

## Innovative Approaches in Integrated Assessment and Management of Residential Real Estate

*Suyunov. B. A.*

*Doctoral student of Samarkand State Architectural and Civil engineering institute*

**Abstract:** *The article analyzes the economic foundations of the formation of the market value of residential real estate. The study describes the main factors affecting the value of real estate in Samarkand, analyzes the housing needs of the population, analyzes the primary and secondary real estate market, and analyzes the stages of property obsolescence. The final section provides recommendations for improving real estate valuation.*

**Keywords:** *real estate, appraisal, external factor, internal factor, degree of obsolescence, market value, financing, territory.*

### Introduction

A lot of work is being done to build and create the real estate market in the country. The Republican Real Estate Exchange, the Real Estate and Investment Agency, more than a dozen private real estate firms, and more than 80 brokerage offices and appraisal infrastructure have all been built and are successfully running.

In Uzbekistan, appraisal activity is growing to some level, as it is required to appraise the object for sale and buy, leasing, mortgage, insurance, revaluation of fixed assets, mergers, inheritance rights enforcement, and enforcement of court decisions in a timely manner.

**The main part.** Uzbekistan also employs widely used property valuation methodologies, but the assessment must take into consideration the features of the economy and its structure.

In addition to identifying and assessing the key variables impacting the formation and determination of market real estate value, it is now necessary to construct a model of its life cycle in the objective assessment of residential real estate market value.

From this vantage point, the examination and improvement of real estate management is unquestionably a hot topic.

The life cycle of a residential building is the period in which engineering research, design, construction, operation (including maintenance), rebuilding, overhaul, and demolition are carried out. [5, 6].

Because the value of residential real estate does not remain constant, the complete life cycle (cycle) must be considered in the objective assessment of residential real estate.

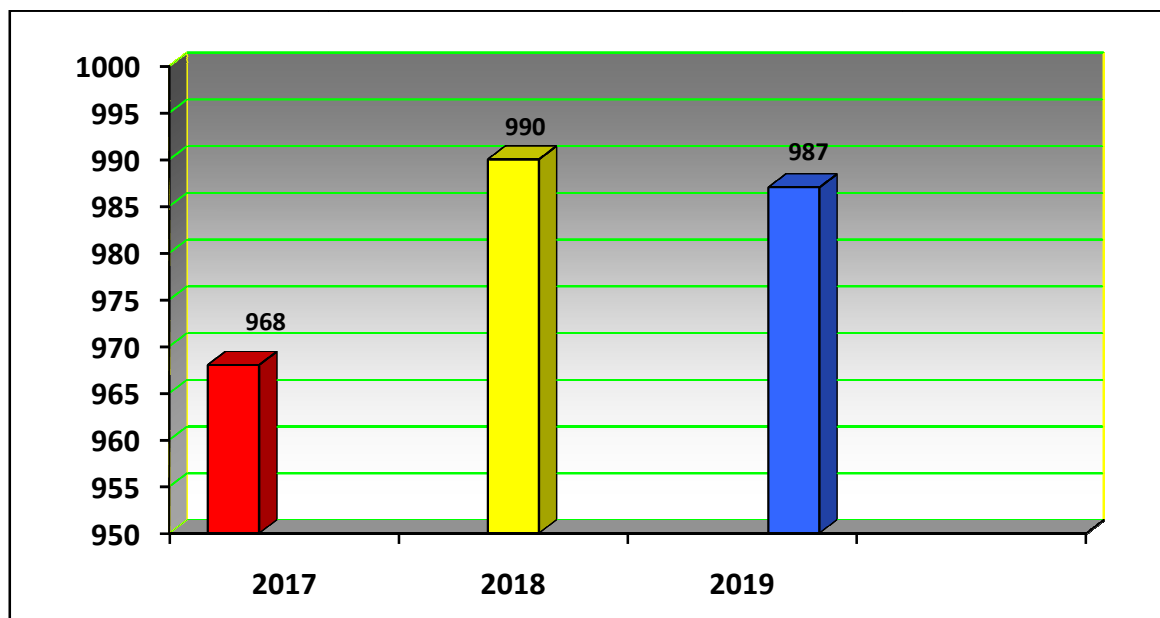
We did an examination of the primary and secondary markets of residential real estate in the city and district of Samarkand to analyze the activities targeted at addressing the population's housing demands.

The housing market in Samarkand and its surrounding districts, like that of other cities, is witnessing fast growth. However, there were no notable changes in the real estate market between 2017 and 2020.

Buyers' wages are lower than property values, mortgage rates have not reduced, so the number of individuals prepared to make a deal is low, and supply continues to outnumber demand.

When we look at the dynamics of new housing in Samarkand over the previous ten years, we can see that it is unequal. In 2019, new house starts grew by 28.0 percent to 14,483 thousand square meters, compared to 2017.

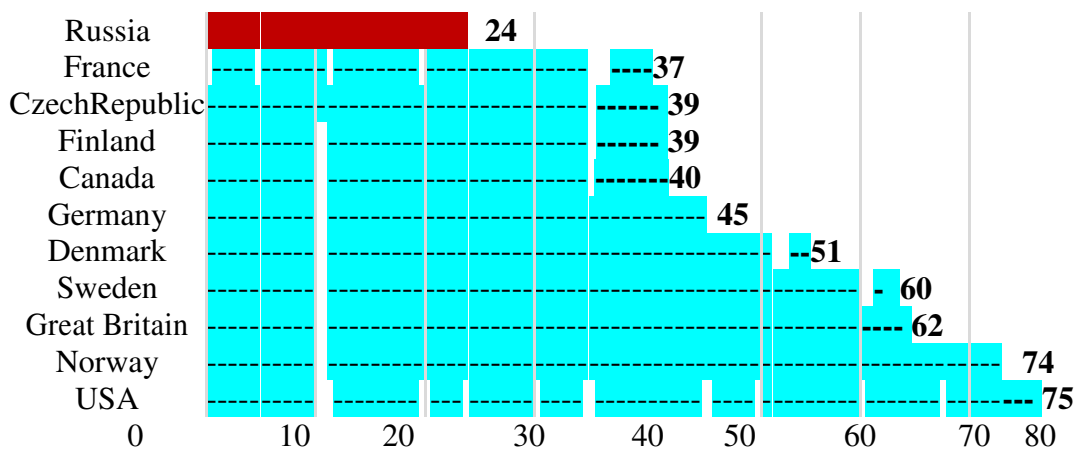
Construction and commissioning of new houses has increased quickly in recent years, not only in Samarkand but throughout the country. The cause for this is President Sh.president Mirziyoyev's efforts and initiatives. The building and commissioning of model houses, as well as economical and pleasant accommodation for young families, has resulted in an expansion in Samarkand's housing stock.



**Fig.3 - Dynamics of housing commissioning in Samarkand (thousand sq. m).**

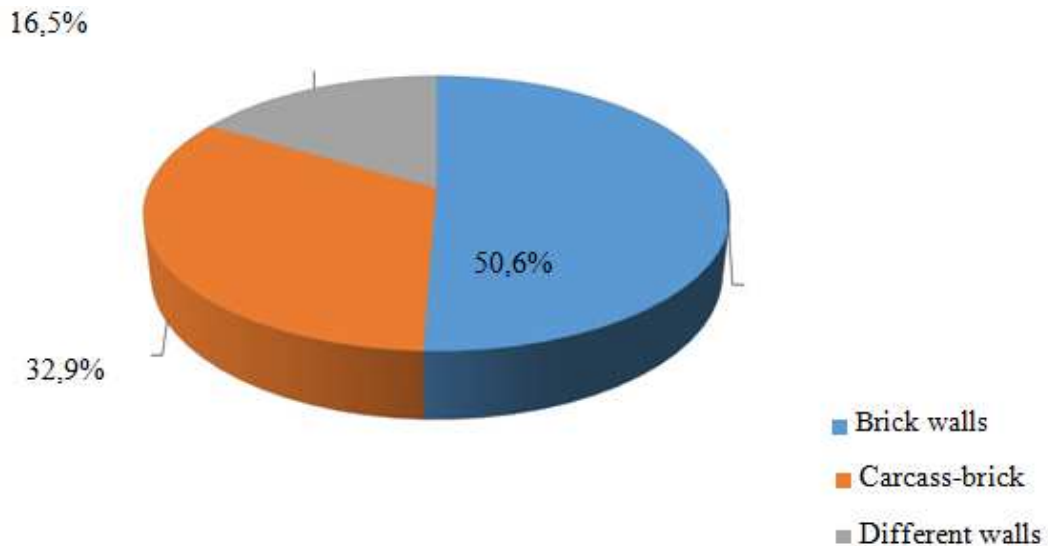
When we analysed the housing supply of the population over the last 10 years, it became clear that the housing level of the population had increased by 30.56% compared to 2010.

In foreign countries, including Western Europe, the average living space per capita is 40 square metres, in Samarkand it is 22 square metres, and in Samarkand region the average living space per capita is 15 square metres.

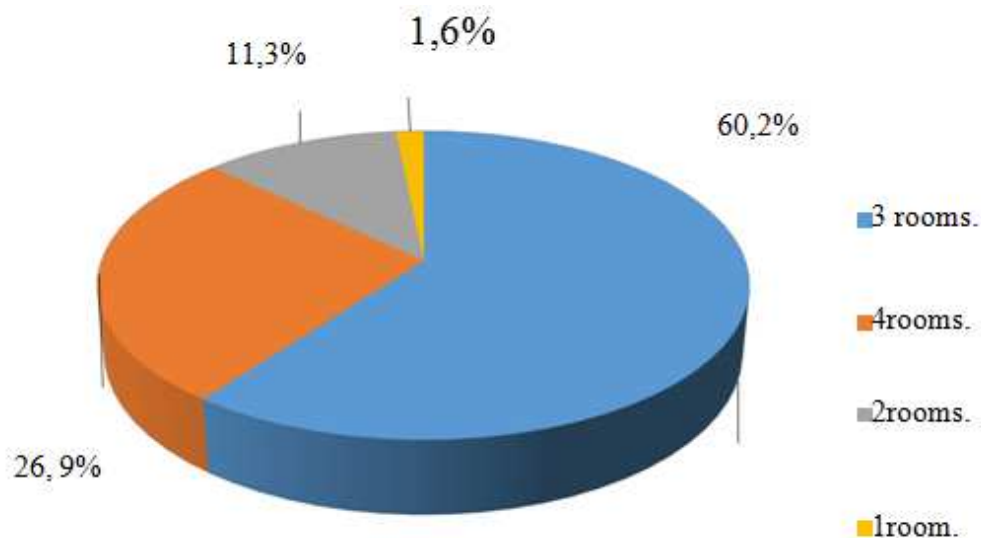


**Fig.4.** Per capita housing indicators in foreign countries (per square metre).

Considering the wall materials, in recent years the main component of residential houses (more than 50%) are brick houses, as for a long time such houses have remained prestigious and in demand (Figure 5).



**Fig 5** Distribution of houses commissioned by wall materials.



**Fig 6** Miscellaneous flats in Samarkand start-up volume (in %).

In recent years, the real estate market of Samarkand region has seen a decline in demand due to a sharp rise in prices (according to statistics, the cost of 1 sq. m of housing ranges from 2.5 million to 5 million soums), mainly due to the general economic situation in the region and the country, due to the decline in effective demand, increase in supply, high inflation and high mortgage interest rates, etc.

Convenience plays a major role when choosing a flat from a building under construction; well-developed infrastructure, convenient transport accessibility evaluate the attractiveness of the project.

Depending on the location, technology and year of construction, one can buy a one-bedroom flat for between 90m and 125m soums on the secondary market in Samarkand District, real-estate agencies said. Ordinary three- and four-bedroom houses are also selling for the same. In the new buildings market, the price starts at 3 million rubles per square meter.

Estimating the market value of residential buildings at different stages of their life cycle is very relevant and plays an important role. Residential real estate today functions not only as a place of residence, but also as an object of legal, social and economic relations.

The market value of property depends on many factors reflecting its use value over time, with the stage of their life cycle being important.

It should also be borne in mind that the real estate market is an imperfect type of market: one in which objects of non-standard shapes circulate, which are difficult to compare in terms of quality; this market is always local (demand, supply and prices depend on location) and highly uncertain (supply is always limited due to natural scarcity of territory). All these difficulties lead to difficulties in the property valuation process.

In most market economies, mass revaluations and reassessments for the purpose of property taxation have been attempts at automation using modern information technology in recent years, but this is a much more complex and sophisticated process. We are also taking steps towards a digital economy in this area.

The existing property valuation methods in principle meet all the conditions and requirements of a market system, as they are based on the basic components of the market - supply and demand.

However, the valuation of residential and public buildings has not only methodological peculiarities, but also specific features, since many social, general economic factors influence the real estate valuation process. Therefore, for all cases of real estate appraisal, different methodological approaches are required, taking into account the positive features of Uzbek market and taking into account the functional, architectural and construction, structural and other features.

The analysis shows that the cost of 1 sq m of housing in Samarkand province depends on quantitative factors: location, construction year and area.

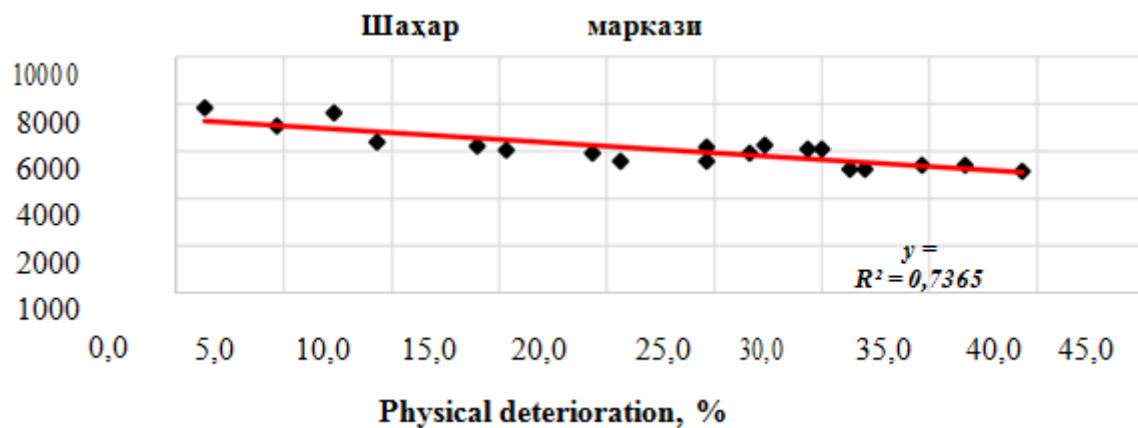
We defined a model for the life-cycle dependence of the market value of residential property using multivariate regression. Multivariate regression analysis is known to include a method for determining whether one variable is related to two or more independent variables.

**Table 1** The main factors affecting the Samarkand housing market

Factors	Factor characteristic	Factors	Factor characteristic
1) Location (district)	Center, city, district	5) house layout	Very old (Khrushchev) In the 70s and 80s Bedroom type New layout
2) Number of rooms	For young people Rooms 1 + 4-		
3) Wall material	Panel Brick Monolith Brick + monolith Wood Block Shlakliblok, foamconcrete	6) Area	New plpnirovka Planning has been improved Private, individual Two-tiered (level)
4) Floor	Side floor (ground or last floor) Middle floor	7) Construction year	Residence, new or old kitchen

In the following diagrams, we present the results of determining the regression model of the market value of residential real estate depending on the year of construction, the area of the apartment, the area in which it is located and the degree of physical obsolescence (Figure 1).

Based on the results of the data presented in the figures, we construct table 2. To create the model, the conditional districts of Samarkand, such as Bogishomol, Railway, Siyob, and the Center of Samarkand district, the Fortress of Chemists, etc. were selected.



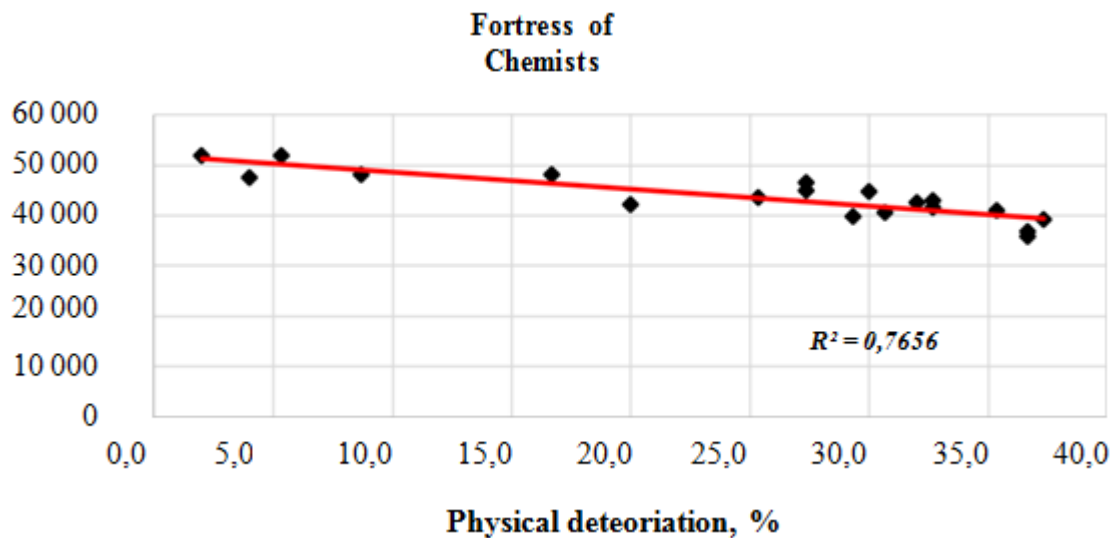


Figure 1. Regression model results in the effect of regions and physical depreciation on market value.

Thus, in the Railway, Siyab and Gulobod regions, the rate of obsolescence is 20% to 40%. The cost of a square meter is about 4 million to 5 million soums. The cost of 1 square meter of housing with a depreciation rate of 40% to 60% ranges from 3.2 million to 4.3 million soums. At the same time, the cost of housing in the "central regions" of Samarkand, which has the same level of obsolescence, is expensive, from 4.2 million to 5.2 million soums. The location of the building is also important and has an impact on the level of deterioration.

Table 2 Comparative description of prices in the housing market depending on the degree of obsolescence by region.

Area, district	Market price of 1 sq.m. apartment building		
	0% – 20%	20%– 40%	40%– 60%
Bogishomol	5 200,2 – 6 354	5046,2– 5 200,2	4 292,8– 5026,2
Railway	5145,8 – 6076	4214,6– 5145,8	3283,4– 4114,6
Siyob	5096,8 – 5885	4306,6– 5096,8	3517,4– 4306,6
Gulobod	4938,4 – 5676	4199,8– 4938,4	3460,2– 4199,8
Fortress of Chemists	4524 – 5198	3550– 4524	3177– 3550

The underdeveloped Fortress of Chemists in Gulobod cities, relevant to above mentioned cities, the cost of a residential building is much lower, with a depreciation rate of 40% to 60%, the cost of 1 sq.m. is from 3.1 million to 3.5 million soums. There is also the effect of territorial location.

The proposed models for changing the market value of residential properties in the city and district of Samarkand depending on physical obsolescence and different locations show that the location of a property in a more developed area (location factor) suppresses high levels of obsolescence proves that this can increase its value.

Thus, it was proved that there is a correlation between the life cycle and market value of residential real estate objects. The main important factors are location and physical obsolescence, the former can suppress the latter in shaping the market value of equally obsolete housing.

**Conclusion** As a result of the research, the following suggestions and recommendations can be made to improve the valuation of real estate:

1. scientifically update, prepare and improve regulatory documents that meet international standards of evaluation.
2. full compliance with the basic principles and legal framework in the assessment of residential real estate;
3. to take into account the factors influencing the assessment process;
4. create a comprehensive database for appraisers to facilitate evaluation ledgers;
5. introduction of selection of statistical methods in the absence of data on similar (analog) objects.
6. extensive use of practical experience of foreign countries in the assessment;
7. taking into account the impact of urban spatial indicators in the assessment and management of residential facilities.
8. A number of key factors in the assessment are the environmental situation, the market situation (supply and demand, solvent demand), the territorial location of the object and its area, construction year, the degree of physical wear and tear, the external and internal technical condition of the facility, the availability of wall materials, planning, flooring and utilities must be taken into account, only then will the market value of residential real estate be found to be accurate, objective.

Taking into account these measures and recommendations, the effectiveness of the assessment will increase by 30-40%.

#### **References**

1. Mirziyoev Sh.M. Together we will build a free and prosperous, democratic state of Uzbekistan.-Tashkent.Uzbekistan.
2. Law of the Republic of Uzbekistan on Evaluation Activities - Tashkent, 1999.
3. Asaul, A.N. Economics of real estate: textbook for universities / A.N. Asaul.- 3rd ed. - SPb.: Peter, 2013. – p.416.
4. Asaul, A.N. Theory and Practice of Management and Development of Property Complexes: scientific edition / Kh.S. Abaev, Y.A. Molchanov. - SPb. Humanities, 2006. – p.250.
5. Grinenko S.V. Economics of Real Estate: textbook / S.V. Grinenko. - Taganrog: publishing house of TRTU, 2004. – p.187.
6. Ўzbekiston Respublikasi MBMS № 1, 2, 3, 5, 10;
7. Ganiev K.B., Ganiev G.I. Real Estate Appraisal: Textbook - Tashkent, KONSAUDITINFORM –Publishing, 2010. – p.232.
8. Methods for Determining Physical Depreciation in Real Estate Valuation [Electronic resource] :<http://www.ocenchik.ru/docs/943.htm>.
9. [www.gkilicenz.uz](http://www.gkilicenz.uz)
10. [www.ziyonet.uz](http://www.ziyonet.uz)