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CONSTRUCTION CHALLENGES IN RURAL AREAS OF LATVIA: COSTS, FINANCING AND HOUSING STOCK

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Abstract
Not only does construction activity in the regions play a crucial role in the regional development, as it not only provides employment opportunities and thus contributes to the well-being of the population, but also creates favourable conditions for access to modern housing and requires the mobility of human resources to the regions. At the same time, construction in regions and rural areas often implies more difficult conditions than in urban environments, which are associated with both funding opportunities and working conditions. The availability of financial investments to the private sector is limited for the construction of housing outside Riga and Pierīga region, which significantly reduces construction opportunities in the regions of Latvia. The study evaluates the possibilities of obtaining new housing in the regions of Latvia, analyses the trends in construction volume and costs from 2015, modelling forecasts until 2026. The study looks at various economic instruments that could contribute to the development of construction and new housing in the regions. The study uses surveys of municipalities, entrepreneurs and experts in the field of construction, in-depth interviews, focus groups and statistical data processing methods. It has been concluded that Latvian entrepreneurs tend to postpone investments or invest only in the economically strongest moments, which further aggravates the gap between urban and rural areas. The trends identified in the study indicate a possible further direction of stagnation or recession in the construction sector of new housing in the regions of Latvia, which will directly affect regional development in the next five years. The study highlights the necessary interventions for more productive regional housing stock cohesion.
Key words: rural development, construction, cost forecasting, housing stock.

Introduction

Construction activity in the regions plays a crucial role in regional development, as it not only provides employment opportunities and, as a result, contributes to the well-being of the population, but also creates favourable conditions for the availability of a place of residence that meets modern requirements (OECD, 2014). Taking into account the lack of human resources in the regions not only in Latvia, but throughout the European Union, it is important for policy makers to create innovative support instruments (Storper, 2018) that would directly target the development of housing construction in the regions. The unavailability of modern and affordable housing in the regions is one of the main hindering factors for the development of regions.

At the same time, construction in regions and rural areas often implies more difficult conditions than in urban environments, which are associated with both funding opportunities and working conditions. For the construction of housing outside Riga and Pierīga region, the availability of financial investments to the private sector is limited, which significantly reduces construction opportunities in the regions. Consequently, in the regions, construction mainly takes place within the framework of the public sector for public buildings, which further highlights the differences in the availability and quality of building infrastructure and premises between public and private buildings. In order to successfully address the challenges of regional cohesion, it is necessary to balance public and private capital investment in construction, in particular by promoting the construction or restoration of quality housing. For policymakers to carry out effective interventions, it is necessary to assess the current housing affordability situation in the regions, the factors affecting it and current construction development trends. The current study evaluates housing opportunities in the regions of Latvia, analyses the trends in construction volume and costs from 2015, modelling forecasts until 2026. The study looks at various economic instruments that could contribute to the development of construction and new housing in the regions.

Materials and Methods

The study begins with the analysis of secondary data: a review of the availability and construction of housing described in various reports and scientific sources, statistical data on housing, construction trends and the structures that make it up. Support measures to promote housing construction in the regions are discussed. Based on extrapolation of statistical data and expert opinions, an assessment of the development trends of construction until 2026 has been carried out. Expert opinions on regional construction and housing development and construction promotion activities have been gathered and analysed using in-depth interviews and focus group discussions. To achieve the diverse objectives of the study, a five-stage research design was applied, which included the following stages – analysis of secondary data, retrieval and analysis of primary data, extrapolation of statistical data, comparative analysis of synthesized information and development of conclusions and proposals. The following methods were used in the study – a survey of representatives of 41 regions – municipal experts, a survey of 83 construction experts, 5 focus groups, 55 in-depth interviews, 5 focus group discussions and statistical data processing methods, which included statistical data analysis from 2015 to 2021. Construction development forecasts were made for the period from 2022 to 2026. Autoregressive moving average – ARIMA (autoregressive integrated moving average), SARIMA (incl. seasonality) and ARMA (autoregressive moving average) – have been used to extrapolate the construction volume and cost time series. These models were adapted to the data of the construction dynamics rows in order to predict future scenarios for the development of construction costs and volume.

Results and Discussion

The general economic development of regions depends on **the construction of available housing** (Wardrip *et al*., 2011). **The initial construction of affordable housing generates short- and long-term employment possibilities as well as extra income for the community**, supported by the household expenses of new residents. The benefits of the development of the projects themselves are useful for the local area, provided that the maximum use is made of building materials and labour from local enterprises (Braslina *et al*., 2021). An additional multiplier effect may arise from the daily spending of those involved in construction, which can revive the local service sector (Braslina *et al*., 2020). **The construction and renovation of affordable housing brings fiscal benefits to local authorities** – benefits from VAT, income taxes and levies (Stefenberg *et al*., 2022). Due to the specifics of the Latvian tax system, the most significant benefits would be from new residents, which would increase the income of the municipality from income tax payments (Sloka *et al*., 2022). **Buyers of affordable housing may face risks of insolvency with a lower probability** (Wardrip *et al*., 2011). New homeowners who opt for luxury properties or generally invest in more expensive real estate are more exposed to insolvency risks (Batraga *et al*., 2019). **The existence of affordable housing in the municipality makes it easier for employers to attract skilled labour from other areas** (Girma *et al*., 2008). Highly motivated and mobile workers are flexible in choosing their place of residence and ready for geographical mobility to areas with lower living costs, lower traffic volumes and higher job opportunities. It is precisely the strengthening of county centres that is essential, since it is not rational to promote the construction of housing for every less densely populated area (Danusevics *et al*., 2022). Internal mobility is possible by achieving the availability of the necessary conditions – new housing, accessibility of educational institutions or transport to them for children, availability of high-quality telecommunications and consumer goods. Support mechanisms would be needed not only to promote housing, but also to support businesses serving the population (Braslina *et al*., 2021).

Indirect benefits for local government from a more active real estate market are also beneficial (Lagendijk & Cornford, 2000). Construction projects improve local infrastructure and contribute to the overall increase in the value of real estate, as well as provide a common public good. The construction of affordable housing frees up a larger part of the household budget for daily consumption needs, which contributes to turnover in the nearby area (Sloka *et al*., 2017).

The overall situation of the availability of new housing in Latvia indicates a relative ‘active circle’ of Pierīga – North Vidzeme – territory, which covers mainly Riga and Vidzeme regions and is characterized by more active construction of new apartments (Figure 1).

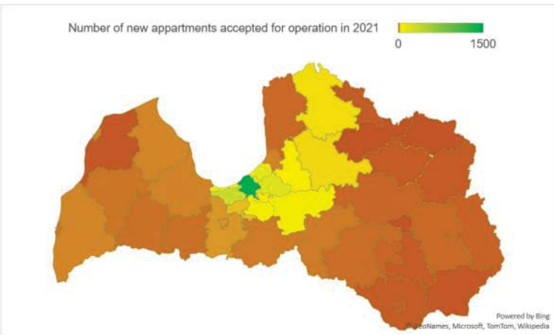

Figure 1. Breakdown of the number of new apartments accepted for operation in Latvian counties and cities of the country.
Source: CSB, authors’ calculations.

The most significant number of new construction objects is in Riga and municipalities bordering Riga. A relatively high indicator is observed in a semicircle, which includes Ogre, Sigulda, Cēsis and Valmiera counties. In Riga region, the greatest opportunities for obtaining a new housing are in Riga with 1537 new apartments accepted for operation in 2021 (Figure 2). Of the adjacent territories, the highest indicator is in Mārupe county with 320 apartments and Ropaži county with 201 apartments. The lowest indicator is Olaine County with 31 new apartments accepted for operation.

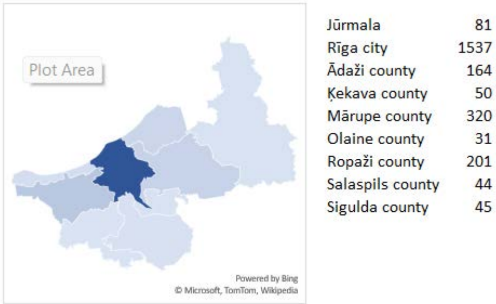

Figure 2. Breakdown of the number of new apartments accepted for operation in Riga region counties and cities.
Source: CSB, authors' calculations.

In Vidzeme region, there are prospects for new housing in Ogre County with 79 new apartments in 2021 (Figure 3). There is also a positive situation in Valmiera and Cēsis counties with 40 and 38 new apartments accepted for operation, respectively. In other municipalities, no statistics are available or less than 10 new apartments have been put into operation.

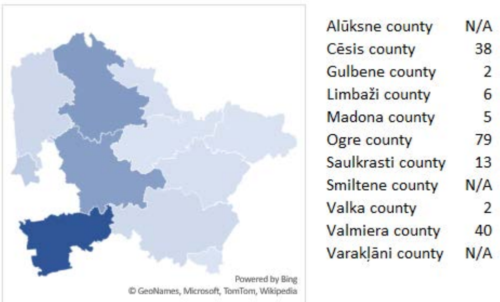

Figure 3. Distribution of the number of new apartments accepted for operation in Vidzeme region counties and cities.
Source: CSB, authors' calculations.

The Kurzeme Planning Region does not offer significant dwelling opportunities in new projects on a national scale; however, there is a certain variation within the region (Figure 4). The largest number of apartments accepted for operation is in Talsi and South Kurzeme counties with 14 apartments each, as well as in Ventspils and Tukums counties with 13 apartments each. Ventspils City provides more opportunities for dwelling, but in Ventspils region only one apartment was accepted for operation.

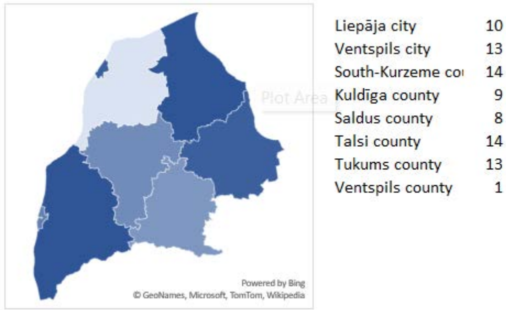

Figure 4. Distribution of the number of new apartments accepted for operation in the counties and cities of the Kurzeme region.
Source: CSB, authors' calculations.

In Zemgale planning region, there are higher dwelling possibilities in Jelgava and Jelgava County, where in 2021 29 and 19 apartments were put into operation (Figure 5) In total, it is more than in all other Zemgale counties combined, which provides Jelgava with significant competitive advantages for attracting remigrants who would like to return directly to Jelgava or its county. Aizkraukle and Bauska counties have the same number of new apartments – 11 each.

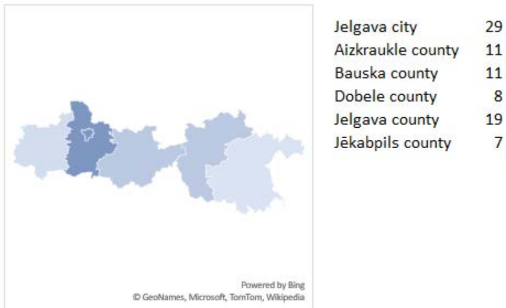

Figure 5. Distribution of the number of new apartments accepted for operation in Zemgale counties and cities.
Source: CSB, authors' calculations.

The Latgale planning region is the least attractive from the context of new housing opportunities, because in this region the best county is equivalent to the worst counties in terms of the number of apartments in other regions (Figure 6). For a potential seeker of a new place of residence, the greatest opportunities are available in Rēzekne municipality and city, where a total of nine new apartments have been accepted for operation. Līvāni municipality also provides small advantages with five new apartments. Other Latgale counties and Daugavpils have even lower activity.

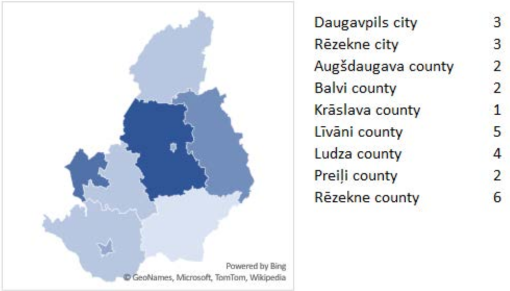

Figure 6. Distribution of the number of new apartments accepted for operation in Latgale region counties and cities.
Source: CSB, authors' calculations.

It can be concluded that outside Riga and Vidzeme region there are relatively few opportunities to acquire new housing. The availability of quality housing in existing buildings, including renovated ones, is not excluded; however, the study of this indicator is not possible based on the public information available in the study on the state of the housing stock by municipality. Taking into account the low availability of new apartments outside the Riga region, it is important to develop state and local government programs to promote the availability of the housing stock. The measures would include not only the creation of a municipal housing stock, but also the provision of support and advice for obtaining financial support for housing construction.

In order to address market failures and ensure high-quality and affordable rental housing in regions for households that cannot afford housing at market price due to insufficient income, several public sector activities have been announced in the public sector in Latvia, which are mainly aimed at low-income groups of the population. **The Ministry of Economics has developed a brand new support program, within the framework of which real estate developers will be able to receive support for the construction of low-rent residential rental houses in the regions**. It is planned to build 700 low-rent apartments in the regions with help of this funding. In the programme support to real estate developers for the construction of rental housing, the Development Finance Institution ALTUM intends to issue a long-term loan (up to 30 years) and a capital rebate (up to 30% of the total eligible costs of the project). To receive a capital discount, certain conditions will have to be met, for example, the quality requirements of a residential rental house and a certain amount of rented apartments. ALTUM support programme is intended for real estate developers and is available to commercial companies, cooperative societies and private companies. It will be possible to acquire rental rights for housing for any household that meets the established household income thresholds (net) and has entered the queue administered by the municipality. The aim of the support programme is to provide affordable housing, so it is stipulated that the rent initially does not exceed 5 EUR m^{-2} and that rents can be indexed annually to the annual average national inflation rate.

It is planned to achieve a similar goal by the Housing Fund provided by the Ministry of Environment and Regional Development, one of the tasks of which is the attraction of financial resources and investments in housing development. At the same time, the creation of this fund is intended not to have an impact on the general budget. It is planned to create public sector rental apartments and lease them to immobility managers. The plan foresees that managers, in turn, will manage and rent out housing, making regular payments to the fund. It is also intended to use the inverse proportionality and to provide for more allocated funding for planning regions with lower gross domestic product.

The activities carried out and planned are aimed at supporting low-income social groups, currently not focusing on support mechanisms for the construction of private sector and private equity housing in the regions.

The study evaluated changes in construction volume and cost, which have an immediate impact on the region's construction growth prospects. 83 experts from the field of public administration, civic initiatives (NGOs), academia, and businesses in the construction industry participated in this evaluation and provided their opinions.

Construction cost forecasts indicated that in 2022 construction costs will increase by 20.5 (actual increase by 19.7% (CSB, 2023)), which directly affects the decrease in construction volume. According to the researchers' forecasts, a large increase in construction costs is expected also in 2023, mainly in the field of the cost of building materials and the maintenance and operation of machinery and equipment. Total construction costs in 2023 are expected to increase between 9.9% (combined forecast) and 9.4% (expert forecast). Annual cost growth in 2024–2026 is forecast at an average of 8.7% for the combined forecast and 4.5% according to the experts' forecast (Table 1).

Table 1

Yearly construction cost changes in Latvia

2020	2021	2022	2023	2024-2026
+1.3%	+6.7%	+19.7%	Study forecast	
Combined forecast →			+9.9%	Annual average +8.7%
Expert forecasts →			+9.4%	Annual average +4.5%

Source: CSB data, expert opinions gathered for the study, authors' calculations.

In 2022, the most notable increase was recorded in construction products for building materials by 24.7%, followed by maintenance and operational costs of machinery and equipment – by 17.5%, but labour wages of workers rose by 10.3% (CSB, 2023). Timber, bituminous and metal products have the highest expected growth. In these groups of materials in 2023, increasing costs could reach annual growth closer to the 20–25% mark.

Contrary to the rise in construction costs, in 2022 the total volume of construction production decreased for the second year in a row by 11.3% (CSB, 2023). According to the projections of the study, growth in construction volume between -1.4% and -0.2% is also forecast in 2023 (Table 2).

Table 2

Yearly construction cost changes Latvia

2020	2021	2022	2023	2024-2026
+2.7%	-6.2%	-11.3%	Study forecast	
Combined forecast →			-0.2%	Average +2.0% per annum
Expert forecasts →			-1.4%	Average +2.0% per annum

Source: CSB data, expert opinions gathered for the study, authors' calculations.

Increasing construction prices and decreasing trends in construction volumes point to a trend of stagnation and recession in the construction sector, which can have a direct impact on the further development of housing construction and restoration in rural areas.

According to the study's estimates, residential building construction prices are predicted to rise by 14.3% in 2023. Experts predict an increase in the cost of building materials that is slowing, but still increasing annually with an increase in costs of 8.6% in 2023 and an average of 4.0% annually in 2024–2026 (Figure 7).

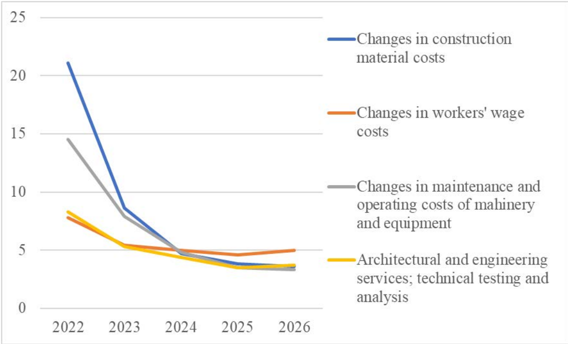

Figure 7. Forecasted construction resources costs for 2022–2026, percentage of the previous year.

Source: expert opinions gathered for the study, authors' calculations.

For the first time in projected observations following expert assessments, the expenses associated with maintaining and operating machinery and equipment were greater than the growth in worker pay. The growth of this resource group has typically been within a few percent every year, but in 2022, expert projections will finally approach double digits and a 14.5% cost increase is expected. In further years, this growth is projected to be lower, with 7.9% in 2023 approaching the 3% annual growth level in the following years. The large increase in fuel prices, which is immediately reflected in the operating expenses of machinery and equipment, is to blame for the rise in the price of this type of resource. The lack of competition in Latvia's machinery and equipment market, which is evident in the analysis of factors affecting the cost of machinery and equipment, may be a secondary issue.

The cost of building materials is anticipated to be higher in the construction of residential buildings than in the general ranking; experts predict that in 2022 as a whole, they might increase by 30.0%, while in 2023 they could continue within the bounds of 16% growth. (Figure 8).

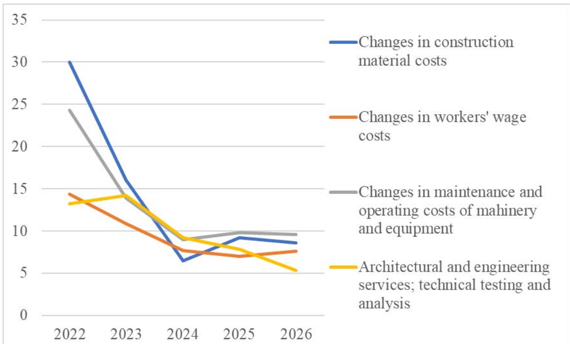

Figure 8. Forecasted residential buildings cost changes by resource types for 2022–2026, percentage of the previous year.

Source: expert opinions gathered for the study, authors' calculations.

Analyzing the factors that determine prices reveals that the prices of building materials have the biggest influence on the prices of metal, wood, and energy resources. The present increasing prices of fuel and energy resources, as well as the lack of competition in Latvia's machinery and equipment market, have a particularly negative impact on the maintenance and operating expenses of machinery and equipment used in the construction industry. It has been determined that the issue is related to the availability of spare parts and machines from specific brands. When assessing the causes of this increase in costs, the Russian-Ukrainian war and the associated changes in international relations, as well as the supply chain disruptions caused by COVID-19 and not yet fully restored, are considered to be the main ones.

On the other hand, Latvian labor expenses are mostly influenced by the pace of building. Additionally significant pressure comes from other EU construction sectors, where both salaries and labor demand have an effect.

Representatives of local governments surveyed in the study during in-depth interviews and focus groups indicate that the **increase in the prevalence of remote work has opened up new opportunities to maintain quality housing in small towns and rural areas**, as long as there is a sufficiently good internet connection, and the distance to cities is not so great as to be an obstacle to access to work or various necessary services. The most remote rural areas, where there is no infrastructure for transport, telecommunications and urban health and education infrastructure, the preservation of the place of residence and the creation of new quality housing do not take place. At the same time, experts have observed a trend towards the expansion of the ranges of economic centres-cities, people build houses outside the city. **The ideal option that many strive for is a house in the suburbs with a small plot of land.**

Municipalities experts emphasize that the difference in housing affordability between regions and Riga remains very large, and it is necessary to reduce it – Latvia differs significantly negatively in terms of regional differences against the background of other countries, experts point out. The large regional differences mean that there are the regions outside Riga that are entering a negative development spiral - lack of access to housing, the labour force is draining and the economic development of the region is regressing.

Experts also point out that the regions of Latvia are currently affected by new challenges related to the current energy crisis and large tax payments. Many entrepreneurs find it difficult to pay wages, not to mention bonuses, which is another obstacle to investing in improving the living environment. Increasing uncertainty about future remuneration increases the risks for starting construction – uncertainty increases whether the intended idea will succeed, whether the desired income will be guaranteed. Although the energy crisis undoubtedly affects the whole of Latvia, in an **unstable environment, entrepreneurs tend to postpone investments or invest only in the economically strongest points**, which in the case of Latvia is the Riga region, which further aggravates the gap between urban and rural zones in Latvia. The challenge for cities further away from Riga is also caused by the high transportation costs, which have increased significantly due to the increase in fuel prices. Latgale is currently more affected than other regions by geopolitical challenges, which also directly affect local construction companies. In the interviews of the study, it is highlighted that a sense of periphery and abandonment has developed among entrepreneurs in Latgale, which negatively affects plans for investments in housing improvement.

Conclusions

1. In regions outside Riga, the number of new apartments put into operation is very low, which is disproportionate to the population structure. With the exception of Riga, where in 2021 1537 new apartments were put into operation, only in Ādaži, Mārupe and Ropaži counties there are more than a hundred new apartments. In all other counties and cities of the country, this indicator is measured only in tens or even less. This creates significant obstacles to the economic development of rural areas.
2. In all regions of Latvia, one of the main problems is the lack of new and high-quality housing. The housing stock of municipalities is insufficient, no new residential facilities are being built, although in many municipalities such plans are mentioned. There are challenges related to the increase in construction costs, labour outflow, unavailability of financial loans outside the Pierīga zoning.
3. Experts point to the problem of rural depopulation, but how to act in this situation, the opinions of experts differ. While some stress the need for comprehensive rural revitalisation, others point to the need to think about **development centres** – where people want to live, where there is infrastructure that can be provided.
4. Taking into account the low availability of new apartments outside the Riga region and the high increase in construction costs, it is important to continue to develop not only state and local government programs for promoting the availability of housing stock for low-income

groups, but also to promote private capital investments.

5. It is stipulated that support measures should not only cover the creation of a municipal housing stock, but also provide support and advice for obtaining financial support for housing construction in the private sector.
6. It is necessary to strengthen state and local government programs for facilitating the availability of housing stock, using both fiscal and monetary support approaches.
7. It is desirable to consider the possibilities of directing municipal land to the construction of the economic segment (including row houses) for the needs of entrepreneurs and municipalities. In the case of entrepreneurs, preference should be given to companies in smart specialisation sectors.
8. It is necessary to provide for guarantees or other support mechanisms for credit institutions for the construction of houses of the economic segment outside the Pierīga region.
9. Municipal development plans need to take into account a balanced territorial plan for the availability of places of residence, educational institutions, transport hubs and other essential elements in order to promote territorial attractiveness and support mobility.
10. It is desirable to strengthen the co-financing of the municipality for the construction or renovation and reconstruction of residential buildings.
11. In order to reduce housing shortages, it is desirable to develop better transport infrastructure – a link between cities and smaller places where free housing might be available.
12. It is desirable to develop motivational mechanisms for entrepreneurs who are ready to renovate houses and build dormitories for their employees in the regions.
13. It is advised that municipalities create residential structures and provide accommodation for rent with a right of redemption to priority groups of the population (families with children, priority specialists specified by local governments, etc.).

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