A MECHANISM FOR FORMING AN AFFORDABLE HOUSING MARKET: RUSSIAN AND INTERNATIONAL CHARACTERISTICS

INTRODUCTION

In the federal target program “Housing for 2011-2015”, the term “housing affordability” is defined as creating a sufficient market supply for various solvent options. As a result, the term “affordable” is perceived as “everyone can buy”. It is directly associated with the situation on the market when there is a lot of housing and it is cheap. It is necessary to separate the concepts “social housing” and “affordable housing”. In the first case, we are talking about people who are unable to purchase housing even with the help of various support mechanisms, both market-based, for example, a mortgage loan, and government, such as, subsidies. For this category of citizens, housing is provided for social rent. “Affordable housing” should be purchased independently by citizens based on their own income through mortgage lending. In economic analysis, there are different definitions of “housing affordability”:

1. “Housing affordability” has a social orientation in matters of housing provision and is interpreted as an opportunity to provide adequate housing for those categories of the population who cannot independently purchase it on market conditions. It is synonymous with social housing (TAX CODE OF THE RUSSIAN FEDERATION, 2000; FEDERAL TARGET PROGRAM “HOUSING”, 2005).

2. “Housing affordability” is a sufficient supply of housing on the free market for all market mechanisms for its purchase or lease (VOLGIN, 2018).

The UK government has determined that affordable housing is for those whose needs cannot be met by the market supply. The right to purchase such housing is guaranteed to the participants of the relevant national program. This property is not traded on the open market due to price and resale restrictions. Its cost should not be higher than 3.5-4 average annual salaries at the location of the property. “Affordable housing” in the United States refers to the total housing costs (rent, mortgage, basic utilities) of adequate housing that do not exceed 30%-35% of total household income or the total cost of housing, the maintenance of which is affordable for the average household income.

METHODS

Study design

To successfully change the proportions in the structure of the housing stock towards an increase in the share of rented area, it is necessary to develop and implement a housing policy that covers the entire set of interdependent processes occurring in the housing sector and allows for their effective regulation. The scientific interest of the issue is due to both its urgency and the lack of works specifically devoted to a detailed substantiation and study of rental housing markets in modern Russia. This would allow studying them as a subsystem of the national economy with its own structure and infrastructure, conducting a systematic analysis of the regulation of this market. The study used the methods of economic and statistical analysis, quantitative and qualitative study, as well as the principles of consistency and development.
Calculation method

In world practice, the indicator “housing affordability index” is used, which is calculated as the ratio of the median cost of housing to the median household income for the year. The value of this indicator corresponds to the number of years during which a family can save up for an apartment on the assumption that all the monetary income received will be saved for its purchase. At the same time, when calculating this indicator abroad, the values of the median market price of housing and the median annual household income are usually used (FEDERAL LAW OF THE RUSSIAN FEDERATION, 2003; FAMILY CODE OF THE RUSSIAN FEDERATION, 1995). In general, the index of the possibility of acquiring a home with a loan is determined by the following formula:

\[ \text{HAI} = \left( \frac{E \cdot R}{C} \right) \times 100\% \]  

(1)

where \( R \) is the average monthly family income; 
\( C \) is the monthly payment on the loan, with the help of which the housing is purchased; 
\( E \) is the marginal share of family income that can be spent on loan repayment.

The value of \( C \) depends on the amount of the loan that the family needs to buy a home, the interest rate on the loan, and its term. Its size is determined by the level of prices in the housing market. Thus, the HAI index considers the price factor not directly, but through the mechanism of mortgage lending in the country (DECR EE OF THE PRESIDENT OF THE RUSSIAN FEDERATION, 1994; 1996). The monthly payment on loan \( C \) is determined based on generally accepted and widespread parameters of mortgage programs of banks. Since foreign banks use a scheme for calculating monthly payments on loans, the value of \( C \), which is the same for all months throughout the entire loan period, will be calculated using the formula:

\[ C = D \times \left( \frac{r}{12} \right) \times \frac{1 - \left( 1 + \frac{r}{12} \right)^{12n}}{1 - \frac{r}{12}} \]  

(2)

where \( D \) is the amount of the loan required by the family to purchase housing; 
\( r \) is loan rate, 
\( n \) is loan term (years).

The size of the loan \( D \) can be either equal to the cost of the acquired housing or less than it if the household has savings and can pay some part right away. Thus, the housing affordability determined through the HAI is directly proportional to the family’s monthly income \( R \), the term of the mortgage loan \( n \), and is inversely proportional to the size of the home loan \( D \) and its rate \( r \) (BOLGOVA, ZHEREBTSOVA, 2014; GAREEV, ZARIPOVA, 2014).

For a more accurate assessment of the possibility of acquiring housing from the point of view of the ratio of housing prices and household incomes in the Russian Federation, which can be used to purchase it, we propose a modified housing affordability coefficient. It is calculated as the coefficient of the average market value of a standard apartment (with a total area of 54 sq. m.) to the average annual income of a family of three minus the compulsory expenses and expenses for meeting the basic needs of the family (THE CONSTITUTION OF THE RUSSIAN FEDERATION, 1993; ACHKASOV et al., 2019).

This coefficient shows the time it takes for a family to accumulate funds to purchase a home by saving up all of their income in excess of the minimum funds required for food and other basic needs. Having adjusted for the family’s current consumption by deducting the subsistence minimum from its average annual income, we will obtain a modified housing affordability coefficient in the Russian Federation (FEDERAL TARGET PROGRAM “HOUSING”, 2010; NATIONAL PROJECT “AFFORDABLE AND COMFORTABLE HOUSING FOR CITIZENS OF RUSSIA”, 2005).
RESULTS

Based on the results of the study, the following mechanism is proposed for the formation of the affordable housing market in the country. It contains the following recommendations (THE TOWN PLANNING CODE OF THE RUSSIAN FEDERATION, 2004; THE CIVIL CODE OF THE RUSSIAN FEDERATION, 1996; THE LAW OF THE RUSSIAN FEDERATION, 1992):

- to introduce social categorization of the population according to the total annual income;
- to determine the cost of 1 sq.m. housing for each social group;
- to introduce for a certain period (5 years) the fixing of prices in the primary market, which will create certain financial stability and allow developing an indexing mechanism, housing affordability coefficient in the Russian Federation;
- to strengthen the public sector of housing construction, which will allow the state to act as a buyer and a seller;
- to create construction investment banks to attract funds from the population and organizations for the construction (equity participation) of housing;
- to introduce a system of benefits and investment deposit insurance for all interested participants in housing construction;
- at low income levels, to increase the level of savings for the purchase of housing in installments, as well as through the introduction of new mortgage products.

**Figure 1.** Modified housing affordability coefficient in Russia

**Source:** Search data.

The introduction of the proposed recommendations into the existing housing practice will speed up the mechanism for the formation of the affordable housing market and the systematic solution of housing problems in the country (FEDERAL SERVICE FOR STATE REGISTRATION, CADASTRE AND CARTOGRAPHY, 2018; BURDIN, 2015). From the point of view of housing...
affordability, coefficient values that do not exceed 3-5 years are considered normal. Within this particular interval of time, households can purchase housing without burdening the family budget (BREUSOVA, 2014; VASILEVA; ZERCHANINOVA; KHARLOV, 2014).

Thus, housing is not affordable for the majority of citizens, since the income of the population and the level of prices in the housing market do not allow more than 80% of the population of Russia to acquire it (ANNUAL REPORT OF THE FEDERAL HOUSING DEVELOPMENT FUND, 2018).

**Figure 2. Housing affordability coefficient in the Russian Federation**

![Housing Affordability Chart]

Source: Search data.

**DISCUSSION**

According to the international classification of housing markets based on the criterion of affordability, an indicator of affordability that does not exceed 3 years is considered favorable. In practice, this means that the average family can purchase a standard apartment in no more than 10 years, paying for it no more than a third of the total family monetary income per year (THE CIVIL CODE OF THE RUSSIAN FEDERATION, 1996; THE LAW OF THE RUSSIAN FEDERATION, 1992; GUSEV, 2008). The main criterion for housing affordability is its real market value, considering the dynamics of its change over time. The required number of years for the purchase of housing in the Russian Federation is shown in Figure 3.

**Figure 3. The housing affordability coefficient as a whole for the Russian Federation in 1998-2017**

![Housing Affordability Chart]

Source: Search data.

The housing affordability coefficient has decreased over 10 years by 2 years from 5.3 to 3.3 years. The main driving force is the decline in housing prices relative to the income of the population, caused by a decrease in population demand for housing as a result of the economic crisis, on the one hand, and an increase in the supply of housing in the primary
market, on the other (BOLGOVA, ZHEREBTSOVA, 2014). Despite its positive dynamic, the indicator of housing affordability is very arbitrary and cannot serve as a universal measure for everyone in a specific city or each specific family at a specific point in time (THE CIVIL CODE OF THE RUSSIAN FEDERATION, 1994).

In reality, not every family corresponds to the calculation parameters used - consisting of 3 people and having an income per family member equal to the average one in Russia. In addition, housing prices in each specific city may differ significantly from the average Russian prices (STANDARD FOR RESTRUCTURING HOUSING MORTGAGE LOANS, 2019).

The cost of housing in the Russian Federation continues to grow. The main reason for the rise in prices is the imbalance between supply and demand in the housing market. The percentage of families with incomes sufficient to purchase housing at current prices is, according to various estimates, at least 10-15% (considering the purchase of housing on credit). Even if we consider that the need to improve housing conditions for this category of citizens is much lower than the average in Russia, then even then we will get a more than two-fold excess of demand over supply. This means that no real economic factors are acting in the direction of reducing prices and even stabilizing them (FEDERAL TARGET PROGRAM “HOUSING”, 2005; 2015).

CONCLUSION
There is an increase in the cost of housing construction, caused primarily by an increase in prices for building materials and energy resources, which amounted to about 12-14% in 2019. At the same time, the growth in selling prices for housing more than 3 times outstripped the growth in cost. The lack of economic incentives makes all efforts to achieve the use of cheaper technologies in construction ineffective.

A significant obstacle to the development of mass mortgages is the lack of housing supply on the market and a significant rise in prices. In addition, mortgage lending, which increases the population’s demand for housing, despite the relatively small number of home loan sales, also contributes to this negative trend. Thus, for the majority of citizens, housing is not affordable, since the income of the population and the level of prices in the housing market do not allow more than 80% of the population of Russia to acquire it.

REFERENCES


DECREE OF THE PRESIDENT OF THE RUSSIAN FEDERATION No. 293 of February 28, 1996 “On additional measures for the development of mortgage lending” (in Russian). Available at:


A mechanism for forming an affordable housing market: Russian and international characteristics

Mecanismo para formar um mercado imobiliário acessível: características russas e internacionais

Mecanismo para formar un mercado de vivienda asequible: características rusas e internacionales

Resumo
Hoje, a formação do mercado imobiliário acessível é uma das prioridades da política socioeconômica da Rússia. Sua significância deve-se à gravidade do problema habitacional, deformações do mercado imobiliário formador, que são especulativas em condições modernas com um aumento constante dos preços da habitação, e limitando ainda mais sua disponibilidade para a maioria da população russa. A relevância do estudo é confirmada pela alta importância social da habitação como mercadoria, pela presença de significativas contradições socioeconômicas no setor habitalional, bem como pela necessidade de encontrar formas de atrair investimentos significativos no setor habitalional. Atualmente, cerca de 83% do estoque habitacional é de propriedade privada, cerca de 13% em aluguel social e 4% no aluguel comercial. Essa estrutura não é suficientemente eficaz, pois reduz a atividade empresarial e de vida de grande parte da população.


Abstract
Today, the formation of the affordable housing market is one of the priorities of Russia’s socioeconomic policy. Its significance is due to the severity of the housing problem, deformations of the forming housing market, which are speculative in modern conditions with a constant rise in housing prices, and further limiting of its availability for the majority of the Russian population. The relevance of the study is confirmed by the high social significance of housing as a commodity, the presence of significant socioeconomic contradictions in the housing sector as well as the need to find ways to attract significant investment in the housing sector. Currently, about 83% of the housing stock is privately owned, about 13% is in social rent, and 4% in commercial rent. This structure is not effective enough, as it reduces the business and life activity of a large part of the population.

Keywords: Housing market. Population. Housing sector. Business activity.

Resumen
Hoy en día, la formación del mercado de la vivienda asequible es una de las prioridades de la política socioeconómica de Rusia. La necesidad de desarrollar un mecanismo organizativo y económico para el funcionamiento del mercado de la vivienda asequible para la población es moderna y pertinente. La pertinencia del estudio se ve confirmada por la gran importancia social de la vivienda como mercancía, la presencia de importantes contradicciones socioeconómicas en el sector de la vivienda, así como la necesidad de encontrar formas de atraer inversiones significativas en el sector de la vivienda. Actualmente, alrededor del 83% del parque de viviendas es de propiedad privada, alrededor del 13% es para alquiler social y el 4% para alquiler comercial. Esta estructura no es lo suficientemente eficaz, ya que reduce la actividad empresarial y vital de una gran parte de la población.