles and sanitary ware is very fragmented with a large number of local, regional and global manufacturers.

3.1. WORLD MARKET

An analysis of the global ceramic tile market estimates that the global ceramic tile market will grow from $ 207.7 billion in 2020 to $ 281.5 billion in 2025, with an estimated average annual growth rate of 6.5%.[5] The reason is primarily the growth of the world's population, the growth of disposable income, the growth of activities in the renovation and refurbishment of housing units, as well as the growth of investments in the residential and commercial sector. However, the volatility of raw material prices for this industry, as well as the increase in regulations and taxes, will have a limiting effect on market growth. Tile production is an extremely energy-intensive production process, and energy, gas and transportation costs are key inputs affecting the industry. The world's largest manufacturers of ceramic tiles are globally present and among them are: Mohawk Industries (US), Siam Cement Group (Thailand), Grupo Lamosa (Mexico), RAK Ceramics (UAE), Kajaria Ceramics (India), Grupo Cedasa (Brazil), Ceramica Carmelo Fior (Brazil), Pamesa Ceramica (Spain), Grupo Fragnani (Brazil), STN Ceramica (Spain). The global ceramic tile market is relatively fragmented, and there are several global, regional and domestic manufacturers present in the markets. These market participants have strong and well-established supply and distribution networks, which contribute to the profitability and efficiency of production.

In the comprehensive analysis of competitiveness in the ceramics sector in the EU[6], the indicators of SWOT analysis were identified through 4 dimensions given as a framework for the analysis of the observed sector. SWOT analysis is a simple, but powerful tool for assessing resource capabilities and weaknesses, market opportunities and external "threats" to the future progress of a company considering its market position. A quality SWOT analysis is a key prerequisite for creating a business strategy that aims to seize the best opportunities for the company and protect it from threats from the business environment. The idea is to analyze the above factors to enable developmental behavior, which ensures maximum use of

[5] Source: Ceramic Tiles Market by Type (Porcelain, Glazed, Unglazed), Application (Floor, Internal Wall, External Wall, Others), End-Use Sector (Residential & Non-residential), & Region - Global Forecast to 2025, издавач: The MarketsandMarkets edge, новембар 2020.

[6] FWC Sector Competitiveness Studies - Competitiveness of the Ceramics Sector Within the Framework Contract of Sectoral Competitiveness Studies – ENTR/06/054 Final report, 13 October 2008, израђена за ЕК - Directorate-General Enterprise & Industry

opportunities and abilities, and to find a way to minimize weaknesses and threats. Concrete analysis should be viewed primarily through the manufacturing sector in terms of understanding the complete business environment in which the industry takes place. SWOT is the English abbreviation for Strengths, Weakness, Opportunities and Threats. The following are listed as basic indicators of each of the dimensions:

Table 1 – SWOT analysis

Strengths: o Innovation - The EU is a world leader in the production of ceramic products - produced by flexible and innovative SMEs[7] o High-quality production o Design and branding - high value, unique designs, in some cases use the country of origin label. o Quick response - SMEs can respond quickly to the changing market demand and new opportunities o New technologies in the production process o Knowledge clusters - process innovations and increasing competitiveness	**Weaknesses:** o Low flexibility of production - Uncertain demand in the sector, and low flexibility in the use of production capacities o Protection of property rights - initiating legal proceedings against cheap "copies" are difficult and expensive for SMEs in some sub-sectors o Image - Low ability to attract qualified employees o Mature production process - the ceramic production process is in a mature phase and reaches its limits, while the ability to improve efficiency and further reduce CO_2 emissions is limited o High barriers to entry for new companies due to high start-up costs, economies of scale and vertically integrated distribution channels can hamper innovations o High sunk costs due to capital-intensive production capacities can hinder the transition in production from low to high product prices o Product weight - the high weight of some products increases production costs o Difficult to install - floor and wall tiles are harder to install than replacements such as carpet or paint.
Possibilities: o Mergers and acquisitions to achieve economies of scale o Specialization in the sale of ceramics with high added value corresponds to the capabilities of many SMEs, o Access to new markets in emerging economies	**Threats, dangers:** o Competition based on low costs - increase in imports of cheap ceramics from new growing economies o Variable demand - dependence on demand in other markets such as construction and steel. o China is a serious competitor of the EU

[7] Small and Medium Enterprises - hereinafter referred to as SME

o Brand and loyalty - to be closer to the buyers (geographical location - eg. retailers) o Gain new customers by using the Internet, o Improving services - just-in-time and time-to-market concepts particularly important in b2b markets o Developing clean technologies. o Increased research and development activities of ceramics; smart materials, use of lasers in decoration, nanotechnology, process automation. o Labeling and marking of benefits - certificates, designations of origin, eco-labeling	on the world market of ceramics o Increased energy price o Raw materials - reliance on imports of raw materials from non-EU countries o Environment, health and safety standards. High level of environmental protection EU regulation and control of emissions create a competitive challenge for non-EU countries where environmental legislation is less stringent, but above all increases the costs of European-based production facilities. o Intellectual property rights are often violated for the sub-sectors of fine ceramics o In the long run, material substitution and relatively high dependence on the construction and renovation sector may challenge the competitive position o Trade barriers - The EU faces high import tariffs on many export markets, e.g. compared to the US in China and Mexico. Non-tariff barriers are also becoming increasingly important. o Less and less workforce.

Source: FWC Sector Competitiveness Studies - Competitiveness of the Ceramics Sector Within the Framework Contract of Sectoral Competitiveness Studies – ENTR/06/054 Final report, 13 October 2008, prepared for EC - Directorate-General Enterprise & Industry

3.2. ENTRY AND EXIT MARKET BARRIERS

In the same document, the analysis of the sector structure identified potential barriers to market entry, primarily in the manufacturing sector. Bearing in mind that the identified barriers are general for the sector in question and that, with certain corrections, they can be applied to other geographic markets, the following is a basic overview of the identified barriers to entry and exit from the ceramics market:

Economies of scale arise when the long-run average costs of a company decline as a result of output growth. Achieving significant economies of scale in production requires mass production, and high labor and capital productivity is usually required. Many large ceramics producers in the EU are able to operate at low cost because they can achieve economies of scale through high capacity utilization and large unit production.

Sunk costs are costs that have been incurred and cannot be reimbursed. According to the data of the British authority for protection of competition from 2007, the cost of establishing a brick factory is between 50-70 million euros. The most significant sunk cost for ceramic producers are kilns, which are expensive and have a long average lifespan. The fact is that the existence of such costs, which cannot be reimbursed in the event of a business failure, can act as a significant barrier to entry, assuming it is not feasible to lease production capacity from another producer. There is also an element of risk associated with the purchase of kilns, because high long-term investments make it difficult to respond to short-term fluctuations in the energy sector. Taking these factors into account, the new entrant must be confident that it will be sufficiently efficient in the medium and long term for production in a sector where environmental regulations are becoming more stringent; otherwise buying a kiln will not be economically viable. Such high capital-intensive, financial and economic costs and risks together act as a significant barrier to entry.

Advantages of existing manufacturers and availability of raw materials. According to the British brick manufacturer, a 25-year supply of clay is needed to justify the investment in a new brick factory, and therefore, each new entrant must be close to a long-term source of this key raw material. Most of these sites are already occupied and they enjoy the benefits of the first incumbent. Given that many ceramics subsectors rely on raw materials and that stocks are not infinite, the geographical availability of raw materials can act as a significant barrier to entry. Also, rising energy costs, which contribute to higher transport costs, have made this factor even more important in recent years.

Legal barriers, tariffs and non-tariff barriers. A significant legal barrier to entry into most large sub-sectors of the ceramics sector lies in the form of local government approval for construction. Even if a new participant can locate the required raw material reserves, a 2007 study estimates it takes up to 5 years to get approval to plan a new clay quarry in the UK. This is one of the reasons why current manufacturers are expanding their current reserves rather than looking for new ones. Also, health and safety laws, environmental regulations, fiscal laws are other examples of legal barriers to market entry. An important parallel issue that also needs to be considered are restrictions on entering foreign markets, in the form of tariff and non-tariff barriers.

Access to markets and distribution channels. Even if a new entrant can somehow overcome the aforementioned barriers to entry, it must still be confident that there is room in the market for new capacities. The new entrant would also be at a disadvantage due to the brand and customer loyalty of other established manufacturers. Given that ceramic products are relatively heavy and transportation costs per unit are high, a new entrant may be limited to where it can set up its production facility, especially if it needs to be close to its market.

High energy intensity. The relatively high energy intensity of ceramic production and the price of energy, inflation and volatility, can act as a barrier to entry. High short-term to medium-term energy prices can prolong the time it would take for a new entrant to achieve economies of scale, which increases barriers to entry for established ceramics producers.

Macroeconomic uncertainty. The last barrier to entry that applies to almost every sector is macroeconomic uncertainty. Uncertainty about inflation, interest rates, currency values, energy prices, political relations, stock market performance, real estate prices, credit availability and employment rates potentially increase barriers to entry into the sector. As a large part of the production of ceramics is actually derived from the construction sector, their prospects tend to be quite closely related.

3.3. DEMAND CHARACTERISTICS OF CERAMIC TILES AND SANITARY WARE ON THE MARKET OF THE REPUBLIC OF SERBIA

Unlike the demand for consumer goods which is final, the demand for ceramic tiles and sanitary ware is derived demand. Ceramic tiles are used for cladding walls and floors and are usually formed from clay and a number of other raw materials. Wall and floor tiles can be shaped, of different sizes, stylized and glazed in various ways, all in order to improve the final product, as well as to meet the criteria of physical durability, longevity and aesthetics. The demand for wall and floor ceramic tiles is closely derived from the demand in the construction industry, which is affected by the number of newly built buildings and the demand for buildings in which renovations and upgrades are carried out. Demand is also closely influenced by changes in consumer preferences and trends in space furnishing.

Having in mind that the market of ceramic tiles and sanitary ware in the Republic of Serbia, is in direct connection with the growth of construction works, as the most important indicator of construction activity in Serbia, the basic elements of demand for these products arise from the value of construction works, in particular the newly built buildings, as well as the number and area of completed apartments.

Official statistics publish data on the value of construction work performed, which includes: the value of work, the value of installed material and finished products for installation, energy consumed and other costs related to the performance of construction work. The value of work performed does not include: the value of subcontracting work, land acquisition costs, design, supervision and VAT. The value of buildings includes the value of work performed on residential and non-residential buildings.

According to official data from the Republic Statistical Office, the value of construction work performed in 2020 amounted to 451,551 million RSD (or 3,840 million euros, according to the average official average exchange rate of the NBS in 2020), which is about 30% more than in 2018. Of the stated value of performed construction works, 203,033 million RSD refers to buildings, which is an increase of 27% compared to 2018. The growth trend of completed apartments is evident from 18,051 in 2018, then 24,803 built apartments in 2019 and 25,326 in 2020, and there is an evident and increased demand for products with which the newly built space is equipped, including ceramic tiles and sanitary ware, which are installed in residential and non-residential buildings (hotels, business buildings, commercial buildings, traffic, buildings for cultural and artistic activities, industrial buildings, etc.). The sources of supply of ceramic tiles and sanitary ceramics were mostly imported. Official statistics publish data on the production of ceramic and floor tiles. In the observed period, the highest production was recorded in 2019 and amounted to 10,353 thousand m^2, while in 2020 the production of ceramic tiles decreased by 13% and amounted to 8,974 thousand $m^{2.}$ Aggregate data on the most important elements that determine the demand for the products in question are given in the table below, while data on the total supply of the products in question are given in the next chapter.

Table 2 – Basic indicators of construction and consumption of materials (ceramic tiles and sanitary ceramics) in the Republic of Serbia

Aggregate data Basic construction indicators	2018	2019	2020*
Value of the executed construction works in Serbia, in millions of RSD	344,670	471,640	451,551
Value of the executed works in Serbia – buildings, millions of RSD	159,616	196,245	203,033
Value of the executed works in Serbia – other structures, millions of RSD	184,445	275,003	248,264
Completed apartments – number	18,051	24,803	26,326
Completed apartments – surface, thousands of m2	1,337	1,962	1,858
Industrial products in the Republic of Serbia			
Manufacturing – Ceramic tiles and floor slabs, thousands of m2	10,351	10,353	8,974

*preliminary data

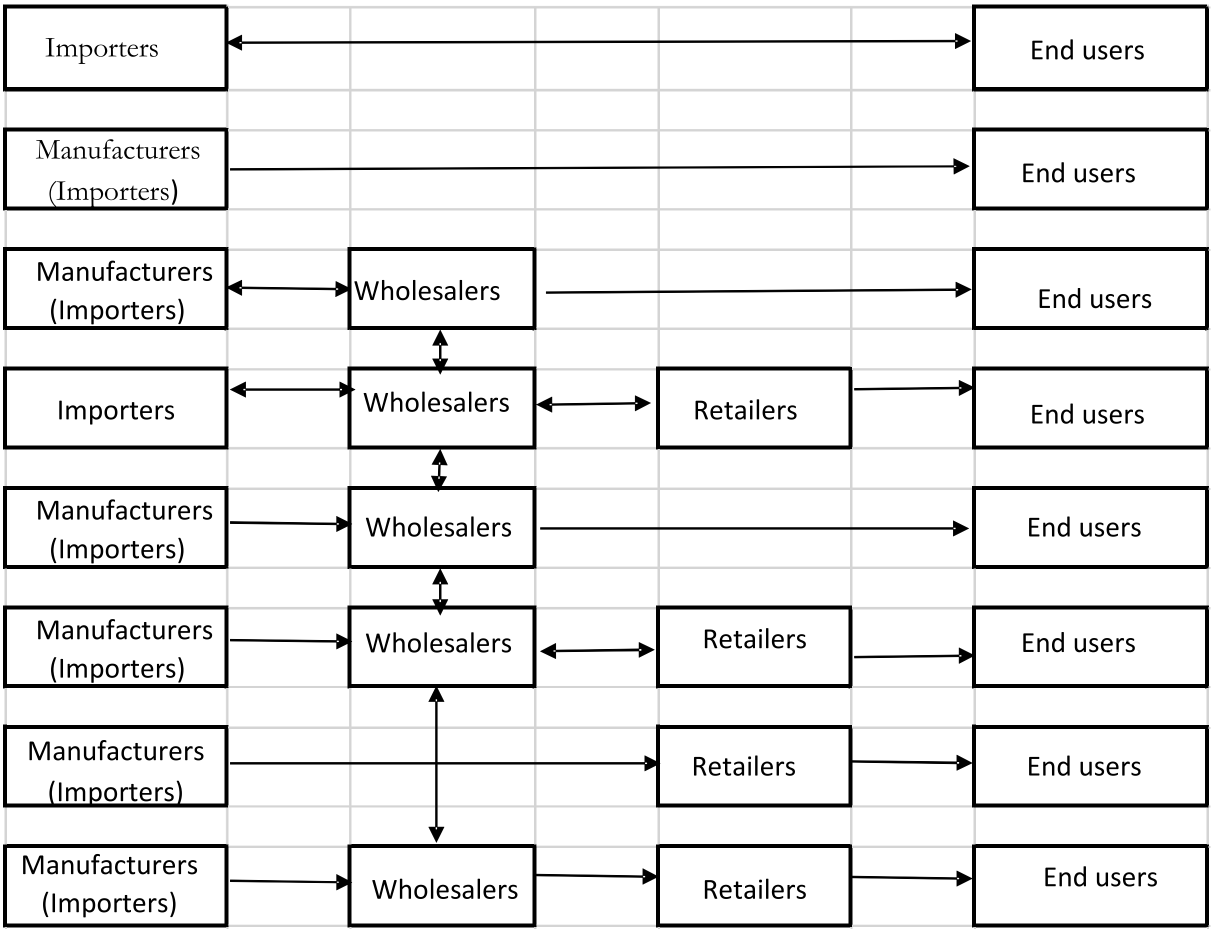
Source: *Republic Statistical Office - Statistical Yearbook of the Republic of Serbia 2021.*

3.4. STRUCTURE, FORMS AND TYPES OF COMPETITION IN DISTRIBUTION CHANNELS OF CERAMIC TILES AND SANITARY WARE

The structure of the distribution channel always includes producers and / or importers and end users (customers). The simplest distribution channel is a direct channel that runs between manufacturers and / or importers and end customers. Indirect channels, on the other hand, rely on one or more intermediaries between manufacturers / importers and end customers. In most types of distribution channels for ceramic tiles and sanitary ware, intermediaries are also included, ie only wholesalers or only retailers, while in certain types of distribution channels, wholesalers and retailers are also included. Creating market power and managing demand is the main goal of each of the participants in the distribution channels.

In the market of ceramic tiles and sanitary ware, the control of the distribution channel is shown in the following figure.

Image 1 - Types and forms of distribution channels



Based on the previous image, it is clear that distribution channels are extremely complex, so it is necessary to consider the types and forms of distribution channels.

In the first case the importer is the end user. A large number of investors, legal entities and individuals directly import ceramic tiles and sanitary ware for their own needs, which are not intended for further sale. According to the analysis of the Customs Administration, in addition to investors engaged in the construction of business and residential buildings, there are a number of retailers of food and non-food products, who directly import ceramic tiles and sanitary ware to build new buildings and / or renovate existing ones. In the second case, end-users purchase the products in question directly from manufacturers and / or importers. In the third case, the importer is also a wholesaler, importing the said products, but also buying them from the producers and selling them to end users. In the fourth case, the importer is a vertically integrated trader, performing all functions in the distribution channels. In fact, a vertically integrated trader controls and manages distribution channels through economies of scale and bargaining power. In the fifth case, there is no complete vertical integration, and wholesalers procure goods from manufacturers and / or importers and sell them to end users. In the sixth case, wholesalers also perform the function of retail, such as various warehouses of construction materials. In the seventh case, retailers dominate the sales channels, and the goods in question are procured directly from producers and / or importers, which are then sold to end users. The eighth case is a traditional distribution channel in which four participants are present, none of whom have control over the distribution channel.

On the basis of the presented types and forms of the distribution channels of ceramic tiles and sanitary ware, the following types of competition may be identified:

1. Competition on several horizontal levels, ie mutual competition between different manufacturers and/or importers, then between different wholesalers, and finally between different retailers;
2. Vertical competition, ie competition when wholesalers together with other members of their own distribution channel compete at different levels of the distribution channel;
3. Competition between the complete channel system, ie when vertically integrated traders compete with other vertically integrated traders.

On the market of ceramic tiles and sanitary ware in the Republic of Serbia, there is vertical integration in advance, which is not initiated by manufacturers, but by the largest importers, thus achieving the highest degree of control of distribution channels, and consequently the competition between entire channel systems. Vertical integration can bring numerous advantages, primarily related to the efficiency of the complete system, higher purchasing power, lower costs, quality control, and finally lower final prices. However, vertical integration can also lead to a number of threats to competition, primarily related to market division and foreclosure.

Given that the observed markets have a large number of participants who trade with each other in order to complete their sales range, the assessment of the aggregate market size is determined as the sum of production values (costs of goods sold - COGS) in the domestic market and the difference between imported and exported quantities. realized by merchants. Thus, the effects of multiple accounting of sold quantities in mutual wholesale transactions of participants in the wholesale market are eliminated.

3.5. PRODUCTION AND IMPORT OF CERAMIC TILES IN THE MARKET OF THE REPUBLIC OF SERBIA

The total offer of ceramic tiles on the market of the Republic of Serbia comes from domestic manufacturers and imports. Roughly estimated, without taking into account the stocks from the previous period and the stocks at the end of the year, the offer from domestic sources makes 1/3 of the total offer while 2/3 of the total quantity of ceramic tiles is imported.

The most important manufacturer of ceramic tiles in Serbia are companies that have been present on the market for decades and the largest of them are: Zorka keramika Šabac, Keramika Kanjiža, Polet - keramika Novi Bečej and Toza Marković Kikinda. According to data collected from market participants, domestic manufacturer of ceramic tiles achieved over 3 billion RSD or slightly less than 26 million euros in sales on the domestic market in 2020. Also, the sales of domestic manufacturers in the observed period were the highest in 2019, when they amounted to 3.8 billion RSD, or over 32 million euros. The table below shows the revenues from the sale of domestic manufacturers of ceramic tiles realized on the market of the Republic of Serbia by years. The highest sales revenue in 2020, individually, was generated by producers […] and […], with over […] RSD annual sales revenue each.

Table 3 – Sales revenue from domestic producers of ceramic tiles in the market of the Republic of Serbia, in RSD, 2018-2020.

Sales revenue from ceramic tiles in the domestic market – value in RSD			
Manufacturers	**2018**	**2019**	**2020**
Zorka – keramika doo Šabac	[…]	[…]	[…]
DOO Keramika Kanjiža	[…]	[…]	[…]
Polet – keramika doo Novi Bečej	[…]	[…]	[…]
Toza Marković Kikinda	[…]	[…]	[…]
Total revenue on the domestic market	**3,372,834,055.14**	**3,820,546,888.00**	**3,043,472,897.59**

Source: *Data on market participants*

In addition to sales on the domestic market, domestic manufacturers are also competitive on the foreign market and export a significant part of their production. At the end of this section, export destinations and exports by market participants in the observed period will be presented in more detail.

Despite the domestic production and exports to foreign markets, Serbia is a net importer of ceramic products. According to data on imports collected from the Customs Administration, for tariff numbers within the code *6907 - ceramic tiles for paving and cladding*, in 2020, ceramic tiles worth over 6.7 billion RSD, or slightly more than 57 million euros, were imported. The import value in 2020 increased by 32% compared to 2018. The major importers of the entire observed period are as follows: Enmon doo Beograd (with import share of /10-20/% in 2020), Keramika Jovanović doo Zrenjanin (/10-20/% of total import) and Eurodom doo Beograd (/5-10/%).

Table 4 – Import of ceramic tiles per importers - value in RSD, 2018-2020.

Ceramic tiles importers – value inRSD	2018.	2019.	2020.
Enmon doo Beograd	[…]	[…]	[…]
Keramika Jovanović doo Zrenjanin	[…]	[…]	[…]
Eurodom doo Beograd	[…]	[…]	[…]
Lemit doo Novi Sad	[…]	[…]	[…]
Minotti doo Beograd	[…]	[…]	[…]
Noks NJ doo Beograd	[…]	[…]	[…]
C.Y. Doo Novi Sad	[…]	[…]	[…]
Koral Pančevo	[…]	[…]	[…]
Domis enterijeri doo Laćarak	[…]	[…]	[…]
Aqua Casa doo Beograd	[…]	[…]	[…]
Other	2,464,377,867.12	2,749,109,813.77	3,232,443,855.24
Total ceramic tiles import	**5,099,202,665.83**	**5,940,339,456.02**	**6,736,155,330.85**

***Source**: Customs Administration*

Based on the afore said, a structure can be noted, of the total supply of ceramic tiles on the domestic market, which, as already mentioned, consists of tiles produced on the domestic market (1/3 of the total supply) and imported tiles (2/3 of the total supply). The estimated value of the total supply on the domestic market is in the range of 7-8 billion dinars, without taking into account stocks at the beginning and end of the year. The sample of companies on the basis of which the conclusion was made included all significant producers of ceramic tiles in Serbia and all direct importers of tiles. We should keep in mind the extensive distribution network of the products in question, because direct importers sell to other wholesalers and retailers, and manufacturers sell to both wholesalers and retailers, and the sales value can later enter the estimated value of wholesale and retail,several times. In the overview provided further below, the concern that it contains more than the calculated value of the same products that are later traded, has been removed. To that end, relatively "net" shares in the total supply of ceramic tiles on the Serbian market were estimated, which represent their share in the total turnover, which is calculated as the sum of costs of goods sold by domestic producers traded in the Republic of Serbia and direct import value, from which the purchase value of imported goods was deducted, which was not intended for further sale, but for own needs.

Table 5 – Total offer of ceramic tiles in the Republic of Serbia in RSD and shares of manufacturers and importers in the offer, in%, 2018-2020.

TOTAL OFFER of ceramic tiles in RSD – shares of manufacturers and importers in %	2018	2019	2020
a) Domestic market manufacturing (costs of sold goods)	2,800,810,00	2,996,414,000	2,291,579,000
b) Direct import (procurement value of the imported goods)	5,099,202,666	5,940,339,456	6,736,155,331
c) Import for one's own needs	295,486,500	265,759,728	317,466,540
d) Export (without the manufacturer)	711,221,027	654,399,252	556,584,999
e) Estimated offer of ceramic tiles (a+b+c+d)	**6,893,305,139**	**8,016,594,476**	**8,153,682,792**
Enmon doo Beograd	/10-20/%	/10-20/%	/10-20/%
Zorka – keramika doo Šabac	/10-20/%	/10-20/%	/10-20/%
DOO Keramika Kanjiža	/10-20/%	/10-20/%	/5-10/%
Eurodom doo Beograd	/0-5/%	/0-5/%	/5-10/%
Keramika Jovanović doo Zrenjanin	/0-5/%	/0-5/%	/0-5/%
Polet – keramika doo Novi Bečej	/5-10/%	/0-5/%	/0-5/%
Lemit doo Novi Sad	/0-5/%	/0-5/%	/0-5/%
Toza Marković Kikinda	/5-10/%	/5-10/%	/0-5/%
Minotti NJ doo Beograd	/0-5/%	/0-5/%	/0-5/%
Noks NJ doo Beograd	/0-5/%	/0-5/%	/0-5/%
Other importers	35.41%	36.57%	41.93%

***Source**: Customs Administration data and Market Participants Data*

According to the table, Enmon doo Belgrade, Zorka keramika doo Šabac and Keramika Kanjiža have the largest shares, which in the observed period amounted to between / 10-20 /% per year. The combined share of the four largest market participants in 2020 was / 30-40 /%. Polet-keramika doo Novi Bečej and Toza Marković Kikinda also had shares in the range of 5-10%. All other importers individually had significantly lower shares. In addition to the importers listed in the table, it should be added that in the category of other importers about 300 importers of ceramic tiles were recorded in the observed period. The countries from with highest rate of import are Italy (36% of total tile imports), Spain (17%), Turkey (13%), Bulgaria (12%) and Poland (10%).

In addition to value indicators, the market of ceramic tiles was estimated through quantitative indicators, specifically in m^2. Namely, the data on the production of ceramic tiles in m^2 are published by official statistics, while the data of the Customs Administration on the quantity of imported and exported ceramic tiles are included in the balance equation. Putting the said indicators in relation, it is estimated that the size of the ceramic tile market in Serbia is between 12 and 13 million m^2 of ceramic tiles. The table below shows the data on the basis of which the assessment was made, as follows: production quantified to which the imported quantity was added and the exported quantities of ceramic tiles were deducted.

Table 6 - Assessment of the ceramic tiles market in the Republic of Serbia, quantified in m^2, 2018-2020.

Ceramic tiles in m2	2018	2019	2020
a) Production (data from the RSO)	10,351,000.00	10,353,000.00	8,974,000.00
b) Import	7,559,532.80	7,749,688.05	8,628,724.37
c) Export	5,219,400.34	4,985,035.19	4,975,879.50
d) Estimate – Spent on the RS market (a+b+c)	***12,691,132.46***	***13,117,652.86***	***12,626,844.87***
Estimate […] of the RS market size	10,000,000.00	12,000,000.00	12,000,000.00

Source*: Republic Statistical Office, Customs Administration and Market Participants Data*

The stated estimate according to the quantitative criterion is close to the estimate made by one of the market participants.

3.6. CERMIC TILES EXPORT

International trade poses a significant element in the ceramics sector. Apart from selling on the domestic market, domestic manufacturers are also competitive in sales on foreign markets. The most important export destinations of domestic manufacturers of ceramic tiles are the surrounding countries and this can be seen from the table below, which lists the individual countries of export destination. In 2020, the majority was exported to Bosnia and Herzegovina (25%), then Croatia (17%) and Hungary (16%).

Table 1 6 – Export of ceramic tiles per countries of export, value in RSD, 2018-2020.

Export of ceramic tiles per country of export	2018	2019	2022
Bosnia and Herzegovina	695,128,463.14	752,004,464.92	619,638,867.23
Croatia	357,946,495.47	435,834,549.77	411,159,170.08
Hungary	423,954,230.69	497,121,679.34	389,117,095.48
North Macedonia	334,792,025.58	359,442,920.20	347,588,717.71
Montenegro	400,651,025.90	462,970,442.14	309,811,205.94
Other	1,054,864,169.55	872,990,904.94	762,957,753.97
Total value in RSD	***2,843,382,179.64***	***2,847,243,281.97***	***2,451,155,714.94***

Source*: Customs Administration*

The largest domestic exporter of ceramic tiles in 2020, with a share of /40-50/ % in the total export of ceramic tiles is the company Zorka keramika Šabac, then Keramika Kanjiža with a share of /10-20/ %, Keramika Jovanović Zrenjanin /10-20/ % and Polet keramika Novi Bečej with a share of /10-20/ %, Enmon doo Belgrade /5-10/ % and other exporters lower than 1% in the total export of the products in question. The value of ceramic tiles export in RSD per exporters is provided in the following table:

Table 7 – Export of ceramic tiles per exporters, in RSD, 2018-2020.

Ceramic tiles exporters	2018.	2019.	2020.
Zorka-keramika doo Beograd	[…]	[…]	[…]
Keramika Kanjiža doo Kanjiža	[…]	[…]	[…]
Keramika Jovanović doo Zrenjanin	[…]	[…]	[…]
Polet-keramika doo Novi Bečej	[…]	[…]	[…]
Enmon doo Beograd	[…]	[…]	[…]
MT Kika gradnja doo Kikinda	[…]	[…]	[…]
Other	170,296,018.36	120,521,579.21	66,579,797.66
Total export –value in RSD	**2,843,382,179.64**	**2,847,243,281.97**	**2,451,155,714.94**

***Source**: Customs Administration*

The export of ceramic tiles in 2018 and 2019 amounted to more than 24 million euros a year, and in 2020 it amounted to 20 million euros or 2.4 billion dinars, which is about 15% less than in previous years. Bearing in mind that the COVID-19 pandemic affected the entire economic activity in the observed period, therefore in the observed case, this may be one of the reasons for this trend.

3.7. DOMESTIC MARKET - PRODUCTION AND IMPORT OF SANITARY CERAMICS

The total offer of sanitary ceramics on the market of the Republic of Serbia comes mostly from imports (81-83%), while a smaller part is produced on the domestic market. Among the market participants identified as manufacturers of sanitary ceramics, the companies Sanitarna keramika doo Leskovac and ZTR Đorđević keramika Mladenovac were surveyed, which generated total sales revenue on the domestic market of around […] dinars in 2020. In the observed period, sales revenues of these two manufacturers increased, and compared to 2018, sales increased by 27%.

Table 8 -Revenues from sales of domestic manufacturers of sanitary ceramics, in RSD, 2018-2020.

Sales revenue from sanitary ware in the domestic market			
Manufacturers	**2018.**	**2019.**	**2020.**
Sanitarna keramika Leskovac doo	[…]	[…]	[…]
ZTR Đorđević keramika Mladenovac	[…]	[…]	[…]
Total revenu on the domestic maket	**[…]**	**[…]**	**[…]**

***Source**: Data on market participants*

In addition to production, the dominant supply channel for sanitary ware is imports. According to the data of the Customs Administration on import and export recorded for tariff code 6910 - sinks, sink columns, bathtubs, bidets, toilet bowls, cisterns, urinals and similar products, in 2020 sanitary ceramics worth over 1.4 billion RSD were imported , ie slightly more than 12 million euros. Imports have been growing in the observed period, so in 2020, compared to 2018, imports increased by 15%. The major importers of the entire observed period are as follows: Enmon doo Belgrade (with a share in imports of / 10-20 /% in 2020), Keramika Jovanović doo Zrenjanin and Aqua promet doo Jagodina (with / 5-10 /% share each) and Delta term doo Belgrade and Minotti doo Belgrade (with shares of / 0-5 /%).

Table 9 – Import of sanitary ceramics per importers - value in RSD, 2018-2020.

Sanitary ware importers	2018.	2019.	2020.
Enmon doo Beograd	[…]	[…]	[…]
Keramika Jovanović doo Zrenjanin	[…]	[…]	[…]
Aqua promet doo Jagodina	[…]	[…]	[…]
Delta term doo Beograd	[…]	[…]	[…]
Minotti doo Beograd	[…]	[…]	[…]
Miraro doo Beograd	[…]	[…]	[…]
Stream doo Beograd	[…]	[…]	[…]
Eurodom doo Beograd	[…]	[…]	[…]
Marbomil doo Surčin	[…]	[…]	[…]
Keramika Mirela doo Beograd	[…]	[…]	[…]
Other (198)	633,174,729.42	633,141,458.07	729,184,039.66
Total value of import in RSD	**1,247,832,077.52**	**1,235,828,728.10**	**1,431,014,236.88**

***Source**: Customs Administration*

On the basis of the afore said overview of manufacturers and importers, we see the structure of the total supply of sanitary ceramics on the domestic market, which consists of sanitary ceramics from imports (80%) and sanitary ceramics produced on the domestic market (20%). The estimated value of the total supply on the domestic market in 2020 is over 1.5 billion dinars, without taking into account the stocks at the beginning and end of the year.

Just as in the case of the assessment of the total supply of the ceramic tile market, an identical methodology was used to estimate the total supply of sanitary ceramics in the Republic of Serbia in the observed period. Namely, in the review that follows, the estimate of the total offer is calculated as the sum of costs of goods sold by domestic manufacturers of sanitary ceramics traded in the territory of the Republic of Serbia and the purchase value of direct import from which the purchase value of imported sanitary ceramics for one's own needs and the value of re-export of importers was deducted. In such an estimated total offer, the shares of the most important market participants were calculated: domestic manufacturers (as the ratio of the purchase value of goods sold on the domestic market and the total estimated market value) and the largest direct importers of sanitary ceramics (net values of foreign trade exchange were taken as the difference of the direct import of the major importers and exported quantities and were put in relation to the total estimated supply).

Table 10 - Total offer of sanitary ceramics in the Republic of Serbia in RSD and shares of producers and importers in the offer, in%, 2018-2020.

TOTAL OFFER sanitary ceramics – shares of manufacturers and importers	**2018.**	**2019.**	**2020.**
a) Domestic market production (costs of goods sold)	209,852,999	222,712,382	266,845,791
b)Direct import (procurement value of imported goods)	1,247,832,078	1,235,828,728	1,431,014,237
c) Import for one's own needs	59,489,233	61,700,001	83,397,402
d) Export (without the manufacturers)	61,250,388	66,296,999	79,050,594
e) Estimated offer of sanitary ceramics (a+b+c+d)	**1,336,945,455**	**1,330,544,110**	**1,535,412,032**
Aqua promet doo Jagodina	/10-20/%	/10-20/%	/10-20/%
Sanitarna keramika Leskovac doo	/10-20/%	/10-20/%	/5-10/%
ZTR Đorđević keramika Mladenovac	/5-10/%	/0-5/%	/5-10/%
Keramika Jovanović doo Zrenjanin	/5-10/%	/5-10/%	/5-10/%
Enmon doo Beograd	/5-10/%	/5-10/%	/5-10/%
Delta term doo Beograd	/5-10/%	/0-5/%	/0-5/%
Minotti doo Beograd	/0-5/%	/0-5/%	/0-5/%
Stream doo Beograd	/0-5/%	/0-5/%	/0-5/%
Miraro doo Beograd	/0-5/%	/0-5/%	/0-5/%
Eurodom doo Beograd	/0-5/%	/0-5/%	/0-5/%
Marbomil doo Surčin	/0-5/%	/0-5/%	/0-5/%
Keramika Mirela doo Beograd	/0-5/%	/0-5/%	/0-5/%
Other direct importers (198)	40.71%	39.84%	38.85%

***Source**: Customs Administration data and Market Participants Data*

As can be seen from the table, the largest shares are held by Aqua promet doo Jagodina, primarily due to the fact that it is among the largest importers, and exports almost no such products, followed by Sanitarna keramika doo Leskovac (in which Enmon doo Belgrade owns 50%) and ZTR Đorđević keramika Mladenovac, as well as traders Keramika Jovanović doo and Enmon doo Beograd. All other importers individually had shares of less than 5%. In addition to the importers listed in the table, it should be added that the category of other importers also includes data on 200 importers of ceramic tiles were recorded in the observed period. The countries with the highest rate of import are Turkey (26% of total imports of sanitary ware in 2020), Bulgaria (17%), Romania (12%) and Italy (9%).

3.8. SANITARY CERAMICS EXPORT

The most important export destinations for sanitary ceramics, are the surrounding countries and this can be seen from the table below, which lists the individual countries of export destination. In 2020, the majority of sanitary ceramics was exported to Bosnia and Herzegovina (32%), followed by Montenegro (23%) and North Macedonia (14%).

Table 11 – Export of sanitary ceramics per countries of export, value in RSD, 2018-2020.

Export of sanitary ceramics per countries of export	2018.	2019.	2020.
Bosnia and Herzegovina	24,844,787.41	31,840,147.37	36,001,743.87
Montenegro	23,919,891.02	23,708,749.89	25,807,425.30
Notrth Macedonia	17,264,441.74	12,477,151.12	16,050,139.40
Albania	3,103.79	17,092.11	7,890,580.29
Croatia	829,943.57	4,838,001.80	5,775,070.28
Other	28,012,172.21	23,881,566.62	20,366,399.19
Total value of export in RSD	**94,874,339.73**	**96,762,708.92**	**111,891,358.34**

Source: Customs Administration

Total exports of sanitary ware in 2020 were 15% higher than exports in 2019 and 18% higher than in 2018. In 2020, sanitary ceramics worth slightly more than 951 thousand euros were exported, which is close to 112 million RSD, while at the beginning of the observed period, sanitary ceramics worth slightly higher than 800 thousand euros or 94 million RSD were exported.

The largest domestic exporters of sanitary ceramics in 2020, with a share of / 20-30 /% in the total exports of Serbia are the companies Peštan doo Bukovik and Keramika Leskovac doo Leskovac. It is hereby noted that according to the publicly available data, the company Peštan Bukovik produces pipes for water supply and sewerage, which it produces from plastics, and it is not clear why the export is recorded under heading *6910* under the heading *Ceramic products*. A significant share is held by Keramika Jovanović doo Zrenjanin of /10-20/%. Given that the legal entities Enmon and Roper CO are under the control of the same owner, their joint market share was / 5-10 /%, while the shares of other exporters in the total export of sanitary ceramics individually were lower than 5%.

Table 12 - Export of sanitary ceramics per exporters, in RSD, 2018-2020.

Exporters of sanitary ceramics	2018.	2019.	2020.
Peštan doo Bukovik	[…]	[…]	[…]
Keramika Leskovac doo Leskovac	[…]	[…]	[…]
Keramika Jovanović doo Zrenjanin	[…]	[…]	[…]
Enmon doo Beograd	[…]	[…]	[…]
ZTR Đorđević keramika Mladenovac	[…]	[…]	[…]
Minotti doo Beograd	[…]	[…]	[…]
Roper CO doo Umka	[…]	[…]	[…]
Miraro doo Beograd	[…]	[…]	[…]
Eurotis group doo Popovac	[…]	[…]	[…]
Polyagram doo Kragujevac	[…]	[…]	[…]
Others	25,367,149.62	23,962,811.49	15,606,659.81
Total – export value in RSD	**94,874,339.73**	**96,762,708.92**	**111,891,358.34**

Source: Customs Administration

As in case of ceramic tiles, we can see that Serbia is a net importer of sanitary ceramics, namely imports are many times higher than exports of these products.

3.9. WHOLESALE OF CERAMIC TILES AND SANITARY CERAMICS

Trade in these products is very diversified, there are a large number of market participants engaged in trade in these product groups, from specialty stores that sell only ceramic tiles or sanitary ware, to large facilities that apart from the afore said, also sell a large number of other home furnishing products - department stores that sell furniture, decoration as well as facilities that sell building materials "from foundation to roof" that offer construction materials, bathroom furniture and accessories, plumbing materials, paints and varnishes, cement, blocks, timber, iron, roofing and more.

In the process of analysis, market participants were asked to submit data on revenues generated through sales channels - wholesale and retail, as well as contracts with the largest customers. It was noted that most of the participants are active both as wholesalers and retailers, except in cases when they are exclusive distributors of a certain foreign brand, and that all of them have products from both the domestic manufacturers and imported products in their product portfolio. In addition to direct import and direct procurement, market participants also trade with the products in question, which is described in more detail in the part where the contractual relations with the largest customers are analyzed. Also, the surveyed participants stated that in most cases they do not have signed contracts with customers, but operate on the basis of invoices. This means that the network of wholesalers and retailers is still developed in relation to the network that is "covered" by contracts. For market participants who are simultaneously active in both, the wholesale and retail markets, a separate overview of the revenues of market participants generated in wholesale is given. In this regard, the estimated market shares are given, based on the data on the surveyed group of participants, but also a comparison with the data in which the entire offer is estimated. The idea was to estimate the maximum market shares that represent the share of realized wholesale revenues in the total realized wholesale revenues in the surveyed group of companies (these are the maximum market shares in wholesale, because it is assumed that in addition to surveyed companies, there are other companies that generate wholesale revenues as well as that the market is larger than the one here state) and that the "maximum" shares thus determined are put in relation to the estimated shares in the total supply (roughly, it could be referred to as the "minimum market share"). The real market power of each of the listed participants in the wholesale market is between these two shares.

The revenues shown in the following table are revenues from the wholesale of ceramic tiles as one of the sales channels of each individual market participant from which revenues in mutual exchange are not excluded, given the complexity of distribution and trade channels.

Table 13 - Wholesale, revenues in wholesale of ceramic tiles in the Republic of Serbia, in RSD and share of companies in the sample and total offer in %, 2018-2020.

Wholesale revenues and market shares in the wholes ale of ceramic tiles									
	2018.			2019.			2020.		
Ceramic tiles wholesalers	WS revenue from the sale Of ceramic tiles in RSD	% in sample	% in total offer	WS revenue from the sale Of ceramic tiles in RSD	% in sample	% in total offer	WS revenue from the sale Of ceramic tiles in RSD	% in sample	% in total offer
	[…]	/10-20/	/10-20/	[…]	/10-20/	/10-20/	[…]	/20-30/%	/10-20/
DOO keramika Knjiža	[…]	/10-20/	/10-20/	[…]	/20-30/%	/10-20/	[…]	/10-20/	/10-20/
ENMON doo Beograd	[…]	/10-20/	/10-20/	[…]	/10-20/	/10-20/	[…]	/10-20/	/10-20/
Keramika Jovanović doo Zrenjanin	[…]	/10-20/	/10-20/	[…]	/10-20/	/10-20/	[…]	/10-20/	/10-20/
Polet Keramika doo Novi Bečej	[…]	/5-10/	/5-10/	[…]	/5-10/	/5-10/	[…]	/5-10/	/0-5/
Toza Marković Kikinda	[…]	/10-20/	/5-10/	[…]	/10-20/	/10-20/	[…]	/5-10/	/0-5/
Listello and decor tiles doo, Velika Plana	[…]	/0-5/	/0-5/	[…]	/0-5/	/0-5/	[…]	/0-5/	/0-5/
DOO Koral Pančevo	[…]	/0-5/	/0-5/	[…]	/0-5/	/0-5/	[…]	/0-5/	/0-5/
Balkania Ceramics doo Beograd	[…]	/0-5/	/0-5/	[…]	/0-5/	/0-5/	[…]	/0-5/	/0-5/
DIM TRADE doo Beograd	[…]	/0-5/	/0-5/	[…]	/0-5/	/0-5/	[…]	/0-5/	/0-5/
Nantes doo Beograd	[…]	/0-5/	/0-5/	[…]	/0-5/	/0-5/	[…]	/0-5/	/0-5/
S.A.B. Ambijentdoo. Leštane	[…]	/0-5/	/0-5/	[…]	/0-5/	/0-5/	[…]	/0-5/	/0-5/
DIPLON doo Beograd	[…]	/0-5/	/0-5/	[…]	/0-5/	/0-5/	[…]	/0-5/	/0-5/
Čavra doo Valjevo	[…]	/0-5/	/0-5/	[…]	/0-5/	/0-5/	[…]	/0-5/	/0-5/
Total sample – VS revenue	**5,646,832,140.24**	**100.00%**	**81.92%**	**6,271,217,357.54**	**100.00%**	**78.23%**	**5,366,829,199.77**	**100.00%**	**65.82%**
Estimated total offer of ceramic tiles	**6,893,305,139.13**		**100.00%**	**8,016,594,476.22**		**100.00%**	**8,153,682,792.08**		**100.00%**

***Source**: Data on market participants*

Looking at the table above, which contains data on the wholesale of ceramic tiles, performed in the manner described above, we can see that the surveyed companies in the observed period, by year, generated revenue in the range of 5.3-6.2 billion dinars.

The highest wholesale revenues were realized in 2019, and amounted to about 47.7 million euros, and the lowest in 2020 - 45.6 million euros. Market participants having the largest share in the realized revenues from the wholesale of ceramic tiles in 2020, in the observed sample, are the most important manufacturers of ceramic tiles in Serbia: Zorka keramika Šabac - /20-30/ %, Keramika Kanjiža - /10-20/ %, followed by Enmon doo Belgrade with a share of /10-20/ % and Keramika Jovanovic doo Zrenjanin with /10-20/ %. Polet keramika doo Novi Bečej and Toza Marković Kikinda also have a share between /5-10/ %, while the others have significantly smaller shares. In addition to the shares expressing the shares of realized wholesale revenues in the total realized wholesale revenues of the surveyed companies, a column is shown in which the shares of realized wholesale revenues in the total offer of ceramic tiles in the market of the Republic of Serbia are given. The shares are relatively stable in the observed period and there are no significant deviations in either relative or value indicators of trade. The trend of reducing the turnover of ceramic tiles in 2020 has already been noted, and the differences are mostly conditioned by the general trend of reducing the entire economic activity, in this case primarily the construction industry.

In addition to the individual participation of surveyed companies, it is important that the observed sample of companies participated with 66-82% in the total estimated supply of ceramic tiles in the Republic of Serbia in the observed period, and we can conclude that this is a significant sample of companies, on the basis of which data were collected in the subject analysis.

Unlike the market of ceramic tiles, the market of sanitary ceramics has seen a trend of increasing wholesale revenues, from 529 million dinars in 2018 (which is about 4.5 million euros) to 642 million dinars in 2020 (5.46 million euros) or expressed in relative amounts, revenues in 2020 increased by 13% compared to 2019 and 21% compared to 2018. Sanitary ceramics sales revenues per market participants, are provided in the following table:

Table 14 - Wholesale, revenues in wholesale of ceramic ware in the Republic of Serbia, in RSD and share of companies in the sample and total offer in %, 2018-2020.

Wholesale revenues and market shares in the wholesale of sanitary ware									
	2018			2019			2020		
Sanitary ware wholesalers	**WS revenue from the sale of sanitary ware in RSD**	**% in share**	**% in total offer**	**WS revenue from the sale of sanitary ware in RSD**	**% in share**	**% in total offer**	**WS revenue from the sale of sanitary ware in RSD**	**% in share**	**% in total offer**
ZTR Đorđević Keramika Mladenovac	[…]	/30-40/	/10-20/	[…]	/30-40/	/10-20/	[…]	/30-40/	/10-20/
Sanitarna Keramika Leskovac doo	[…]	/10-20/	/5-10/	[…]	/10-20/	/5-10/	[…]	/10-20/	/5-10/
ENMON doo Beograd	[…]	10-20/	/5-10/	[…]	10-20/	/5-10/	[…]	/10-20/	/5-10/
Predstavništvo Geberit prodajno podjetje doo Beograd	[…]	/5-10/	/0-5/	[…]	/5-10/	/0-5/	[…]	/10-20/	/0-5/
Keramika Jovanović doo Zrenjanin	[…]	/5-10/	/0-5/	[…]	/10-20/	/0-5/	[…]	/5-10/	/0-5/
DIM TRADE doo Beograd	[…]	/0-5/	/0-5/	[…]	/5-10/	/0-5/	[…]	/0-5/	/0-5/
Nantes doo Beograd	[…]	/0-5/	/0-5/	[…]	/0-5/	/0-5/	[…]	/0-5/	/0-5/
DOO koral Pančevo	[…]	/0-5/	/0-5/	[…]	/0-5/	/0-5/	[…]	/0-5/	/0-5/
Čavra doo Valjevo	[…]	/0-5/	/0-5/	[…]	/0-5/	/0-5/	[…]	/0-5/	/0-5/
SAB Abmijent doo Leštane	[…]	/0-5/	/0-5/	[…]	/0-5/	/0-5/	[…]	/0-5/	/0-5/
Total sample – WS revenue	**529,310,876.89**	**100.00%**	**39.95%**	**566,979,487.94**	**100.00%**	**42.61%**	**642,190,656.93**	**100.00%**	**41.83%**
Estimated total offer of sanitary ware	**1,336,945,454.54**		**100.00%**	**1,330,544,109.83**		**100.00%**	**1,535,412,032.20**		**100.00%**

Source: Data on market participants

The highest revenues in the wholesale of sanitary ceramics in 2020 in the amount of over […] dinars were realized by the participant Đorđević keramika Mladenovac with a share in the realized revenues of /30-40/ %. Next in terms of wholesale revenues from sanitary ceramics is another manufacturer, Sanitarna keramika Leskovac, with revenues of […] dinars and a share of /10-20/ % Significant shares in the wholesale of sanitary ceramics were also recorded by Enmon doo Belgrade /10-20/ %, Geberit Belgrade /10-20/ % and Keramika Jovanović Zrenjanin /5-10/ %. Given that Enmon holds 50% of the shares in Sanitarna keramika Leskovac, assuming that it is a matter of joint control, these shares, even if viewed together, would be at the level of about / 30-40 /%. Other participants achieved lower wholesale revenues and their shares are less than 5%. The 5 of the listed participants in 2018 and 2019 were the participants with the highest shares in the observed category. The representativeness of the sample (measured by the percentage of sample coverage) in the range of 40-43% for the category of sanitary ceramics is lower than the market of ceramic tiles and we can therefore conclude that the wholesale market of sanitary ceramics is larger than shown in the sample and that the wholesale shares have probably been assessed in relation to their real market power in the wholesale sanitary ware market.

3.10. CERAMIC TILES AND SANITARY CERAMICS RETAIL

The retail market for ceramic tiles and sanitary ware was not in the strict focus of the sector analysis. The sample of market participants from whom the delivery of data was requested is not reliable for drawing a conclusion on the total size of the retail market, so the assessment of market shares does not fully correspond to the real situation in the retail market. However, further below and for the sake of illustration, an overview of the data collected in the analysis process on the realized retail income of the surveyed participants is provided. In this regard, the shares of market participants in the retail market are overestimated and do not give a reliable picture of the actual market power in the total retail market, and thus presented shares represent only shares of retail revenue within the observed sample and not the market as a whole.

Table 15 - Retail revenues of surveyed companies in the retail market of ceramic tiles and participation in the sample

Retail revenues from sanitary ware sale – value in RSD						
Surveyed market participants	**2018**	**%**	**2019**	**%**	**2020**	**%**
ENMON doo Beograd	[…]	/50-60/	[…]	/40-50/	[…]	/40-50/
SAVIĆ DOO Smederevska Palanka	[…]	/10-20/	[…]	/10-20/	[…]	/10-20/
Keramika Jovanović doo Zrenjanin	[…]	/10-20/	[…]	/10-20/	[…]	/10-20/
ALVOS doo Zemun	[…]	/0-5/	[…]	/0-5/	[…]	/5-10/
PREDUZEĆE SKALA DOO Šabac	[…]	/5-10/	[…]	/0-5/	[…]	/0-5/
LIBAR HOME DOO Mladenovac	[…]	/0-5/	[…]	/0-5/	[…]	/0-5/
AQUA PROMET DOO Jagodina	[…]	/0-5/	[…]	/0-5/	[…]	/0-5/
DOO Koral Pančevo	[…]	/0-5/	[…]	/0-5/	[…]	/0-5/
DOO Keramika Kanjiža	[…]	/0-5/	[…]	/0-5/	[…]	/0-5/
Nantes doo Beograd	[…]	/0-5/	[…]	/0-5/	[…]	/0-5/
DIPLON doo Beograd	[…]	/0-5/	[…]	/0-5/	[…]	/0-5/
Zorka – keramika doo Šabac	[…]	/0-5/	[…]	/0-5/	[…]	/0-5/
DIM TRADE doo Beograd	[…]	/0-5/	[…]	/0-5/	[…]	/0-5/
Polet – keramika doo Novi Bečej	[…]	/0-5/	[…]	/0-5/	[…]	/0-5/
SAB Ambijent doo Leštane	[…]	/0-5/	[…]	/0-5/	[…]	/0-5/
CALYPSO CO DOO Niš	[…]	/0-5/	[…]	/0-5/	[…]	/0-5/
Toza Marković Kikinda	[…]	/0-5/	[…]	/0-5/	[…]	/0-5/
BEL KERAMIKA DOO Sremska Mitrovica	[…]	/0-5/	[…]	/0-5/	[…]	/0-5/
KERAMIKA KOVIN ZTR	[…]	/0-5/	[…]	/0-5/	[…]	/0-5/
Čavra doo Valjevo	[…]	/0-5/	[…]	/0-5/	[…]	/0-5/
AQVA THERM DOO Subotica	[…]	/0-5/	[…]	/0-5/	[…]	/0-5/
Total sample	**2,758,356,683.76**	**100%**	**3,085,778,254.27**	**100.00%**	**3,541,261,845.92**	**100.00%**

***Source**: data on market participants*

The most significant share in the total realized retail revenue of the sample (surveyed companies) in 2020 is the share of Enmon doo Beograd of /40-50/ %, followed by Savić doo Smederevska Palanka /10-20/ % and Keramika Jovanović doo Zrenjanin /10-20/ %. Other surveyed participants hold shares of less than 6%. The surveyed companies generated a retail revenue of RSD 3.5 billion in 2020, which is about 45% of the total estimated supply, so it can be reasonably assumed that the retail market of ceramic tiles is at least twice as large as shown in the sample, and that market shares observed in the sample itself, are overestimated in relation to the actual market power of participants in the market of retail ceramic tiles.

Table 16 - Retail revenues of surveyed companies in the retail market of sanitary ceramics and participation in the sample

Retail revenues from sanitary ware sale – value in RSD						
Surveyed market participants	**2018**	**%**	**2019**	**%**	**2020**	**%**
ENMON doo Beograd	[…]	/30-40/	[…]	/30-40/	[…]	/30-40/
AQUA PROMET DOO Jagodina	[…]	/20-30/	[…]	/20-30/	[…]	/20-30/
Keramika Jovanović doo Zrenjanin	[…]	/10-20/	[…]	/10-20/	[…]	/10-20/
DIPLON doo Beograd	[…]	/5-10/	[…]	/0-5/	[…]	/5-10/
Nantes doo Beograd	[…]	/5-10/	[…]	/5-10/	[…]	/5-10/
DIM TRADE doo Beograd	[…]	/0-5/	[…]	/0-5/	[…]	/0-5/
ALVOS doo Zemun	[…]	/0-5/	[…]	/0-5/	[…]	/0-5/
LIBAR HOME DOO Mladenovac	[…]	/0-5/	[…]	/0-5/	[…]	/0-5/
DOO Koral Pančevo	[…]	/0-5/	[…]	/0-5/	[…]	/0-5/
ZTR Đorđević keramika Mladenovac	[…]	/0-5/	[…]	/0-5/	[…]	/0-5/
AQVA THERM DOO Subotica	[…]	/0-5/	[…]	/0-5/	[…]	/0-5/
KERAMIKA Kovin ZTR	[…]	/0-5/	[…]	/0-5/	[…]	/0-5/
Čavra doo Valjevo	[…]	/0-5/	[…]	/0-5/	[…]	/0-5/
CALYPSO CO DOO Niš	[…]	/0-5/	[…]	/0-5/	[…]	/0-5/
BEL KERMIKA DOO Sremska Mitrovica	[…]	/0-5/	[…]	/0-5/	[…]	/0-5/
Total sample	**286,539,280.66**	**100%**	**339,646,400.40**	**100.00%**	**403,135,544.72**	**100.00%**

***Source**: Data on market participants*

When it comes to the retail sale of sanitary ceramics, the surveyed companies earned over 400 million RSD in retail sales in 2020. The most significant shares in the realized revenues from the retail sale of sanitary ceramics are held by Enmon doo Belgrade - / 30-40 /%, Aqua promet doo Jagodina / 20-30 /% and Keramika Jovanović doo Zrenjanin / 10-20 /%. The estimated supply of sanitary ceramics in 2020 amounted to RSD 1.5 billion, and the stated market shares and the presentation of revenues should be viewed exclusively in the context of the observed sample, but not the total retail market of sanitary ceramics.

Apart from the market and share in retail, only a part of the range of products in retail and the movement of retail prices in the observed period were analyzed.

3.11. RANGE

It has already been stated that there is an extensive network of retailers of the products in question on the market, and that there is a possibility of procurement from imports as well as on the domestic market. In support of these findings is the following overview in which, through publicly available data from the websites of observed market participants,are summarized data on the number of manufacturers (brands) that these participants have in their offer.

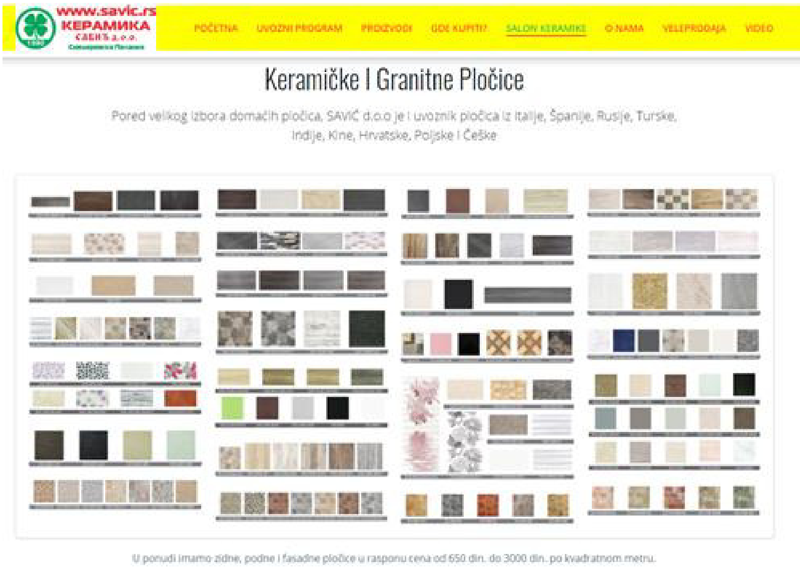
Table 17 – Number of brands in the offer of traders and sources of supply

	Range – number of manufacturers and brands in the offer		Source of supply	
Traders	**Ceramic tiles**	**Sanitary ware**	**Import**	**Local manufacturers**
DOO Koral Pančevo	23	3	yes	yes
SAB Ambijent doo Leštane	20	12	yes	yes
Čavra doo Valjevo	150 suppliers		yes	yes
Nantes doo Beograd	21	8	yes	yes
DIM TRADE doo Beograd	17	17	yes	yes
Keramika Jovanović doo Zrenjanin	23	8	yes	yes
ENMON doo Beograd	25	15	yes	yes
ALVOS doo Zemun	3	9	yes	yes
DIPLON doo Beograd	30	28	yes	yes
Balkania Ceramics doo Beograd	n/a	n/a	yes	Ne, solely Spanish ceramics

***Source**: Data from the company's websites*

As clearly observed in the overview, wholesalers and retailers cooperate with a large number of suppliers, almost all of which are profiled as multi-brand stores with a wide range of different manufacturers, distributors and suppliers. Participants are supplied with products directly, from manufacturers or imports, then from distributors or other wholesalers. Apart from the one retailer offering products from "only" 3 sanitary suppliers, most others offer different products from the observed range of over 20 different manufacturers and brands of ceramic tiles and 8-28 brands of sanitary ware. In addition to the stated number of different manufacturers and brands, it should be noted that there is a huge number of different products within the brand. Thus, in the wholesaler's portfolio, we can see that they offer wall, floor and facade ceramic tiles in a very wide price range from 500 to 5,000 dinars per square meter, in certain places and in a larger range, and that they were purchased from domestic manufacturers, as well as from those coming from Spain, Italy, Turkey, Russia, India, China, Croatia and the Czech Republic ...

Image 2 – Screenshot of the sanitary tiles and ceramic retailer's website



Based on the submitted data and information, no limitations in the possibilities of cooperation with various suppliers and manufacturers were identified in the course of analysis, and it can be assumed that a possible termination of cooperation with some of them would result in a significant number of alternative supply channels for market participants.

3.12. PRICE TRENDS DURING THE REPORTING PERIOD

Market participants were surveyed in terms of submitting data on changes in the prices of ceramic tiles and sanitary ceramics in the observed period. Market participants were required to submit an *average* change in prices on an annual basis, bearing in mind that it was not individual products that were observed, but the average of a group of products.

Table 18 – Change in sales prices of ceramic tiles and sanitary ware, in %, 2018-2020.

Manufacturers and traders	Ceramic tiles price adjustment			Sanitary ware price adjustment		
	2018	2019	2020	2018	2019	2020
DOO Keramika Kanjiža			[…]			
Zorka –keramika doo Šabac	[…]	[…]	[…]			
Listelo	[…]	[…]	[…]			
Toza Marković Kikinda		[…]	[…]			
Polet – keramika doo Novi Bečej	[…]	[…]	[…]			
SAB Ambijent doo Leštane	[…]	[…]	[…]	[…]	[…]	[…]
Nantes doo Beograd			[…]			[…]
Keramika Jovanović doo, Zrenjanin	[…]	[…]	[…]	[…]	[…]	[…]
Predstavništvo Geberit prodajno podjetje doo Beograd				[…]	[…]	[…]
ENMON doo Beograd	[…]	[…]	[…]	[…]	[…]	[…]
ALVOS doo Zemun	[…]	[…]	[…]	[…]	[…]	[…]
DIPLON doo Beograd	[…]	[…]	[…]	[…]	[…]	[…]
Balkania Ceramics doo Beograd		[…]	[…]			
Average sales price adjustment	**0.18%**	**3.58%**	**2.45%**	**1.84%**	**4.53%**	**5.33%**

***Source**: Data on market participants*

Based on the above review, it can be seen that the average price changes in the observed period did not exceed 5.3%. The lowest price changes were in 2018, while slightly higher price changes were recorded in 2020. Observed by participants, the highest price growth is with the company […], while with other market participants it is significantly lower. Most market participants stated that prices were stable in the observed period, the exchange rate was stable and there were no significant oscillations. The main reason for the increase in prices was the increase in the purchase prices of raw materials and the purchase prices of imported products. In 2020, we see a slightly more significant trend of price growth, and the reason given is the increase in transport prices due to the COVID 19 epidemic.

Based on all of the afore said, it can be concluded that in the observed period there was no significant increase in prices.

4. CONTRACT ANALYSIS

In the course of sectoral analysis, the contractual relations of participants at all levels of the distribution chain were surveyed: from manufacturers, through the most important wholesalers to retailers. Participants in the manufacturing market were asked to sign contracts with the largest buyers of ceramic tiles and sanitary ware, and selected retailers were asked to submit signed contracts with the most important suppliers of ceramic tiles and sanitary ware.

4.1. ANALYSIS OF CONTRACTS WITH MANUFACTURERS

XXX

The analysis focused on contractual relations related to sales policy in terms of pricing policy, rebate approval and other contractual provisions that could be potentially controversial in terms of the application of competition protection regulations.

XXX

4.2. ANALYSIS OF CONTRACTS SUPPLIED BY THE WHOLESALERS AND RETAILERS

XXX

4.3. ANALYSIS OF CONTRACTS WITH RETAILERS

XXX

4.4. CONCLUDING REMARKS ON CONTRACT ANALYSIS

The analysis of the contract showed that there are certain phenomena that can be potentially disputable. Summarized by groups of findings, these are the following controversial aspects identified in the analysis of the contract:

- The amount and nature of the agreed and invoiced basic rebates
- Determining prices for further sale
- Provision of the contract limiting the active sale to certain buyers and
- The contracts limiting the sale in the territory of the Republic of Serbia.

The general finding regarding the types and amounts of rebates provided for in the contracts is that most contracts have a pre-determined amount of the BASIC rebate. This rebate is not conditioned by the fulfillment of any criteria, at least according to what is stated in the contracts, and it remains unclear how the buyer qualifies for the realization of such a rebate. It should noted that these are quite significant amounts of the basic rebate, ranging from 20% to as much as 50%. For better clarity,further below is a table summarizing the data from the contract and terms of sale, with special reference to the amount of the basic rebate:

Table 20 – Summary overview of the amount of the basic rebate in the analyzed contracts

XXX

Source: *Data on market participants*

When observing the amounts of approved rebates in the aforementioned contracts, their non-selectivity, ie non-conditionality with any criteria, raised questions of the motive for their existence. They could possibly be seen as a way to signal the price of retail products. Otherwise, unconditional rebates are far more similar to discounts granted in retail, but their purpose in the wholesale phase of the distribution chain is unclear. Discount approval is a marketing strategy aimed at all customers without exception, while rebate approval is strategically determined in order to promote sales, primarily to wholesalers. There is also a difference in terms of targeting end users - rebates are aimed at wholesalers and discounts are intended for end customers in retail. Thus, in the end, it can be concluded that having in mind the non-selectivity and the amount of basic rebates in the observed sector, these rebates are more like a discount, although the position in the distribution chain and targeted users still retains the characteristics of rebates. All this is to be noted in the light of the fact that the submitted contracts have not unequivocally determined what their purpose and ultimate goal is.

Other types of rebates, which are specified in the contracts and whose amounts are determined, are conditioned by clear and objective criteria, and they are most often quantity rebates (annual and quarterly), on average about 5%, conditioned by the volume of turnover, as well as rebates for advance payment (3 -5%), cash discount and marketing rebate up to 3%.

Due to the lack of clear criteria for achieving high amounts of the basic rebate, the question arises whether the purchase prices for this amount could possibly have been lower. Namely, if there is no rational economic justification for approving this amount of the rebate, could the initial purchase price have been reduced by this amount. It is unclear why the wholesaler specifies prices at a level that is already 20-50% higher than the price that will be approved to the buyer on the invoices. According to the available information, there is no uncertainty that this basic rebate will not be calculated on the invoices, because there are no eligibility criteria for this type of rebate. The question of the wholesaler's interest to thus specify its purchase prices higher, is raised, save possibly for the purpose of signaling to retailers that they should form a retail price at that level.

Namely, the previous analysis of the contract, except for […], did not identify a mechanism forcing the retailer to adhere to any recommended prices, nor were there any similar comments from retailers of sanitary ware and ceramics, asked to give their assessment of competition in the subject sector. Of particular interest is the fact that high basic rebates are not related to only one or two manufacturers in the industry and further to their wholesale suppliers in the vertical supply chain (manufacturer and its distributors; wholesaler and its retailers), but this phenomenon has been observed in the industry as a whole,and in particular among the offers of the suppliers from abroad.

Market manufacturers and the most important traders were asked to state their views on the nature of this type of rebate in terms of explaining its amount and basis for approval, ie what economic criteria need to be met to achieve this type of rebate. The companies stated the following in this regard:

XXX

As for all the submitted statements, it is evident that none of them explained the nature of the basic rebates or the criteria for the realization thereof. Although there are no penal provisions, the Commission is of the opinion that it is necessary to allow the buyers to freely form prices in resale, and that it is necessary to recommend that the need for a basic rebate be revised, especially if it is not conditioned by objective economic criteria.

CONCLUSION

Unlike the demand for consumer goods which is final, the demand for ceramic tiles and sanitary ware is **derived demand.** The demand for wall and floor ceramic tiles is closely derived from the demand in the construction industry, which is affected by the number of newly built buildings and the demand for buildings in which renovations and upgrades are carried out. The observed period also recorded a growth in the executed construction works in Serbia as well as the growth in the number of completed apartments.

In the course of the analysis of the **relevant legal framework**, no problems were noted in the sector in question regarding possible regulations, and in particular, in the market entry barriers. Entry into the subject market is regulated by laws and bylaws which elaborate technical regulations in the subject area, and apart from operations in accordance with the above regulations, there are no administrative barriers to market entry.

Based on the forms of distribution channels of ceramic tiles and sanitary ware, the following **types of competition** were identified:

1) Competition on several horizontal levels, ie mutual competition between different manufacturers and / or importers, then between different wholesalers, and finally between different retailers;
2) Vertical competition, ie competition when wholesalers together with other members of their own distribution channel compete at different levels of the distribution channel;
3) Competition between the complete channel system, ie when vertically integrated traders compete with other vertically integrated traders.

The estimation of the **aggregate size of the market as the market of total supply** is determined as the sum of the value of production (costs of goods sold) on the domestic market and the difference between the value of imported and exported quantities realized by traders. The estimated value of the total offer of ceramic tiles on the domestic market ranges from 7 to 8 billion dinars, while the structure of the offer consists of tiles produced on the domestic market (1/3 of the total offer, 4 manufacturers) and imported tiles (2/3 of the total offer, over 300 importers). The quantitatively estimated market of ceramic tiles in Serbia is between 12 and 13 million m^2 of ceramic tiles.

Identical methodology was used to estimate the market of sanitary ceramics, which is estimated at 1.2 to 1.4 billion dinars. The structure of the total supply of sanitary ceramics on the domestic market, mostly consists of sanitary ceramics from imports (80% -around 200 importers) and sanitary ceramics produced on the domestic market (20%).

The wholesale and retail market have been analyzed in the context of the selected sample.

An **extensive network of trade in the said products** was observed, wholesalers and retailers cooperating with a large number of suppliers, almost all of which are profiled as multi-brand stores with a wide range of different manufacturers, distributors and suppliers. Participants are supplied with products directly, from manufacturers or imports, then from distributors or other wholesalers.

The analysis of the contract showed that there are certain phenomena that can be potentially disputable. Summarized by groups of findings, these are the following controversial aspects identified in the analysis of the contract:

- The amount and nature of the agreed and invoiced basic rebates
- Determining prices for further sale
- Provision of the contract limiting the active sale to certain buyers and
- The contracts limiting the sale in the territory of the Republic of Serbia.

The general finding regarding the types and amount of rebates provided for in the contracts is that most contracts have a predetermined amount of the basic rebate in the range of 20-50% and the fact that exercising the right to this rebate is not conditioned by meeting any criteria. When explaining this circumstance, market participants neither explained the nature of the basic rebates nor did they state the criteria for their realization, so the assumption is that this mechanism is a way to signal how much the retail price should be. Although there are no penal provisions in the contracts themselves if the buyers do not adhere to the recommended prices, it is necessary to leave space for the buyers to independently form the prices in the resale. In this regard, the Commission recommends that market participants revise the need for a basic rebate, especially if it is not conditioned by objective economic criteria.

Bearing in mind that provisions have been found in some contracts that could be interpreted as provisions that determine resale prices as well as contracts that limit active sales, it is necessary to revise the contracts.

RECOMMENDATIONS

the Ministry of Construction, Transport and Infrastructure is hereby recommended to improve the bylaws in order to resolve open issues, especially regarding the mark of conformity, defining families of ceramic tiles, implementing a system of evaluation and verification of performance of construction products.

The manufacturers and wholesalers active in the market of ceramic tiles and sanitary ceramics are recommended to revise the need for a basic rebate, especially if it is not conditioned by objective economic criteria, and leave the freedom to buyers to form prices in resale.

Manufacturers and/or wholesalers who do not have contractual relations with retailers are recommended to regulate them with clearly defined conditions, especially in the part concerning the terms of sale.