

СВІТОВА ЕКОНОМІКА
ТА МІЖНАРОДНІ
ВІДНОСИНИ



WORLD ECONOMY
AND INTERNATIONAL
RELATIONS

УДК 339.13
JEL Classification L16

Yurii Nykytiuk

Doctor of Economics, Senior Scientific Associate,
Professor of the Department of Environmental Safety and Environmental Economics
Zhytomyr National Agroecological University
Zhytomir, Ukraine

E-mail: andreyniks2@gmail.com

Iryna Nykytiuk

Student

Xiamen University
Fujian, China

E-mail: iraniks19@gmail.com

AN ANALYSIS OF TENDENCIES AND PERSPECTIVES ON THE DEVELOPMENT OF THE MIDDLE EASTERN AND EASTERN EUROPEAN NATURAL STONE MARKETS

Abstract

Introduction. Natural stone is an important raw material that is widely used in many economic sectors including construction, agro-industrial complex, chemical and jewelry industries. Along with the development of economic relations in Central Asia and Eastern Europe, market regulators influence on the relations in these areas is growing as well. This is why the analysis of trends in the market development for natural stone in these countries requires scientific substantiation in order to determine the ways and prospects for its growth.

Methods. General scientific methods are used in the period of research, such as: analysis and synthesis, induction and deduction. Statistical methods are used to study the influence of trends and prospects for the development of the natural stone market.

Results. The article presents results of the research about present tendencies and perspectives on the development of the Middle Eastern and Eastern European Natural Stone Markets. Analysis of recent materials, articles, statistics and scientists' researches on the Middle Eastern countries and Eastern European countries natural stone deposits and their features in different countries, world trends in the construction and design industries and their impact on concrete regions' tendencies allowed to distinguish some crucial changes in the demand of the mentioned above countries.

The East European natural stone market has been growing steadily over the past decade, but according to the industry analysts, its demand level is still lower than in other developed countries, particularly the United States, Japan, Germany and France. The main manufacturers of natural stone in Eastern Europe are Russia, Ukraine, Belarus and the Czech Republic.

Discussion. International natural stone market experts predict that the stone market will continue growing in Eastern Europe and Central Asia, due to increased demand for natural stone in construction, agro-industrial complex, chemical and jewelry industries.

Keywords: natural stone, natural stone deposits, Middle Eastern Countries, Eastern European countries, tendencies, design, construction, GCC, demand, market.

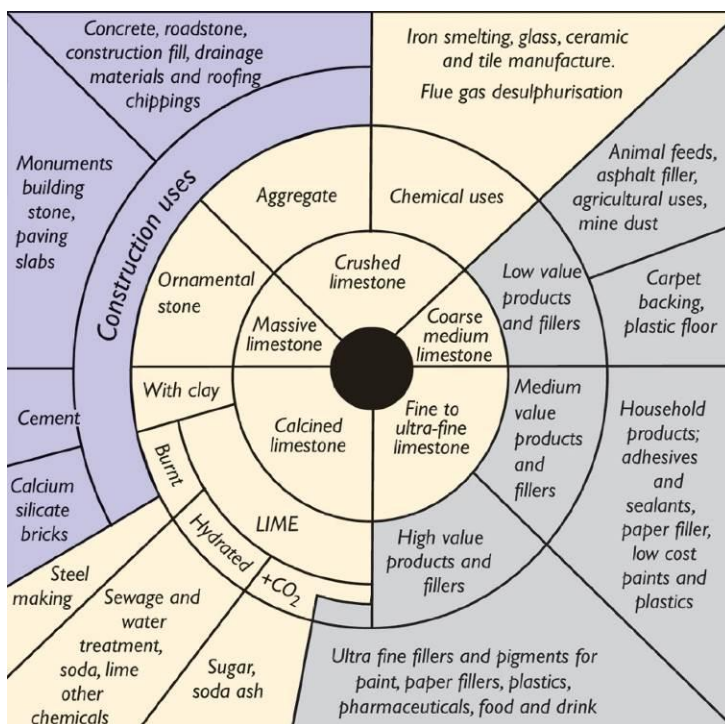
Introduction.

The history of natural stone used by humans began more than 5000 years ago. The ancient Egyptians were the first civilization to extensively quarry and build with natural stone. They built most of their monuments of granite and limestone.

After the Greek Empire rose and took the use of natural stone to new heights. Then the Roman Empire rose to power and quarried marble and granite all over their country.

During the Renaissance, better stone pitting and fabrication techniques allowed to use marble and granite more extensively in the home, as well as liberally throughout churches, palaces, and monuments [1].

Nowadays natural stone is popular all over the world in varying number of industries: construction, agro-industrial complex, chemical and jewelry fields. Great example is limestone; five main groups of its uses are identified (Pic.1.), such as: building and decorative stone – stone used for its resistance to weather or its aesthetic appeal – walls and decorative purposes. Buildings, walls, paving slabs. Aggregates – stone used for its strong physical properties – crushed and sorted into various sizes for use in concrete, coated with bitumen to make asphalt or used 'dry' as bulk fill in construction. Mostly used in roads, concrete and building products. Industrial purposes – limestone can be used for its chemical (mainly alkaline) properties as calcium carbonate (CaCO_3) in farming and manufacturing industry. Lime burning (calcining) – limestone when heated to a high temperature breaks down into lime (calcium oxide) and carbon dioxide gas. It can then be used as a more powerful alkali than limestone (see above) or used as a cement with sand, to make mortar, or as a soil improver in agriculture.



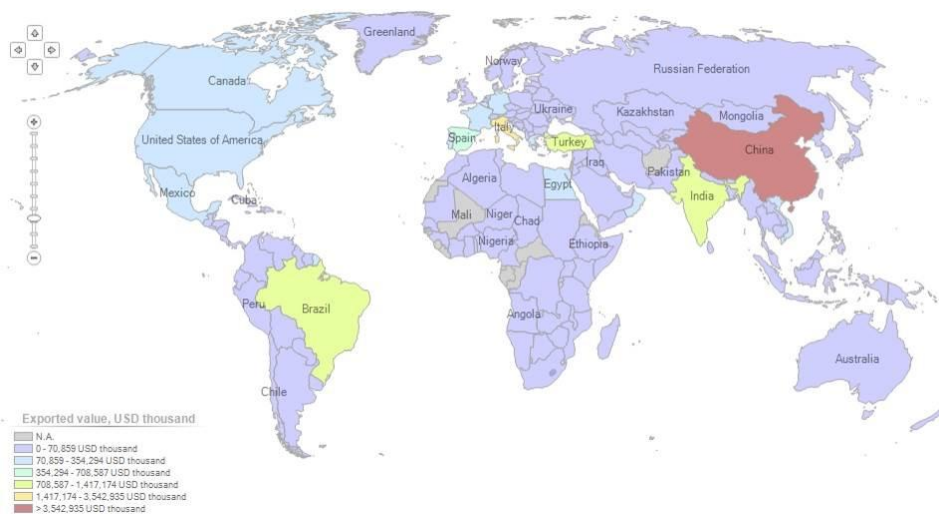
Pic. 1. Uses of stone. Stone as a resource*

*Source: compiled by the author on the basis of [2].

Cement – if limestone (or its variety chalk) is mixed with clay or sandstone before firing, it can produce Portland cement which when mixed with aggregate makes concrete [2].

Newer trends and design fashions appear every year; and the competition between the exporters is getting tenser. There are many different types of natural stones, but five most popular ones as well as their common uses in construction, as in the largest field of natural stone usage (consists 70% out of the whole usage of natural stone): marble, granite, limestone, travertine, slate.

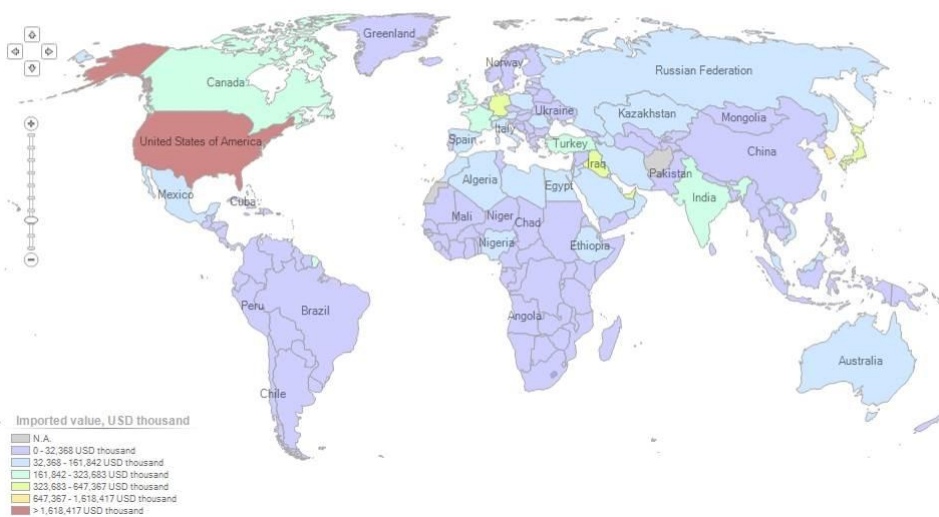
According to the go4WorldBusiness.com statistics [3; 4], the biggest world exporters of marble and granite in 2015, two the most popular natural stones on the market, were China and Italy, followed by India, Turkey and Brazil (pic. 2).



Pic. 2. List of marble and granite exporters in 2015*

*Source: compiled by the author on the basis of [1]

Alternatively, the largest importers of 2015 were the United States of America, South Korea, Japan, Germany, Iraq and United Arab Emirates (pic. 3).



Pic. 3. List of marble and granite importers in 2015*

*Source: compiled by the author on the basis of [1]

Middle Eastern countries as well as Eastern European countries are not exceptions. Both have multiple number of natural stone deposits. Therefore, it is essential to know about their stone market situation: trends, prospective and major players.

Review of recent researches and publications.

Recent articles, statistics, stone exhibitions conclusions and interviews of the construction and design industry experts give the preliminary information for the study. As well as other online magazines and periodicals related to the natural stone and design industries.

Results.

First, we should define which countries are playing significant roles in the stone business among Middle Eastern and Eastern European countries. For Middle East it would be the GCC (Gulf Cooperation Council, political and economic alliance of six Middle Eastern countries—Saudi Arabia, Kuwait, the United Arab Emirates, Qatar, Bahrain, and Oman) stone market is worth over USD 5 billion and constitutes approximately 20% of the global demand in the stone market and stone import value of 178.6 million square meters. [2]

Dubai is a major player in the region, first because it has a huge number of projects happening in its own territory. Qatar can be considered as the second after Dubai in terms of own projects, number and value. It has a booming construction sector and has all types of projects requiring natural stone.

Saudi Arabia also has a considerable number of large projects going on, from mosques to luxurious hotels, or even universities and museums, all requiring natural stone supply. The only note is that Saudi Arabia is a conservative country, with a closed construction sector. It is hard to find the right importer for natural stone.

There are other smaller, but still important players such as Kuwait, with some substantial massive projects going on. Lebanon, which seems to be growing fast in the past few years, with growing appetite for natural stone. Iraq, which is finding its own political stability and has many projects on planning stage. Algeria, with some mega large projects financed by oil and gas revenues.

Urban construction projects across the GCC, valued US \$1.16tn in 2018, drive the demand for natural stone, tiles, marble, granite and ceramic products. Major construction activities appear to be in the United Arab Emirates and Saudi Arabia, both of which constitute approximately 75% of all urban construction projects in the region.

The Middle East flooring market is primed for growth due to the high volume of urban construction projects in the GCC. The urban construction sector has over 18,600 active projects, which account for nearly 80% of all construction activities in the region [2].

In Eastern Europe [3] it is mostly Ukraine, Russia, Belarus and Czechia. Unique natural stone deposits in these countries combines with young ambitious building materials companies give Eastern European countries a boost to fit in the international stone business community.

Ukraine most common natural stone deposits are marble, sandstone, basalt, tuff, labradorite, granite, quartz, gabbro, dolomite, limestone, and cyanite deposits. Scientists estimate explored Ukrainian stocks of only facing stone in the figure of almost 440,000,000 m³ - the volume of parallelepiped with the sides 1000x500x880 meters [4; 5].

Granite, gabbro and labradorite are the rocks of the Ukrainian crystalline shield. Deposits of the latter are located in Zhytomyr, Kyiv, Vinnytsia, Cherkasy, Rivne, Donetsk, Mykolayiv, Zaporizhia, Kirovohrad, and Dnipropetrovsk oblasts.

However, more than 90% of explored Ukrainian labradorite are situated in Zhytomyr region. (One cubic meter of the most expensive labradorite costs around 620 USD) [6].

Stone industry experts call the Zhytomyr area “Little Ural” as a reference to its great deposits of natural stone, which makes Zhytomyr a wonderful place for the stone business development.

Actually, in Russia, marble deposits have vast geographic distribution, but a certain leader is Ural.

There are more than 20 deposits, even though extraction works are happening in only eight of them. White, gray, yellow, black and even pinky-red marbles are found in Ural Mountains.

The Altai and Western Siberia are rich in marble as well. Fine-grained white marble with red-green veins, lilac-pink stone and creamy-gray marble are mined there.

Krasnoyarsk region has more than twenty varieties of cream, white, pale pink, orange, greenish-gray and yellow marble. In Karelia, we can find red and pink granites, yellow-pink stone, Color palette of marbles in Karelia region varies from dark gray and black to snow-white, sometimes with bright yellow and green spots, or stripes [7; 8; 9].

Marble onyx is another featured stone found in Russia. Its hues vary from milky-white to golden, from light pink to amber, and from copper-green to brown.

As for the excellent building and facing stone travertine, in Russia it is a symbol of the Caucasus.

Some experts estimate that capacity of the Russian market of decorative stone (granites, marbles, limestones, quartzites, slates, etc.), including imports, is approaching \$ 500,000 per year [10].

Czechia and Belarus have diversity of syenite, granite and limestone deposits.

Although world trends in the natural stone business are usually the sum of the whole, tendencies in Middle East countries and Eastern European countries are quite distinct.

For Middle East, Crema Marfil and Dark Emperador are the usual suspects, these two Spanish marble stone that are regulars on the top. Also Capri Limestone, Spanish white marble, very popular in the Middle East for its white color and uniformity. Moca Cream limestone is beige limestone from Portugal, a reference and well-known type of limestone. Diverse Beige Marble such as Bursa Beige, Burdur Beige, Botticino. These are Turkish beige marble and have a growing demand [11; 12].

Diverse White Marble is also in favor this year, and particularly the ones with good price. Some examples are Mugla White, Estremoz, Blanco Macael. There is also demand for expensive white marble such as Carrara or Statuario, but in less quantity and for exclusive projects. As well as travertine Beige, especially from Turkey and for exterior cladding use, such as in villas, hospitals, museums, mosques.

Jura Beige Limestone, a German beige limestone that is highly demanded for both cladding projects and exterior flooring and diverse colored Marble such as Negro Marquina black marble, Rojo Alicante or Rosso Levanto red marble, Amarillo Triana yellow marble are on the rise too [13].

There are also some highlights about drifts in GCC demand for international supply. Increased demand for more “exotic”, “luxurious” and “rare” stone materials from countries including Turkey, Brazil, Italy, Portugal, China, India, Greece and North America.

“Our most popular products at Middle East Stone this year have been ‘Santorini’ granite and ‘Botanic’ – a unique quartzite. These are exotic materials from Brazil, which produces some of the world’s best granite, and has proved exceptionally popular for us here in Dubai this year.” Ali Khalil Onessi, Sales Manager at UAE-based SunItalia – one of the largest wholesalers of marble and granite in the region with over 300 varieties currently available.

SunItalia’s ‘Botanic’ stone has emerald green tones, representing one of the design industries most popular color palettes for 2017. Cream, white and gray were other colors highlighted by exhibitors as being in popular demand this year.

“Our most popular product is ‘Crema Uno®’ – our quarry is the only one in the world which has this specific type of marble and it is appealing to the GCC market who favor modern design.” - Serhan Erol, Partner at Aseel Marble – the biggest Turkish marble supplier in the Middle East.

At Tuesday’s talk on ‘Forecasting the future challenges and opportunities for the industry over the next 12-18 months’ experts from Mott MacDonald, SSH and Clyde & Co identified GGC countries UAE, Kuwait, Bahrain and Saudi Arabia in particular – as major construction growth areas [14].

As for Eastern European countries, most of the trends lead to the nature – from natural stone and metals to the imitations, replications, images of them and alloys.

General styles for stone on big surfaces are rustic and ecological minimalism [15; 16; 17]. Stone curving is especially popular this year; geometry in designs is the main trend, which looks beautiful, but is

also a hard work.

Travertine fits all the requirements for the natural look, and environmental friendliness. This is why it became a new fashion in home design, making an ambiance of home comfort and warmth, and going well with modern décor, classic and minimalism at the same time.

Another minimalistic trend that came to the Eastern European countries from the Northern Europe is using concrete and cement in interiors. Designers are playing with new color palettes and finishing, but the best-selling color is still authentic dark-gray.

An unexpected drift of this year is a slow replacement of white Carrara marble with gray and green. High-quality materials such as onyx and agate are adding deepness to any design, and being in favor nowadays as well.

Beside the new green color trend, we can often see melancholic dark walls in muted palette with aquamarine shades. Pink, as a favorite color of modern millenials, came to the décor and construction world too. It makes a great combination with orange-powder tones with shades of sage and dusty blue. Pink palette is complicated, carmine-red and terracotta hues can be a good complementary to it. Experts suspect red to be the next step in the color fashion, as a bright spark for both exteriors and interiors [18; 19; 20].

Conclusions and prospects.

Along with the development of economic relations in Central Asia and Eastern Europe, market regulators influence on the relations in these areas is growing as well.

The GCC (Gulf Cooperation Council, political and economic alliance of six Middle Eastern countries—Saudi Arabia, Kuwait, the United Arab Emirates, Qatar, Bahrain, and Oman) are the countries that are playing significant roles in the stone business among Middle Eastern.

The East European natural stone market has been growing steadily over the past decade, but according to the industry analysts, its demand level is still lower than in other developed countries, particularly the United States, Japan, Germany and France.

Taking in attention main world trends, each region still has its own fashions and drifts in the construction and design industries.

For Middle Eastern countries, overall and based on the Global stone portal statistics [21; 22], we can see a large demand for both marble and limestone, with different colors. Normally beige and white are dominant colors; however, we see increasing demand for different colored stone. Spanish marbles Crema Marfil and Dark Emperador. Capri Limestone, Spanish white marble, beige limestone from Portugal Moca Cream limestone, diverse beige marble such as Turkish beige marbles Bursa Beige, Burdur Beige, Botticino. Diverse White Marble is also in favor this year, especially Mugla White, Estremoz, Branco Macael. As well as travertine Beige, especially from Turkey and for exterior cladding use, such as in villas, hospitals, museums, mosques. Jura Beige Limestone, colored marble such as Negro Marquina black marble, Rojo Alicante or Rosso Levanto red marble, Amarillo Triana yellow marble are in high demand too.

Stone experts are highlighting some specials of the year: ‘Santorini’ granite and ‘Botanic’ – a unique quartzite, ‘Crema Uno’ marble.

Increased the demand for international supply of “Exotic”, “Luxurious” and “Rare” natural stone from countries like Turkey, Brazil, Italy, Portugal, China, India, Greece and USA.

In Eastern European countries, natural and ecological designs are on top. Mixes of metal and stone, minimalism and maximalism – mass individualization and desires for every design to be unique.

Geometry and stone curving using the most popular stone like ecological travertine, authentic concrete and cement, trendy onyx and agate and new favorite colors: gray and green instead of classy white, melancholic dark walls in muted palette with aquamarine shades, millenials’ pink, terracotta hues and forecasts for red to become a new fashion – all these characterize stone industry in Eastern European countries today.

International natural stone market experts predict that the stone market will continue growing in Eastern Europe and Central Asia, due to increased demand for natural stone in construction, agro-industrial complex, chemical and jewelry industries. Which makes it crucial to continue studying their market features, fashions and tendencies.

References

1. The official website of All Granite and Marble Corporation. (2017). The History of Natural Stone by Daniel Morrell. *marble.com*. Retrieved from <https://marble.com/articles/history-of-natural-stone-applications>. (Accessed 15 May 2018).
2. The official website of the Middle East Stone: International Stone and Marble Show. (2018). Middle East Stone is your gateway to a US\$5 billion stone procurement market. *www.middleeaststone.com*. Retrieved from <https://www.middleeaststone.com/exhibit/market-insight/>. (Accessed 15 May 2018).
3. The official website of UNSD. (2018). Standard country or area codes for statistical use (M49). *marble.com*. Retrieved from <https://marble.com/articles/history-of-natural-stone-applications>. (Accessed 15 May 2018).
4. Ramet, Sabrina P. (1998). Eastern Europe: politics, culture, and society since 1939. Indiana University Press. P. 15. Retrieved 2011-10-05, Bloomington, Indiana, USA.
5. The official website of UPBC. (2016). Facing stone of Ukraine. *upbc.com.ua*. Retrieved from <http://upbc.com.ua/uk/for-all/articles/facingstones.html>. (Accessed 17 May 2018).
6. Meleshko K. (2006). Zhytomyrschina – little Ural. Zhytomyr – a cosmic city, AiF. *zhzh.info*. Retrieved from <http://zhzh.info/publ/4-1-0-129>. (Accessed 17 May 2018).
7. The official website of Yarkamen. (2018). Natural stone in Russia: deposits and production features. *www.naturalstone.ru*. Retrieved from http://www.naturalstone.ru/articles/vse_o_kamne/naturalnyi_kamen_v_rossii_mestorozhdeniya_i_osobennosti_dobychi/. (Accessed 18 May 2018).
8. The official website of Litos. (2017). Russian stone market in 2017. *www.litosonline.com*. Retrieved from <https://www.litosonline.com/en/article/2017-sep-11/russian-stone-market-2017>. (Accessed 19 May 2018).
9. Association of Independent Consultants and Experts in the Field of Mineral Resources. (2006). Metallurgy and Chemical Industry Building Stone Market in Russia, Infomine. Moscow, Russia.
10. Granit and marble market. (2005). *Prakticheskij marketing* [Practical marketing], 11. *www.economy.nayka.com.ua*. Retrieved from <http://www.economy.nayka.com.ua>. (Accessed 19 May 2018).
11. The official website of British Geological Survey, NERC. (2017). Stone as a resource. *www.bgs.ac.uk*. Retrieved from https://www.bgs.ac.uk/mendips/aggregates/stone_resource/stoneuses.html. (Accessed 20 May 2018).
12. The official website of Czeska zula. (2018). Czech natural stone. *www.cezula.cz*. Retrieved from <http://www.cezula.cz>. (Accessed 20 May 2018).
13. The official website of Global Stone Portal. (2018). Middle East Stone Market Trends. *www.globalstoneportal.com*. Retrieved from <http://www.globalstoneportal.com/blog/markets-trends/middle-east-stone-market-trends>. (Accessed 21 May 2018).
14. The official website of AEC online. (2017). Middle East Stone 2017 Highlights GCC demand for International Supply. *www.aeconline.ae*. Retrieved from <https://www.aeconline.ae/middle-east-stone-2017-highlights-gcc-demand-for-international-supply-112251/news.html>. (Accessed 21 May 2018).
15. The official website of Take&Live. (2018). Stone and Metal – two main trends in the interior design. *takeandlive.com.ua*. Retrieved from <http://takeandlive.com.ua/article/metall-i-kamen-dva-glavnyh-trenda-v-dizayne-interera>. (Accessed 21 May 2018).
16. The official website of GranitBud Exclusive. (2018). Trend “Nature and Ecology” – Travertine. *granitbud.com*. Retrieved from https://granitbud.com/pro_nas/news/trend_pryrodnist_ta_naturalnist_-_travertyn.html. (Accessed 21 May 2018).
17. Myroshnyk, L. (2016). 50 shades of gray — fashionable concrete in bath interior, Elle Decoration. *www.elledcoration.ru*. Retrieved from <https://www.elledcoration.ru/how-to/trends/50-ottenkov-serogo-beton-i-tsement-v-interere-vannoy>. (Accessed 22 June 2018).
18. Timasheva, N. (2018). All trends 2018: what is in and what is out of interior fashion, Interior design. *www.interior.ru*. Retrieved from <http://www.interior.ru/design/trend/2441-vse-trendy-2018-cto-voshlo-i-cto-vyshlo-iz-interernej-mody.html>. (Accessed 22 May 2018).
19. Gomodobyvayushchaya i toplivnaya promyshlennost'. Rossiya i drugie strany SNG [Mineral and Fuel Industries. Russia and other CIS countries]. (2009). Moscow, Russia: ADI “Bisnes-karta”.

20. The official website of European Commission (2016). Building a harmonized European database on natural stones for the use of construction and restoration stakeholders. *ec.europa.eu*. Retrieved from <https://ec.europa.eu/growth/tools-databases/eip-raw-materials/en/content/building-harmonized-european-database-natural-stones-use-construction-and-restoration>. (Accessed 23 May 2018).

21. Soboleva, H.K., & Lomakyna, N.S. (2015). Mirovoy ryok naturalnogo kamnya [World natural stone market]. *Mezhdunarodnyy studencheskiy nauchnyy vestnik* [International Student Scientific Bulletin], 3-2. *www.eduherald.ru*. Retrieved from <http://www.eduherald.ru/ru/article/view?id=12495>. (Accessed: 26 May 2018).

22. The official website of Go4World Business (2015). The Import Export Blog for Manufacturers, Suppliers, Wholesalers and Traders. *blog.go4worldbusiness.com*. Retrieved from <https://blog.go4worldbusiness.com/2017/04/01/where-should-you-buy-granite-in-bulk/>. (Accessed: 27 May 2018).

Received: 05.10.2018 / Review 06.11.2017 / Accepted 06.18.2018

