



О КОМПЛЕКСНОЙ ОЦЕНКЕ ВКЛАДА БЕЛОРУССКОЙ СТРОИТЕЛЬНОЙ ОТРАСЛИ В РАЗВИТИЕ НАЦИОНАЛЬНОЙ ЭКОНОМИКИ

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На основе анализа данных национального статистического комитета Республики Беларусь описывается влияние строительной отрасли на развитие национальной экономики Республики Беларусь. Период аналитического исследования охватывает 2011–2019 гг. Выбор обусловлен значительными изменениями в законодательной и экономической политике государства в указанный период. Аналитические данные включают следующие показатели: вклад строительной отрасли в ВВП Республики Беларусь, численность занятых в строительной отрасли, динамику инвестиций в строительно-монтажные работы, темпы роста и обновления основных средств строительства, показатели деятельности организаций строительства, темпы роста выполненных подрядных работ по виду деятельности «строительство» по областям и городу Минску. Настоящее исследование является кратким изложением текущих тенденций в строительной отрасли Республики Беларусь, обусловленных макроэкономическими и социально-политическими изменениями в стране.

Ключевые слова: национальная экономика; строительная отрасль; валовой внутренний продукт; инвестиции; подрядные работы; строительно-монтажные работы.

THE COMPREHENSIVE ASSESSMENT OF THE CONTRIBUTION OF THE BELARUSIAN CONSTRUCTION INDUSTRY TO THE DEVELOPMENT OF THE NATIONAL ECONOMY

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This study describes the impact of the construction industry on the development of the national economy of the Republic of Belarus based on the analysis of data from the National Statistical Committee of the Republic of Belarus. The period of the analytical study covers the years 2011–2019 and is due to significant changes in the legislative and economic policy of the state. The analysis data includes the following indicators: the contribution of the construction industry to the GDP of the Republic of Belarus, the number of people employed in the construction industry, dynamic investment in construction and installation projects, growth rate and updates of building fixed assets, performance indicators of the building organisations, contract work growth rates by regional and Minsk «building» activities types. This study is a summary of the current trends in the construction industry of the Republic of Belarus, due to macroeconomic and socio-political changes in the country.

Keywords: national economy; construction industry; GDP; investment; contracting projects; construction and installation projects.

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Introduction

The development of the national economy is determined by changes in GDP, which develops in all its fields. As a material industry, the construction industry is designed to create and restore the basic facilities of all participants in the economic system—legal and natural persons, and financial and commercial organisations. The important role given to the building requires the serious provision of all necessary resources: human, material resources, energy and information.

It is therefore necessary to achieve optimal coordinated development between the relevant and subsectors that should be regarded as construction materials industries without which construction processes cannot be imagined. Therefore, there is an urgent need to conduct qualitative and quantitative research on the development of the construction industry in the Republic of Belarus and to assess its impact on the national economy.

The purpose of the article is to assess the impact of the construction industry on the national economic development of the Republic of Belarus.

The analytical study period covers the years 2011–2019. The choice was based on the construction industry beginning a new stage of development, taking into account the legislative changes in the Republic of Belarus in this area.

Many scholars have done the research of the relationship between the construction industry and the national economic growth. Specifically, L. S. Belousova studied the contribution of the construction industry to the development of the socio-economic potential in the region. She also describes the problem of diagnosing the emerging factor space from the perspective of the conditions and prerequisites for ensuring the sustainable development of the complex, investment attraction and expanding her own production base. It demonstrates the relationship between construction and growth and concluded that there is a two-way relationship between these indicators. Construction therefore must be regarded as one of the main sectors of the economy [1].

The R. Flanagan, W. Shen, L. Lou and K. Jewell studied the development of the construction sector in the context of globalisation. They proposed three directions: 1) expand the vertical integration in order to ensure the breadth of coverage; 2) increase the proportion of private entities in infrastructure projects, and 3) encourage foreign investors to participate in large construction projects [2].

K. Anaman and C. Osei-Ampons studied the contribution of the construction sector to economic growth. Scientists have found that the construction sector plays an important role in maintaining sustainable socio-economic development. They estimated that construction provided infrastructure and was a huge driver of macro-economic growth. They made proposals to modify the government directive in this area to ensure the working conditions of construction organisations [3].

H. Burke and S. Bicen studied the causal relationship between construction growth and GDP growth in developing countries and used quarterly data from Turkey from first quarter 2001 to second quarter 2016 for Granger causality testing to determine the relationship between construction investment and economic growth. Their research showed the importance of the construction industry and presented the possibility of addressing major issues in the short term, and scholars also noted that in order to benefit from long-term construction investment, it need to identify new construction-related industries attractive to investors. Specifically, with the development of the construction industry, there are building materials and related equipment manufacturing, machinery manufacturing, metallurgy and gold industry, petrochemical, glass manufacturing, wood and porcelain manufacturing, transportation, energy, etc. Moreover, the development of small and medium-sized enterprises more than any other economic sector [4].

In [5] the authors analysed the relationship between the construction industry and GDP through the optimisation of Chinese data. They found some similarities in the development of construction industries in Asian countries. The study found that the correlation coefficient of building added value growth and GDP is very high.

Therefore, scholars agree that the development of the construction industry will inevitably lead to the economic growth of a country and the solution of many social problems.

The construction industry has different significance to the development of the national economy from other industries. This is a unique industry involving all aspects such as owners, contractors, architects, subcontractors, materials, labour, suppliers of other technical facilities such as electronic engineers, mechanical engineers, equipment and regulators, etc.

Statistics showed that the country's economic conditions have improved during the period 2011–2019. Different trends have emerged in the construction industry of the Republic of Belarus (fig. 1–6).

Analysis data show that the contribution of the construction industry to the GDP of the Republic of Belarus (2016–2019) was declining, regardless of the growth. It added 2350.5 bln rubles (+43.6 %). At the same time, its relative share of GDP decreased from 10.4 % in 2016 to 5.3 % in 2019.



On the social side, the construction industry in the Republic of Belarus directly affects employment rates, including 6.4 % of the employed population, or 276 600 people (see fig. 2). It should be noted here that increasing building productivity saves per capita costs as well as increasing the income of building organisations. Increasing revenue from the increase provides additional investment inflows to the economy as the construction industry provides links to all other industries in the course of its business.

The contribution of the construction industry to GDP and the dynamics of workforce participation indicators from 2011 to 2019 showed negative trends. The factors causing this situation are as follows:

- 1) the number of construction units decreased sharply from 9548 in 2011;
- 2) construction investment remains low due to high inflation and exchange rate risk (see fig. 4).
- 3) there is a low real property, plant site and equipment update rate (2.6 % in 2018; see fig. 5, a). Building fixed asset growth remains at a minimum of 1–2 % (see fig. 5, b).

In 2019 the proportion of investment in fixed assets of Belarus decreased by 1.04 percentage points compared with 2012. In 2014 the sector had the highest investment index at current prices.

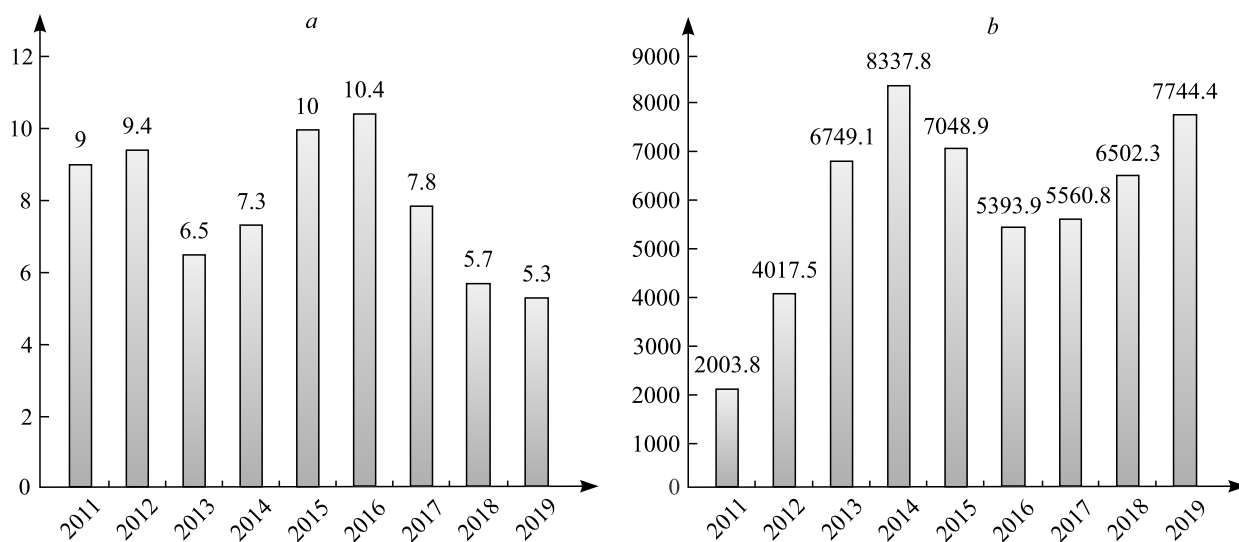


Fig. 1. Index of the construction industry contribution to the Republic of Belarus from 2011 to 2019 (the author's elaboration based on the data of the National Statistical Committee of the Republic of Belarus):

a – construction industry is share of the GDP of the Republic of Belarus, %;
b – contribution of the construction industry to the GDP of the Republic of Belarus, mln rubles.
The 2011–2015 indicators are listed in a comparable form

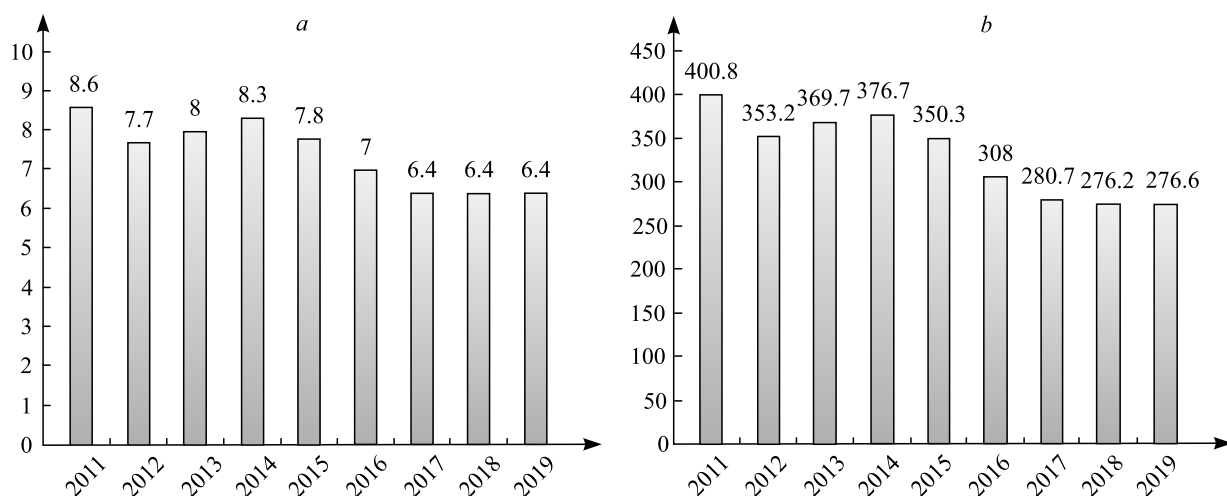


Fig. 2. Index of construction workforce participation in the Republic of Belarus from 2011 to 2019 (the author's elaboration based on the data of the National Statistical Committee of the Republic of Belarus):

a – the percentage of the construction industry employment population in the Republic of Belarus, %;
b – Republic of Belarus construction employment population, thousand

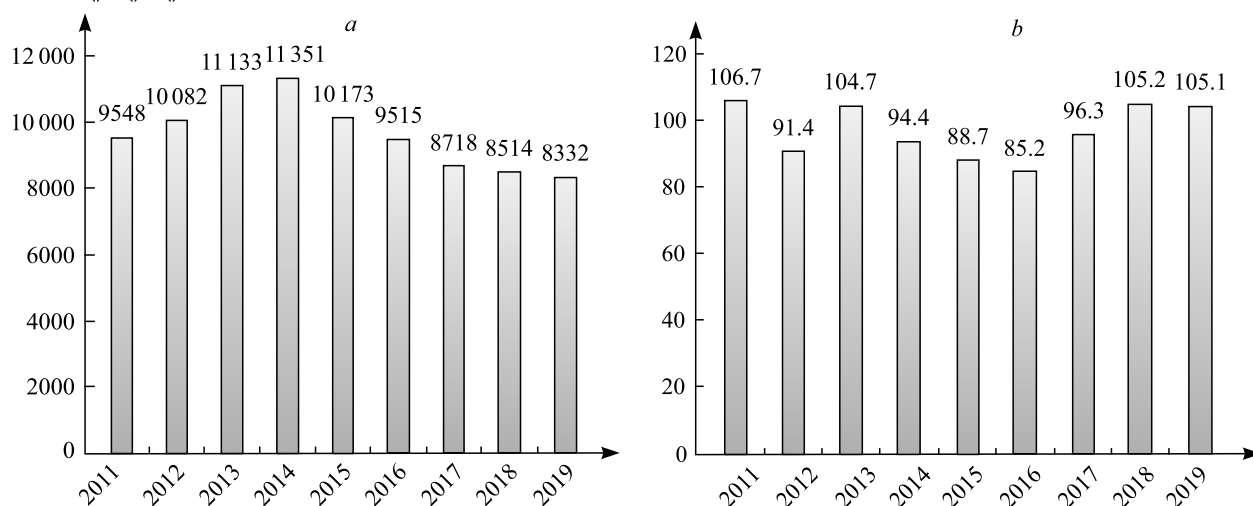


Fig. 3. Activity indicators of the construction units in the Republic of Belarus from 2011 to 2019
(the author's elaboration based on the data of the National Statistical Committee of the Republic of Belarus):

a – the number of building organisations;
b – growth rate of contracted works at comparable price compared to previous year, %

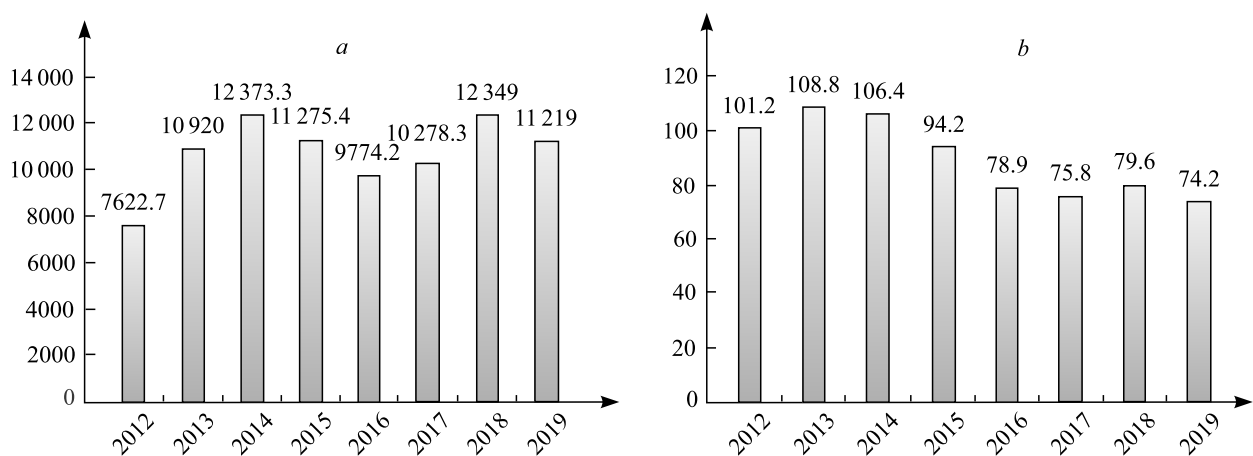


Fig. 4. Dynamic index of construction engineering investment of Republic of Belarus from 2012 to 2019
(the author's elaboration based on the data of the National Statistical Committee of the Republic of Belarus):

a – investment amount of construction and installation project, one million rubles;
b – increase and decrease rate of investment in construction and installation works calculated by 2010, %.
The 2011–2015 indicators are listed in a comparable form

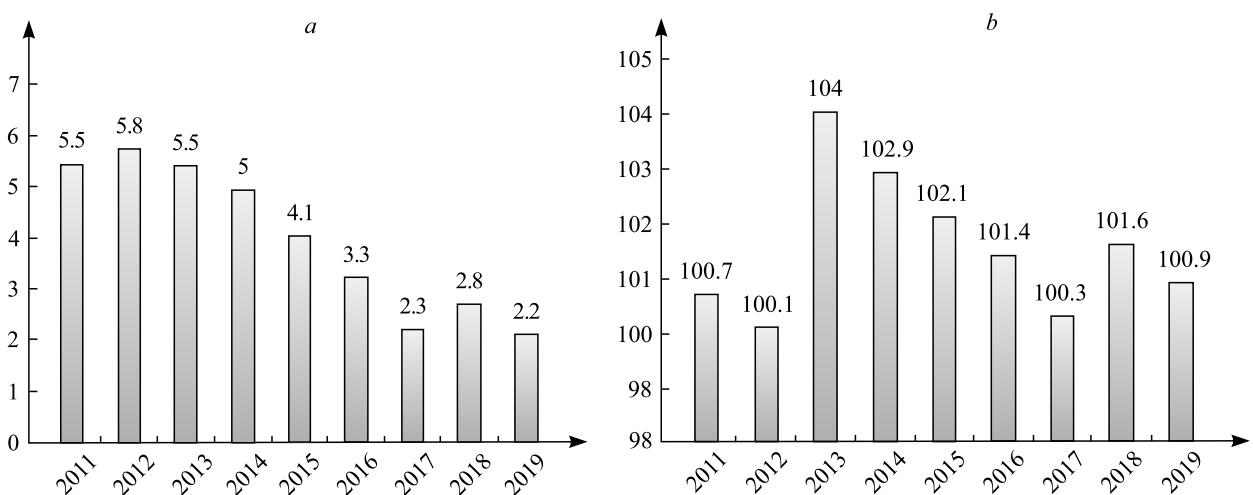


Fig. 5. Growth and update indicators of building fixed assets in the Republic of Belarus from 2011 to 2019
(the author's elaboration based on the data of the National Statistical Committee of the Republic of Belarus):

a – building fixed assets update factor, %;
b – the building fixed asset price growth rate is as compared to the previous year, %



The decline in building fixed asset update rates also shows problems in the industry (see fig. 5, *a*). The minimum growth rate of building fixed asset costs in 2016–2019 was 0.3–1.6 percentage points (see fig. 5, *b*).

Factors affecting key trends in the construction industry in the Republic of Belarus

In 2011 positive changes occurred in passing law and construction reform, starting with deregulation and simplifying the licensing procedures for construction market participants. Also in this year construction units of the Republic of Belarus completed 72.18 bln US dollars in construction work.

The number of built projects fully shows the overall dynamics of the impact of the construction industry on the national economic development (fig. 6).

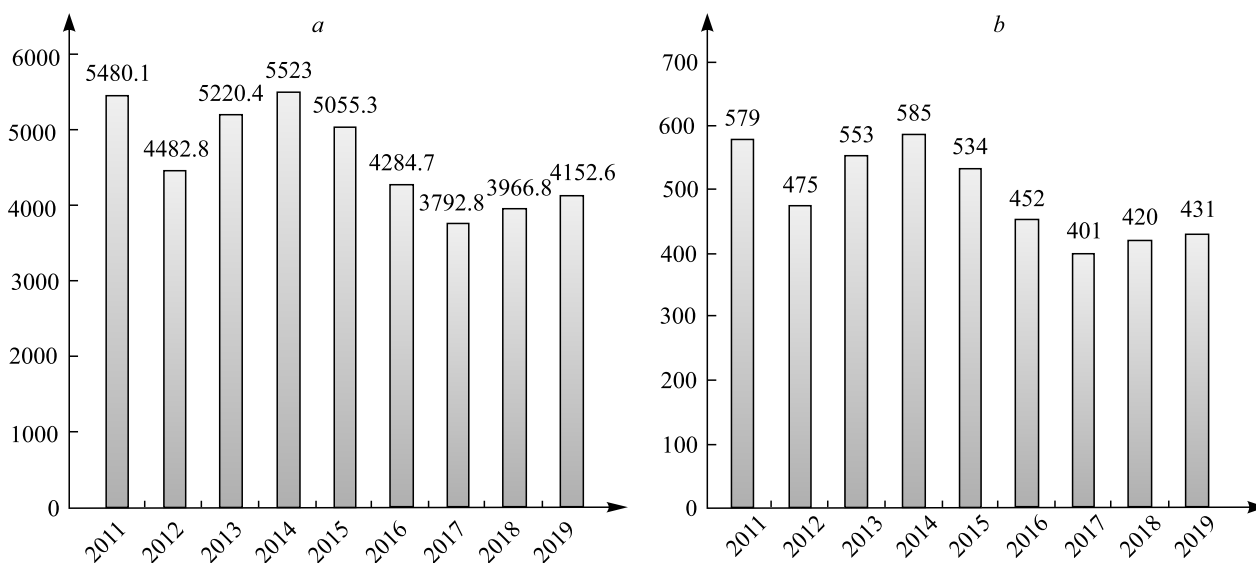


Fig. 6. Activity of construction units in the Republic of Belarus from 2011 to 2019
(the author's elaboration based on the data of the National Statistical Committee of the Republic of Belarus):
a – housing is put into use, thsd m²;
b – housing is put into use, thsd m² per 1000 people

Information for the period 2017–2019, provided by the regional authorities. In Belarus, nearly 11 821 900 cars were put into service. KV was 1.97 % compared to 2011–2013. The index is 15 183 300 m².

Construction of important social projects has increased slightly (table 1).

Table 1

Production of projects of socio-cultural significance from 2016 to 2019

Organisation type	2016	2017	2018	2019
General secondary education institutions, in student places	1091	2564	2760	8473
Preschool education institutions, in places	2820	2620	2800	1675
Hospital organisation, in hospital beds	281	216	886	112
Outpatient and outpatient organisation, in treatment per shift	1360	1725	682	2493

Note. The author's elaboration is based on data of the National Statistical Committee of the Republic of Belarus.

The general market trend in 2020 can be described by industrial stagnation. This is both due to the effects of the methyl hexachlorocyclohexane (Covid-19) pandemic and to the socio-economic imbalance (table 2).

Therefore, consider the growth indicators of the contracted projects completed in the construction activities of the regions and cities. We can see the overall trend in short-term growth in the construction industry in 2018–2019. However, this increase was due to a substantial reduction in the number of construction contractors completed in 2017.

Table 2

**Growth indicators of construction activities by regions and Minsk city
of completed contracted projects Minsk from 2011 to 2020**

Region	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Brestskaya oblast'	96.7	82.0	103.4	90.8	84.5	90.3	100.1	109.0	106.4	97.1
Vitebskaya oblast'	90.5	86.9	102.7	98.7	90.6	85.6	90.7	103.0	118.4	91.8
Gomel'skaya oblast'	101.7	83.1	113.9	92.5	89.3	76.9	96.5	107.1	101.3	100.4
Grodenskaya oblast'	109.3	89.1	102.3	94.0	84.7	81.1	99.3	105.1	97.5	95.0
Minsk city	118.8	98.6	105.4	96.5	86.7	87.4	93.2	105.7	103.4	100.8
Minskaya oblast'	109.5	96.8	101.3	93.4	96.8	88.4	98.7	103.4	108.4	98.6
Mogilevskaya oblast'	97.6	87.7	97.0	88.6	90.7	78.4	106.7	102.8	105.2	98.8
<i>The Republic of Belarus</i>	<i>106.7</i>	<i>91.4</i>	<i>104.7</i>	<i>94.3</i>	<i>88.7</i>	<i>85.2</i>	<i>96.3</i>	<i>105.2</i>	<i>105.1</i>	<i>98.4</i>

Note. The author's elaboration is based on the data of the National Statistical Committee of the Republic of Belarus.

Demand for housing has also dropped sharply in construction industries, demand for buildings and renovations, and demand for construction equipment and materials should also fall. Lower demand is linked to lower consumer ability to pay with some difficulties in providing loans, real estate concessions.

To improve the crisis situation in the construction industry, the following definition of prospects is proposed:

- 1) increase the burden of the housing purchase;
- 2) allocate funds and provide credit within the framework of the construction crisis management programme;
- 3) increase state subsidies to support housing construction;
- 4) develop a complete set of anti-crisis measures to safeguard jobs and support building companies.

It should also be noted that the construction industry, as an important part of the national economy, without the existence and successful development of relevant departments, it is difficult to imagine the rapid development of the construction industry, because the production process is characterised by a high material-intensive, so the construction material industry as the supplier of building materials is the main. Construction materials production is a diverse field involving more than 20 industries, forming its own unique market for building materials. Therefore, the construction market of the Republic of Belarus had a gradual increase in building product sales between 2016 and 2019, but it was not enough to increase its percentage in the GDP structure of the Republic of Belarus.

The construction industry of the Republic of Belarus has always been of great significance in the national economic development. Construction industry in the Republic of Belarus has stalled in recent years, with little growth in the country between 2011 and 2013. This sector saw significant growth due to gradual changes in the market in 2020–2021. It is hard enough to talk about any competitiveness in the industry. At the regional level, due to the enormous capacity and investment attraction, there is a clear tendency to give priority to the construction and construction organisations of the central and major regional cities, while at the global level the construction industry of the Republic of Belarus is far behind in development due to the lack of the necessary financial and organisational changes.

The successful operation of the construction industry and its positive contribution to the development of the national economy is not a new phenomenon for both the Republic of Belarus and the current economic policy. The state economic policies are implemented by implementing large infrastructure projects of social significance that are impossible without state support and appropriate business conditions.

Literature review and practical research on the assessment of construction contribution to the national economy of the Republic of Belarus enables us to identify favourable trends in the construction industry. In large part, the development of sustainable building projects in the Republic of Belarus is due to the skilled workforce to be absorbed by the vibrant green economy supported by the increasingly dynamic private sector to increase the level and impact of investment in green building projects.



In the Republic of Belarus, there is considerable potential to create new jobs in environmentally or new environmentally sound activities such as renewable energy, waste disposal or modernisation of energy efficiency. Similar construction products can be a source of wealth creation, coupled with measures to decline in population income, will improve the quality of life of many in the disadvantaged groups. If properly, the green economy can also narrow the gender gap in jobs and create opportunities for enhancing gender equality.

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