

EXISTING HOUSING STOCK AND NEW HOUSING CONSTRUCTION

Introduction

This chapter analyses the housing stock in the Republic of Moldova - its type, construction, location and condition. It also examines whether the housing supply is sufficient to meet demand and how the problems of utility infrastructure affect residents' quality of life. The chapter also examines the effects of the transition on the construction industry and, finally, it analyses the state of the real-estate market.

A. Housing stock and recent performance

Existing housing stock

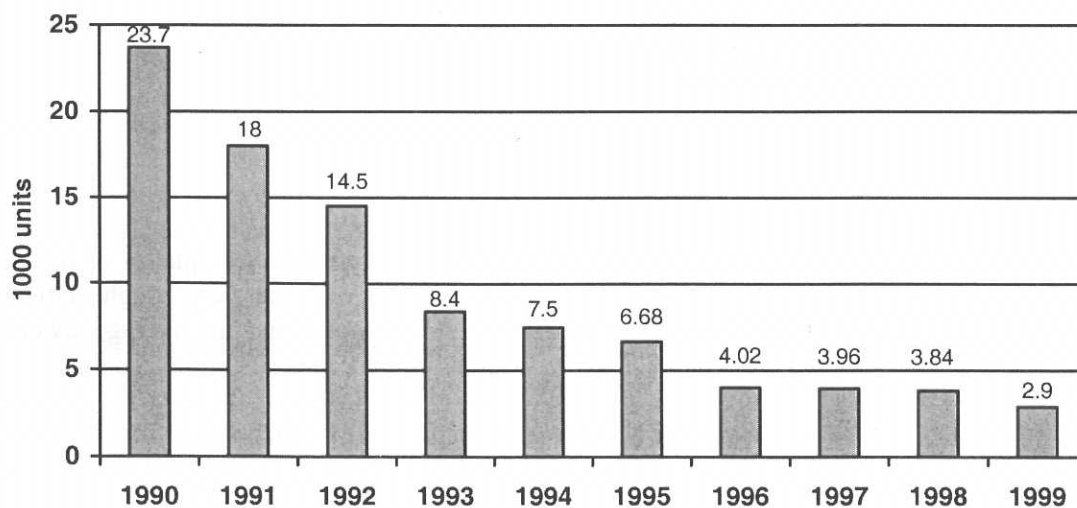
At the beginning of 2000, Moldova's housing stock consisted of about 1.3 million units with a total of some 75 million m² (table 8). There are about 910,000 separate buildings of different sizes – from detached houses to apartment blocks. There are officially no temporary dwellings there.

Table 8. Housing stock of the Republic of Moldova

	Unit	At year-end				
		1995	1996	1997	1998	1999
Number of units	1000	1222	1227	1236	1265	1282
increase	in per cent	-	0.4	0.7	2.3	1.3
Total space	million m ²	71.8	72.2	73.2	74.5	75.4
increase	in per cent	-	0.6	1.4	1.8	1.2

Source: Ministry of Environment and Territorial Planning.

Figure VIII. Number of completed dwellings



The housing stock has increased little over the past five years because of a marked decrease in new housing construction. Completions were just 12% of their 1990 level (fig. VIII). Given that new housing construction is considered to be the main means of expanding and improving the housing stock, this relatively small number of new dwellings has had little impact upon the overall quality of the stock. On the contrary, it can be argued that intensive wear and tear, lack of maintenance, and the limited amount of renovation has deteriorated the quality of the housing stock during this period.

Though the basic parameters would indicate stability over time, these numbers may in fact disguise considerable structural changes. The housing stock data in table 9 provided by the Ministry of Environment and Territorial Development differ slightly from the data in table 8, but the 1999 data give a certain overview of the housing-stock-related problems.

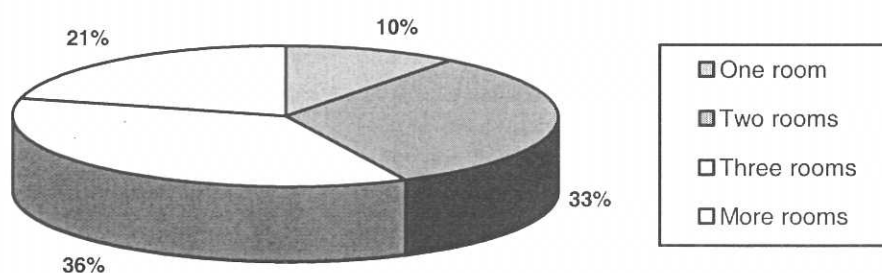
Table 9. Dynamics of the national housing stock, 1999

	Availability of stock (in m ²)	Change in housing stock (in m ²)		
		Increase	Decrease	Balance
At beginning of the year	75,316,104			
physical change		1,197,154	1,417,889	- 220,735
incl. new construction		254,424		
resulted by surveying		567,607	290,710	+ 276,897
At year-end	75,372,266			

Source: Ministry of Environment and Territorial Planning.

The data in table 9 are a good illustration of the problems of obtaining reliable housing-stock data. For example, since 1998 the two regions of Camenca and Dubasari - located on both banks of the Dniester river - have presented no housing stock data, nor is all the data presented earlier reliable. Surveying and resurveying stock may well improve the quality of data, but these changes also outweigh actual stock increases due to new housing completions. Another phenomenon is that many unfinished detached houses in the countryside are not included in completions figures, but are, nevertheless, occupied by households.

Figure IX. Distribution of dwellings according to the number of rooms



Source: Ministry of Environment and Territorial Planning.

The size and composition of dwellings is one aspect that demonstrates the quality of housing. About 70% of the dwellings have two or three rooms (fig. IX). From the very rough statistical information about the whole national housing stock, it can be deduced that an average dwelling comprises 62.7 m² of space with approximately 2.8 'living' rooms.

Any comparative historical analysis of Moldovan housing is difficult because unreliable data means that conclusions cannot be trusted. So most of the data used here are from the most recent years - 1999 and 2000.

There is also a historic-geographical element to be taken into account when analysing the structural differences of the housing stock. There are no uninhabited areas in the Republic of Moldova.

Settlements are dense and relatively uniformly distributed. Most of the rural population live in large villages – some of them with more than 10,000 inhabitants. This structure has been influenced during the past decades by the following two factors:

- 1) favourable natural conditions have encouraged the population of the Republic of Moldova towards agriculture; and
- 2) the vulnerable geopolitical position of this region has discouraged long-term investment and delayed urbanization.

The influence of these factors suggests that national housing performance should be analysed according to the two major categories of settlement, urban and rural. By the end of 1999 the national housing stock consisted of 75.4 million m², of which 27.9 million m² in urban (37%) and 47.5 million m² in rural (63%) settlements. About 40% of all the dwelling units are located in the urban environment.

The geopolitical trends have resulted in the housing stock developing very differently in urban and rural areas – rural dwellings are both larger and more spacious than those in cities (table 10).

Table 10. Urban-rural composition of the housing stock

	Urban	Rural	Total
Average number of rooms per dwelling	2.2	3.1	2.8
Average floor space (m ²) of a dwelling	47.8	71.5	62.7

Source: National Human Development Report. 1999. UNDP.

Currently only about one third of all newly completed housing is located in the rural settlements, but as there is little new construction, the long-established structural proportions between rural and urban stock remain unchanged.

Moldova's housing stock consists of permanent buildings – there are no temporary buildings used to house people. The Soviet-era urban system-built blocks of flats are either large prefabricated slab buildings, or concrete in-situ, or cut stone ones. In 1995, about 49% of all the apartments in urban areas were in buildings with nine storeys or more. By contrast, in the countryside 96.7% of dwellings are privately owned, detached single-family houses. Traditional Moldovan houses are built of clay bricks, but today cut-stone blocks are more usual.

About 18% of the territory is affected by soil erosion. In some cities soil erosion seriously hinders any further development. At the same time, according to the relevant clauses of the 'Quality of Construction Act' 1996, single-family one-storey dwellings are **not** subject to any construction/engineering supervision.

The housing statistics of the former Soviet Union specified two different types of space-related data – 'total floor space' and 'living space'. 'Total floor space' includes all the spaces in a dwelling, whereas 'living space' includes only living rooms and bedrooms. These kinds of data are currently available and still collected in Moldova, so supplying additional data on the spatial quality of a dwelling (table 11).

Table 11. Qualitative composition of spaces in the housing stock

	Total floor space (in million m ²)	Living space (in million m ²)	Share of living space in total (in per cent)
National housing stock	75.4	52.7	70
- Urban	27.9	18.1	65
- Rural	47.5	34.6	73

Source: Ministry of Environment and Territorial Planning.

Table 11 shows that in the average urban dwelling living space occupies about two thirds of the total space. This is a fully acceptable proportion keeping in mind the different amenities required by a household living in urban dwellings – mostly in system-built blocks.

In rural homes a relatively smaller proportion is devoted to amenities and space for household activities – only 27%. For rural Moldovans, at least, building and owning a one-family house has traditionally been regarded as an important feature of well-being. In single-family housing with its own plots and gardens, and where family-based farming is part of the lifestyle, the ratio of space for amenities and for household work should be higher than in cities. This spatial composition (based on table 11) indicates a marked lack of modern facilities in rural housing.

The Republic of Moldova is unique in concentrating its rural population in large villages of 2,000 – 10,000 inhabitants. Housing is generally of one- or two-storey construction and there is a significant self-help building culture. These villages lack adequate social and utilities infrastructure. Housing construction using low-quality materials and unskilled labour is generally of poor quality and undertaken without professional supervision. The lack of sanitation services means that rural spaces are highly polluted with domestic waste.

Housing stock condition

Overall, 65% of the existing housing stock dates back to 1970, and 84% to 1960. The housing stock is relatively new compared to that in many western countries. The relative newness of the housing stock in Chisinau is not surprising since a great deal of older housing was destroyed in the Second World War.

According to surveys conducted by the National Agency for Housing and Real Estate Services (NAHRES) in 1997, the population is not satisfied with the dwellings they live in.¹ Only about 25% of the respondents were satisfied with the quality of their dwellings and with the available service infrastructure. According to the type of the building, the lowest ratings were given to the 16-floor blocks, though these are relatively recent. The highest ratings were given to the stone dwellings and detached houses. About half the respondents stated that their apartment block needed general renovation or improvement. There were the 'traditional' complaints about leaking roofs; mouldy and fungus-infested concrete walls; rotten floors (from leaking roofs and walls), broken water pipes and taps; windows with broken panes.

All these defects and faults are an indication of the state of housing quality, especially in the system-built blocks. Moldova's housing stock is relatively new – the construction of new apartment blocks was rapidly accelerating toward the end of the Soviet Union (table 12). About half of this stock is only 20 years old, but its technical quality poses the most problems.

According to the Department of Architecture and Planning, more than 24% of the housing stock in Chisinau should be demolished. More than 80% of the doors in city buildings need to be changed. Though the lion's share of urban housing is relatively new, approximately 3 million m² need a major overhaul, an increasing amount of housing needs repairing, and there are no adequate financial resources. For example, resources received from privatization were not channelled into maintenance and reconstruction. Thus in 1998 of the 23 million lei received from privatization only 0.07% was spent on the renovation of existing housing, even though the existing tax system allows 50% of regional budget revenue obtained from non-housing privatization to be spent on housing maintenance. Some 75% of the families in urban areas spend one third of their income on apartment and communal expenses, most of which are communal service fees. Expenditure on building maintenance is reduced to the minimum and is insufficient. When there is a chronic deficit State enterprises very often spend money inefficiently and on the wrong things. The State tariff policy of direct and indirect subvention of housing services has failed. Local experts estimate that even when maintenance fees are very low and highly subsidized only

¹ NAHRES and PADCO Europe Ltd., *Housing Preferences and Affordability Survey: Final Report* (31 July 1997).

80-85% of the families pay them. High-income families are also frequently in arrears because of a lack of discipline.

Table 12. Comparison of apartment block construction in Eastern Europe

Country	Proportion of apartment blocks built in different periods (In per cent of total)				
	Before 1961	1961-1970	1971-1980	1981-1990	1991 or later
Bulgaria	53.8	20.0	15.4	9.4	1.4
Estonia	21.2	19.7	21.3	18.9	-
Poland	41.5	16.7	22.8	15.2	3.8
Slovakia	34.4	20.3	25.5	19.8	-
Hungary	43.0	14.7	22.1	17.3	3.0
Republic of Moldova	14.6	18.6	21.2	31.4	7.9

Source: United Nations Development Programme (UNDP), *National Human Development Report: Republic of Moldova* (Chisinau, 1998).

B. Consumption and quality of housing services

Supply and demand

The fundamental housing question is: how many dwellings must be available to ensure adequate housing? The starting point for any estimate of this type, once the basic information about the housing stock is available, is the availability of data about the population and its structure. The simplest solution would be to compare the number of households requiring accommodation with the number of units currently available. This would give a very rough balance between dwellings and households using the criterion of one unit per household for minimum privacy. The amount of space in dwellings per person has also become an international unit of measurement for comparisons of national housing situations.

Currently the Republic of Moldova has no very reliable and up-to-date figures for the number and structure of households. The latest census data date back to 1989 and the number of households then was 1,143,423. During the past transition decade there may have been crucial changes in the demographic structure. Nevertheless, with an overall housing stock of 1.3 million in 1999, there should be one housing unit for every household. The next questions are:

- is the stock located in the places where people need housing;
- is it of the right size and quality;
- are the housing and related services appropriate, accessible and affordable?

The total population of the Republic of Moldova is about 4.3 million and about 54% live in rural settlements. Between 1970 and 1990, the urban population increased, but it never exceeded 46%. During the transition period, the rural population increased slightly, which is not typical of European countries, especially countries in transition. In the mid-90s the rural population was still growing mainly due to the migration of people from the cities to the countryside but today these structural changes have nearly vanished.

The national population, during the past 10 years has recorded a regular decrease of about 0.3-0.4%. This decline is due partly to natural causes, but also to net emigration from Moldova.

These basic housing stock and population data allow us to detect housing consumption trends – square metres of total space per inhabitant (by the end of the year shown).

Figure X. Total space per inhabitant

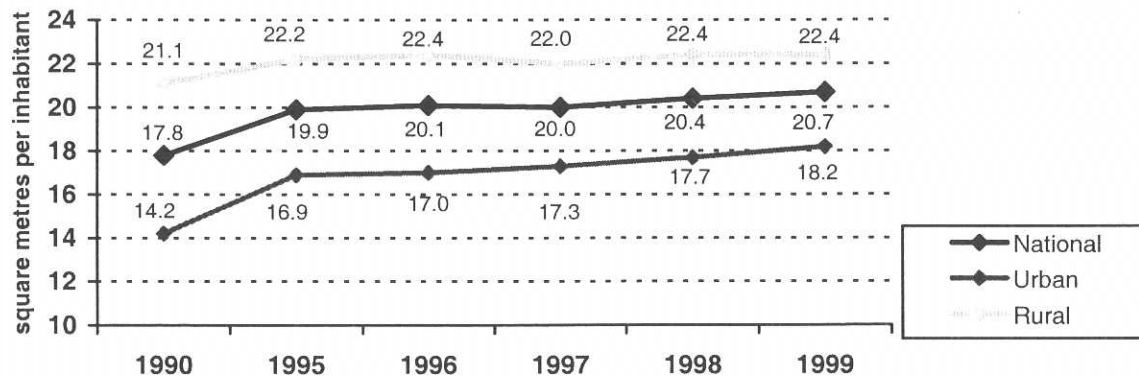


Figure X shows an encouraging picture of basic housing consumption – the average of the three basic consumption profiles shows a general increase over time and also that the absolute numbers per capita are comparable to those in neighbouring countries, but have increased considerably since 1990. Currently the average floor space in urban areas is 18.2 m² per person, compared to 22.4 m² in rural areas. However, it should be recognized that this trend reflects a decrease in population rather than an increase in floor space. Other assessments reveal that spaces have deteriorated significantly over the past few years and lack contemporary facilities.

And when looking at the relevant housing consumption data per administrative-territorial unit we can see the dominance of Municipal Chisinau at the national level – the average for this municipality equals the national average (table 13). At the same time the average numbers for housing consumption for most of the other regions (*judets*) have variations of about 10% with the national average level. This highlights the fact that there are no marked differences based on these basic consumption-related data, though these data are not related to the present quality of housing.

Table 13. Housing consumption (In square metres per capita)

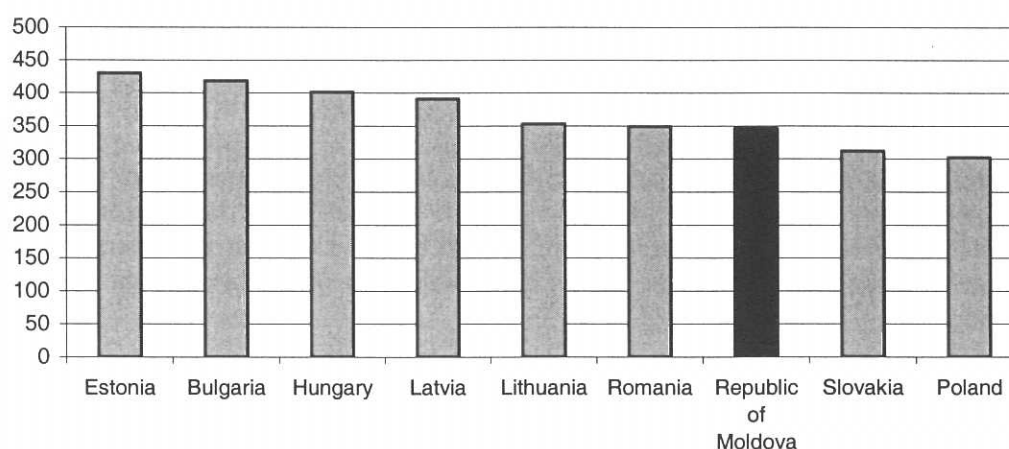
	Administrative-territorial unit	Total	Urban	Rural
1.	Municipal Chisinau	20.7	18.2	22.4
2.	Judet of Balti	20.6	16.9	23.6
3.	Judet of Cahul	20.6	16.9	21.8
4.	Judet of Chisinau	23.2	21.7	23.5
5.	Judet of Edinet	23.9	20.3	25.2
6.	Judet of Lapusna	20.4	19.4	20.8
7.	Judet of Orhei	19.6	22.1	18.9
8.	Judet of Soroca	22.2	18.6	23.8
9.	Judet of Taraclia	20.1	21.2	21.6
10.	Judet of Tighina	23.0	17.1	23.5
11.	Judet of Ungheni	18.9	15.0	20.6
12.	Gagauzia	21.5	19.3	22.9
	National average	20.7	18.2	22.4

Source: Ministry of Environment and Territorial Planning.

Table 13 shows that 'housing provision is sufficient in general'.²

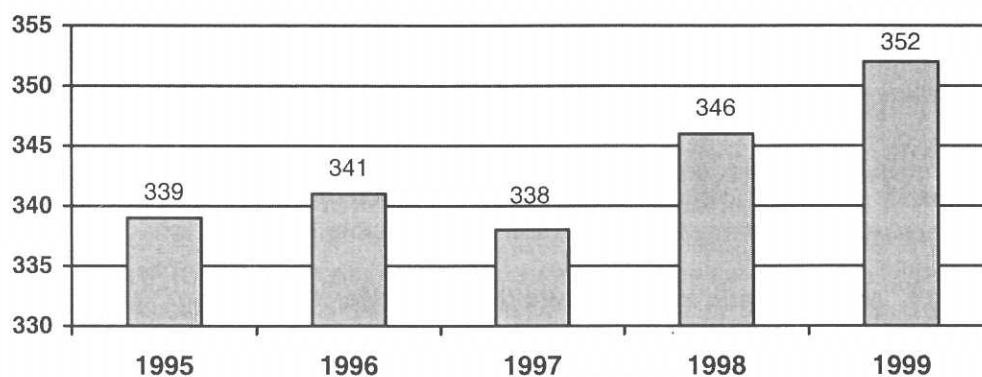
The number of dwellings per 1000 inhabitants is widely used for international comparisons. Figure XI gives these analytical data for 1998 for neighbouring countries and for the Baltic States, which used to be linked to the housing policy of the Soviet Union. According to the above, the Republic of Moldova provides quite a reasonable number of dwellings.

² UNDP, *National Human Development Report: Republic of Moldova* (1999).

Figure XI. Number of dwellings per 1000 inhabitants, in transition countries

Source: United Nations Economic Commission for Europe (UNECE), *Bulletin of Housing and Building Statistics for Europe and North America* (New York and Geneva, 2000).

More confusing still are the Moldovan data for the past five years in figure XII – the improvement is really impressive when you consider that new housing construction had, in fact, halted. This analytical figure is sensitive to population figures, and since the population is decreasing all the per capita figures record an increase.

Figure XII. Number of dwellings per 1000 inhabitants

Another problem is that official data sources may overestimate the population, because a significant number of Moldovans work and live abroad. Unemployment is very serious in the Republic of Moldova - the official unemployment rate at the end of 1999 was 11.1%. Assessment of the numbers of Moldovan workers employed abroad varies from 350,000 to 600,000.

Whatever the real number of temporary or long-term émigré workers is, they represent a minimum of one tenth of the population, though they are included in Moldovan population statistics. Consequently, this quite considerable proportion of workers employed abroad eases the pressure on accommodation in Moldova. One consequence of this is that there are some 2,000 empty single-family houses in the countryside, which will deteriorate more rapidly and may be deducted from the housing stock.

Overcrowding

Though statistics show that there is enough living space available for each person, overcrowding remains one of the most serious problems in city apartments.

The urban housing stock is composed 63% of apartments (flats), 25% of detached or semi-detached houses and 12% of hostels. The hostels date back to Soviet Union days, when they were used to

help solve labour problems by housing single professionals. After marriage these professionals became eligible for larger accommodation. Today, these houses are overcrowded as families remain on the waiting lists for years, but never receive a decent apartment. During the past decade these rooms have also been used to house people who have moved into the city to find work. Sometimes dwellings are shared by two families.

There are also cases where two or more families live in one apartment and the average number of persons per room is 1.6. Specific population groups especially may suffer from disproportionate housing problems. For example, the elderly find it hard to maintain their apartments and a minimum level of comfort. Young families and people with disabilities are often crammed into inadequate living spaces on average.

Not surprisingly then, a survey conducted for NAHRES in 1997 found that only 25% of households were satisfied with their apartments. Lack of hot water, insufficient heating during the winter, and difficulties in disposing of domestic waste are frequent problems. Many people complain about security in their districts, street lighting and poor sanitary conditions in public places. According to this survey, nearly 75% of the families in urban settlements spend about one third of their income on housing and related communal expenses.

Utilities infrastructure

Infrastructure is a vital element in assessing housing quality. Housing consumption depends on different services that the dwellers either physically need or may require socially, and the overall assessment of 'housing quality' depends on how these services are provided.

The environment has a direct impact on living conditions and on the health of the population. At the end of the 1980s, Moldova was considered to be one of the most densely populated and polluted zones in the former Soviet Union. There were 127 inhabitants/ km² and about 13% of the whole territory was built-up.

Housing quality is not just about space. It is also about facilities and infrastructure. Here a major imbalance can be seen when comparing urban and rural housing (table 14).

Table 14. Amenities and infrastructure (In percentage)

	Total	Urban	Rural
Electricity	99.0	99.5	98.7
Water			
Aqueduct	31.1	76.1	0.9
Pump	6.0	9.6	3.5
Well	62.9	14.3	95.5
Sewage	31.1	76.1	0.9
Indoor bath or shower	28.9	71.9	0.2
Natural gas			
Central network	28.5	63.9	4.8
Gas containers	42.4	25.5	53.8
Heating			
Central	32.3	75.8	3.1
Local	67.7	24.2	96.9
Telephone	36.8	65.5	17.5

Source: UNDP, National Human Development Report... (2000).

Most of the urban apartment blocks were built according to the principles accepted throughout the former Soviet Union. All the water, gas, electricity and heating systems were equally distributed to each apartment and there were no meters and no controls to regulate consumption. According to table 14, urban dwellings are well equipped with the basic facilities, whereas in the rural areas most houses only have electricity systems. Public utilities are now widely available in rural areas.

There are major differences between the water supply in cities and in villages. The Republic of Moldova has only limited water resources and the availability of clean groundwater is a matter of national importance. Only 30% of water resources meet international standards. The average daily consumption of fresh water per individual is 163 litres, which is less than that in most Central and South European countries (about 255 litres). At the same time in many of the settlements in the south of Moldova consumption does not exceed 20 litres per capita. In rural areas, less than 1% of houses have sewer systems and this is highly detrimental to sanitary conditions. This may be the reason why about 42% of the population consider that the poor quality of fresh water directly affects their health and causes disease.³

Waste disposal is another key issue. According to the National Strategy for Sustainable Development, the average Moldovan generates 300 kg of waste a year. The proportion of food waste is 35% and the total organic component about 70%. Such waste attracts rats and stray pets. In villages and small towns, people used to haul away their rubbish and dump it far from their homes, while today they dump it in nearby ravines, on roads, even near their homes. Where rubbish collection is not organized according to normal sanitary and technological principles, there is a serious risk that the water supply from streams and wells will become polluted.

Currently, the utilities infrastructure for Moldova's housing stock is in a critical condition. The conduits supplying the consumers with different types of energy (thermal, electricity, gas), or with water and sewerage services reflect earlier policies that allowed excessive consumption. The basic features are:

- the supply infrastructure is designed jointly for housing and industrial enterprises. Since several of the industrial units which were major energy users have been closed down, the supply of energy is excessive for housing estates
- consumption is basically measured by consumers, who are also charged for transmission costs
- the technical and economic lifespan of infrastructure is estimated at about 10 - 15 years. These estimated periods presuppose preventive and regularly planned repairs and maintenance, which has not been the case for years
- production and consumption records and an analysis of efficiency levels would indicate that producer-based interests prevail over national ones.

The whole utilities system was established in parallel with the expansion of settlements. Between 1970 and 1990, the capacity of the principal water pipes increased two to three times; the centralized sewer network grew tenfold and annual thermal energy consumption quadrupled. Today the condition of these installations is extremely poor. About 17% of Chisinau's water pipelines require immediate repair, and 40% of heating systems are being used far beyond their capacity so that the output of thermal installations has decreased 50% on average.

Electricity consumption is generally metered at consumer level. Gas consumption is partially metered. The most serious problems affecting housing quality are related to the thermal energy systems used to heat the major housing estates. The efficiency of district-heating stations is very low, and transmission network losses are estimated at over 50%. About half the conduits currently in use have passed their reasonable lifetime so the running costs of these systems have increased dramatically. The cost of modernizing and rehabilitating these thermal networks is estimated at \$200-300 million.

The largest part of thermal energy produced in Moldova is used in the housing sector for heating and warm water. Bearing in mind that about 98% of national energy resources are imported and that their cost has increased considerably, the emphasis has to be on conserving energy in all spheres of life.

The 1999 NAHRES report, 'Pilot Project on Energy Conservation in the Housing Sector', presents an overview of energy-efficiency improvement plans in the housing sector, backed by specific details.

³ UNDP, *National Human Development Report...* (1999).

Table 14 gives details about the provision of utilities infrastructure, but the data do not include information about the quality of services provided. Moldovan poverty assessment papers from 1999 describe several problem cases in connection with utilities. Though they are specific cases, the issues have wider application in the Republic of Moldova. In urban and rural areas alike there are some houses still unconnected to gas and water systems. Even when they are connected, people complain either about the quality of the service or about the fact that they have not received the service for years. There are also cases where electricity or water is received for only a few hours a day.

The basic problem with mains water pipes is the wear and tear. Suppliers estimate losses to be about 30-50%. The consumption of drinking and warm water is partly metered at building level, but few apartments have meters. The varied location of drinking-water sources complicates the development of mains water systems.

Recently, the Ministry of Environment and Territorial Development approved a Programme for preserving energy in construction and public management for 2000-2005. This energy project is targeted on energy saving and on reducing the environmental impact of energy production.

To help resolve these issues, a number of national targets and resolutions have been adopted. National Government Decision 337 of 25 May 1995 requires the installation of meters for water and thermal energy consumption (for dwellings and for different public entities). Implementation, however, has been patchy. At the beginning of the year 2000 only some 70% of dwellings had water meters. And when the implementation of this Government Decision was discussed in January 2001, it was also noted that the thermal metering installed by consumers was illegal, since it should have been installed by the service provider.

C. Construction and property sector

The construction industry

1991 to 1994 saw radical changes in the Moldovan construction sector. Until 1991, it was extremely centralized, with construction firms managed by several State organizations. Planning for all projects was done by the State Committee for Planning, technical coordination depended on the State Committee for Construction, and the work was coordinated by the respective construction-related ministries. Between 1992 and 1994, the major State-owned construction enterprises were transformed into joint-stock companies. By October 1999, there were 646 construction companies registered, mostly relatively small firms with 10 to 100 employees.

Large construction companies have made considerable efforts to avoid break-up and to maintain their monopoly and geographical spheres of influence despite a reduction in production volume. However, small and more flexible firms have appeared on the market as contractors and subcontractors. The emergence of private ownership has also generated changes in contracting.

All these changes in the 1990s were accompanied by a steep decline in the construction industry as a whole and especially in housing construction. Employment in the sector has decreased, and much of the construction related plant and equipment has been abandoned.

Housing production has been declining over the past five years (fig. VIII). At the same time there are about 300 unfinished apartment blocks (dating back to the 80s) and most buildings especially multi-storeyed ones urgently require major repairs. According to the data received during an interview with the Chisinau City Government, about 24% of the dwellings in the capital require emergency repairs. Data from official sources suggesting that only 0.3% of the national housing stock requires emergency repairs may be unreliable. The 'Quality in Construction Act', stating the major principles to be followed by the construction sector and including the basic quality requirements for buildings was passed in 1996.

By January 2001 there were 379 construction companies⁴ on the market. Some 8% of total construction turnover is the work of contractors in full public ownership; 66% is on new construction. Over 70% of all construction is carried out in and around Chisinau.

The average turnover of contractors according to company ownership is shown in figure XIII.

Figure XIII. Average turnover per contractor, 2000

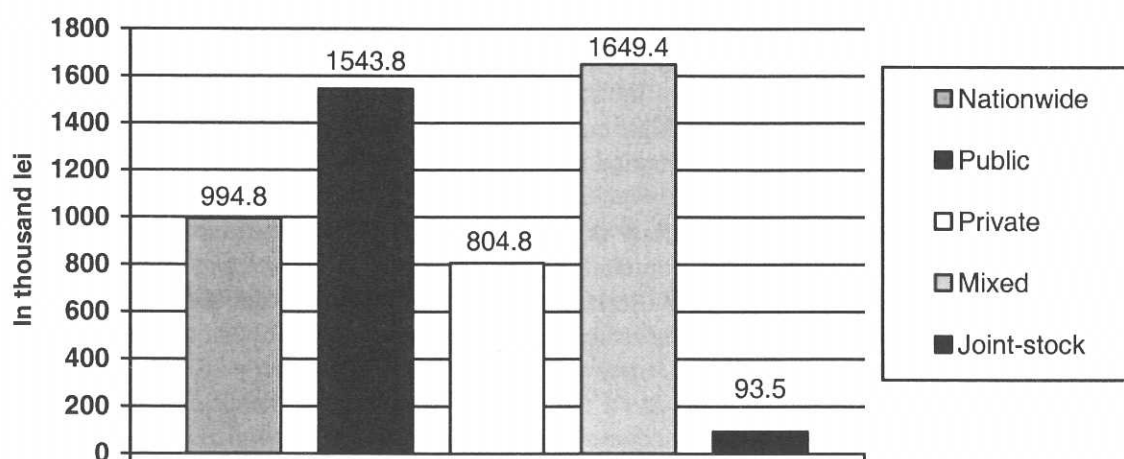


Figure XIII shows that public companies and mixed companies (which were developed from former public companies) continue to enjoy the largest turnovers, albeit in a much diminished market place.

The decrease in construction business has also caused increasing social problems. The number of people employed in construction (56,000 in 1994) has fallen by more than 50% (in 2000 it was down to 22,000). In addition, about 13% of the skilled workers are laid-off (compulsory leave) and amongst these the longest lay-offs (about 84 days) are for construction workers.

Over the same period, the number of staff employed in the real-estate market has fallen only from 32,000 to 27,000. Bearing in mind that total employment has fallen considerably over this period, the proportion of property-related employees has actually increased on the labour market from 2.5 to 4%.

This relative increase in employment stems from two major activities on the market. Firstly, the real-estate companies have found their role on the market and their activities are broadening. Secondly, the creation of private homeowners' associations is developing new alternative housing maintenance companies giving employment to people in this sector.

Construction materials

The Republic of Moldova is largely self-sufficient in traditional building materials. About 75% of house construction materials are produced in Moldova and it may be possible to make greater use of local raw materials, for example, for the production of glass, heat-resistant materials, ceramics and china. The existing limestone reserves could also be better exploited through the modernization of cutting equipment. The Republic of Moldova imports a number of construction materials, such as tiles, ceramic boards, blocks of concrete and gypsum, linoleum and wallpaper.

During the Soviet period the construction industry used technologies based on reinforced concrete panels, cast in-situ reinforced concrete ("monolithic" construction) and cut limestone. As a result of the substantial reduction in funds for the construction of dwellings, starting in 1994, the

⁴ United Nations. Economic Commission for Europe, Bulletin of Housing and Building Statistics for Europe and North America (July 2000).

construction of large panels and prefabricated elements has decreased considerably. The current trend is for low-rise housing built from stone on cast in-situ concrete frames to protect against earthquakes.

Adjacent zones in the Carpathians, including the Republic of Moldova, reflect the high seismic risk of the region. The most powerful earthquakes reach a magnitude of 7.5 on the Richter scale and 8 in the southern part of the country. Magnitude 6 earthquakes affect the north and east of the country, and the majority of the territory of the country is in the magnitude 7 zone.

Special consideration should be given to using materials and technologies with low energy consumption, or which conserve energy during construction. The country continues to apply the standards worked out for construction in stone and concrete. This is expensive and produces economically inefficient houses with a high consumption of materials, technologies, mechanisms and power resources. About 60-70% of construction costs are for materials.

At national level, a change in culture is required. Housing must become more efficient in terms of energy and materials, and more environmentally sustainable. New development standards should be adopted to promote this approach. End-users, designers, constructors and public authorities should change their attitude and use more efficient materials and construction methods.

New construction

In 1999, 2,900 buildings with a total of 284,000 m² of space were completed. Only 30% of these units were built in urban areas. The average number of rooms per dwelling was 2.96 and the space 97.7 m²/56.2 m² (total/living). Only about half of these dwellings were connected to piped water and sewerage systems, and about 40% were connected to a district-heating system.

The market price of 1 m² of dwelling is about 2,000 lei, while 1 m² of new construction costs 2,200 or more, depending on the quality, the level of equipment, the region etc. Only about 1-2% of the population has access to new dwellings.

Only 14% of the buildings put up in 1999 were publicly funded, and most privately funded buildings were individual dwellings. Of the total number of dwellings built 62% were one-family detached houses.

Some 72% (204,000 m²) of total new housing space was in brick and stone buildings. The rest included concrete in-situ and concrete frame buildings with large panels or blocks. No timber frame buildings were built.

Repair and renovation

In addition to new construction, there is a considerable amount of renovation work to be done on poorly maintained housing units. This will require greater management flexibility from construction companies.

Overall, the most common maintenance and renovation problems are: the cleaning of and repairs to common areas of apartment blocks, the high cost of maintenance, poor lighting, problems of dampness, of rubbish on the stairway or around the waste chute in apartment buildings, the lack of heating and a lack of hot water.

According to the Ministry, in 1999 major repair work was carried out in 101 dwellings, comprising some 20,000 m² of space. An average 110 lei/m² was invested in repair work. These data concern repairs paid for by public funds, though it can be assumed that private individuals also made a contribution.

D. The real-estate market

Housing property sales

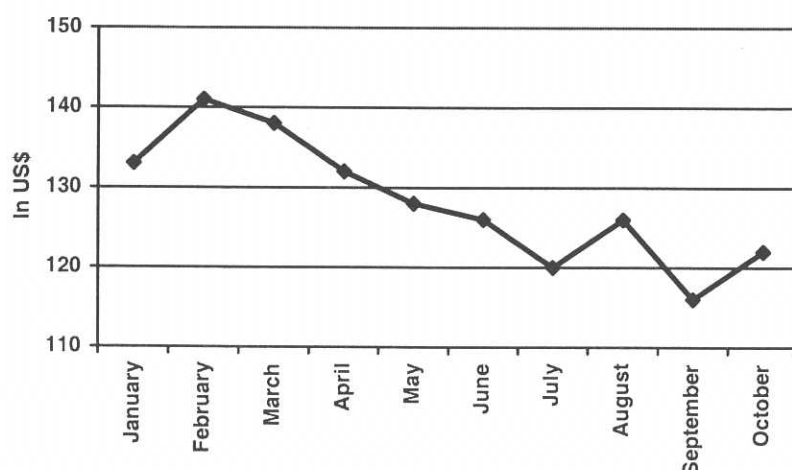
In midsummer 1997, NAHRES prepared the 'Housing Market Study' to give a general review of housing supply and demand. It also highlighted related institutional, legal, financial and technical issues. The major housing market issues are summarized in the following extract from this report.

"The choice of housing is mainly influenced by, in order of importance, location, type of construction, apartment layout, number of storeys, availability of services in the district and environmental conditions. There are distinct preferences for certain types of apartment. There has been a steady growth in the demand for high-price individual houses, partly for the owners' own use and partly as a hedge against inflation. Nevertheless, given for the high price of new housing and the serious impact of rising utility charges, the main market is likely to remain the 'trading-up' of two- or three-room apartments by buyers using their existing assets and savings."

At the end of 2000 and in 2001, the housing market has almost touched bottom. By the end of 2000, one square metre of a dwelling in Chisinau was priced (on the average) at \$125, the lowest level quoted during the past five years (fig. XIV). In 1997, when the above-mentioned report was published, the housing market was flourishing, with prices ranging from \$270 to \$300/m². Local property brokers forecast that prices could fall yet further. One property company speaks of a 60% reduction in turnover since 1996. In 2000, approximately 12,000 apartments changed hands in Chisinau.

Currently – in 2001 – there are about 70 real-estate companies in the Moldovan market. Property valuation activity is Government-licensed and 51 companies possess the relevant licence. Nineteen of them have combined to found a professional association, and five of them are considered as key actors on the market. Their activities centre on Chisinau and Balti, highlighting the great importance of 'location' where real estate is considered.

Figure XIV. Average price per square metre, 2000



Some analysts explain the fall in prices as the 'normal' cycle following the 1998 crisis. However, property dealers argue that the major reason for this fall is that prices are too high for clients/buyers. Demand for housing has fallen considerably, so the seller has to reduce the price. The market may be there, but it is limited geographically and greatly influenced by low demand. In 2000 one- and two-room apartments sold best. The price level has become the major factor in completing a deal; location and state of repair have become less important.

The greatest downturn in property sales has been for larger apartments. An analysis of on-line listings of apartments for sale in June 2001 shows: one room - 13; two rooms - 35; three rooms - 71; four rooms - 30; five rooms or more - 4.

This reflects both the availability of apartments (former Soviet construction policy allowed only limited numbers of large flats) and affordability. Small flats are the most affordable, as are their running costs, but the supply is very limited as they are quickly bought up. Three-room apartments are in good supply but demand is limited as apartments of this size are too expensive for most users/households. A three-room flat in Chisinau can cost from \$4,000 up to \$12,000.

This analysis relates to one property company in Chisinau. Only six apartments located elsewhere in the Republic of Moldova were listed.

There was no information available about apartments for rent. Although it is estimated that 10% of properties in Chisinau are rented privately, there is no information or analysis available, as much of this activity takes place in the black economy.

The market for land for development

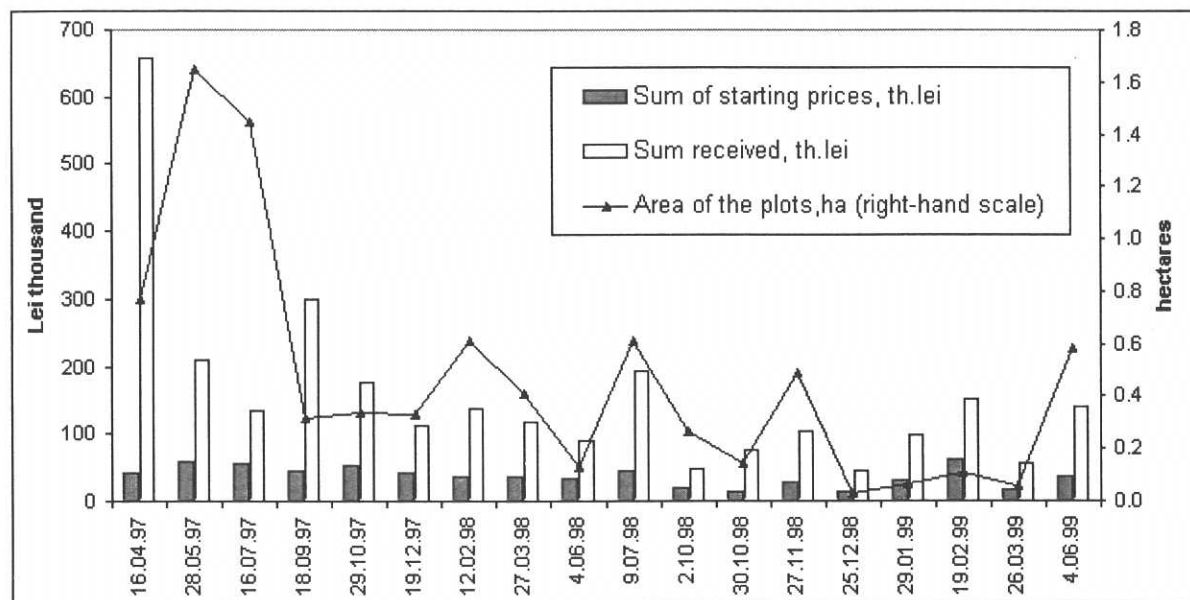
The transition to a market economy has changed the use of land through the abrupt decline in apartment block building and the free distribution of publicly owned land plots for individual construction. As a result, in cities, available land reserves were occupied very rapidly, sometimes chaotically, for the construction of rural-type individual houses. Today the majority of settlements no longer have free plots for construction. At the same time average population density remains relatively low, in cities it amounts to about 35 persons per hectare.

The market for land for development is likely to continue changing:

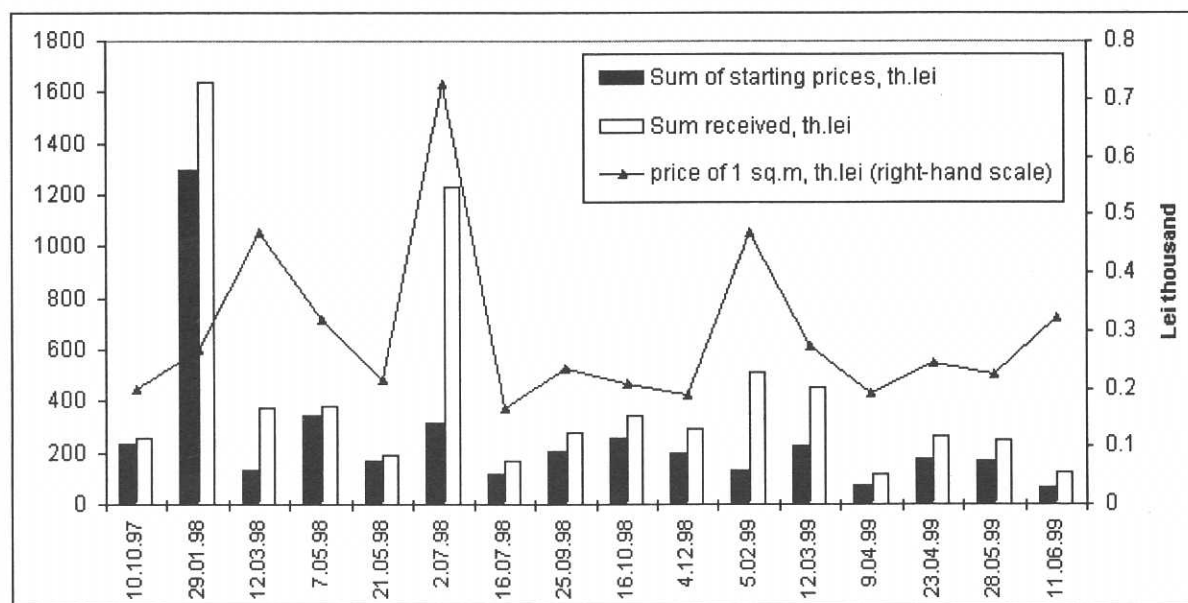
- The introduction of the new Law on the Real Estate Cadastre and the new unified land and property title, once approved by Parliament, should be a major boost to the land market by giving security of ownership rights, laying the foundation for a land and housing market information system and an improved property-based revenue system and providing more secure collateral for bank loans.
- The recent introduction of land auctions is an important step towards establishing market prices for land in urban areas.
- The need to change the approach to urban planning and land management provides the opportunity for public - private partnerships in land development. These may take the form of fully-serviced development sites with agreements with developers on the cost recovery of off-site infrastructure, and/or partly serviced sites allowing families in the middle-income range to construct their own housing incrementally as time, funds and other resources allow.
- There is the opportunity for local governments to give a lead to the currently small individual and commercial developer industry by providing information and advice on, inter alia, streamlined procedures for obtaining land, the identification of phased land release for development, etc. as part of its proposed enabling role in the land and housing sector.

According to the Law on the Normative Price of Land (1997), all citizens of the Republic of Moldova and foreigners have the right to buy a plot of land. Although plots can be owned, sold or leased, the market land-pricing mechanism is not yet effective. The Cadastre uses an appraisal based on the physical valuation of land plots. Legislation lays down that the State and local authorities decide land prices and set rents based on land location.

Two types of auctions for land acquisition have been introduced: one for leasing land and one for buying land into full ownership. Temporary regulations on sales procedures have been developed and pilot projects implemented. All land plots to be leased have a particular designated use and bidders may choose what to build on them according to the lists proposed by the municipality. Leases are offered for different periods of time extending from 5 to 50 years. According to municipal experts, more attention is given now to auctions for selling land plots rather than auctions for the right to lease them (see figs. XV and XVI).

Figure XV. Total auctions for the right to lease land, 1997- 1999

Source: Department of Land Use in Chisinau Municipality.

Figure XVI. Overall distribution of auctions to buy land, 1997- 1999

Source: Department of Land Use in Chisinau Municipality.

Auctions (by tender) for planning and conducting public investment will help to ensure equal conditions for all participants in the investment process and to create a competitive environment.

Urban land privatization is continuing, although not quickly enough. So far 16 auctions have been held and 64 land plots sold (see fig. XIV). On average, the price stood at 294 lei/m², while ranging from 198 to 726 lei at different auctions. A clear decrease in demand for land plots was observed in the second half of 1998. However, in the beginning of 1999 the situation started improving, although auctions are still not held regularly as was envisaged.

According to the Department of Privatization and State Property Administration, there are 1928 'associated' land plots, including 341 plots smaller than 0.5 ha. Almost all of these small land plots have been privatized, but none of the large land plots (6-10 ha) has been bought. From the beginning of privatization (July 1997), 805 land plots have been bought. During 1998, 88 'associated' land plots were

privatized with a total area of 16.8 hectares. The amount received for these plots was 3.3 million lei, of which 1.7 million lei was transferred to the State budget.

Rented housing

There are two types of rented housing: residual municipal housing, which remains in the ownership of local authorities, and privately rented housing. Limited information is available on this sector, particularly on privately rented housing.

Municipal housing

There are some 38,000 municipal apartments, around 14% of the condominium stock. These apartments have not been privatized for a number of reasons:

- Younger households had insufficient working credit and insufficient funds to pay the cash balance.
- Disputes between the adults in the household, consequent, for example, on separation or divorce.
- Some households did not want to become owners because of the red tape (production of documents, queries, etc.) and felt it was all unnecessary.

Local authorities are responsible for keeping waiting lists (a statutory requirement), managing the accommodation, allocating apartments, collecting rent and maintaining buildings.

In Chisinau, there are some 60,000 names of the waiting list. Only five or ten people on the housing list are rehoused each year, suggesting that tenancies are changing outside of municipal control.

Maintenance is carried out by the municipal maintenance companies on the basis of a statutory charge of 0.19 lei per month per square metre. This is equivalent to around \$115 a year per apartment on average, and is insufficient for proper maintenance of the apartments.

Rents are also very low, at 0.2 lei per month per square metre. By contrast, heating charges work out at 300 - 400 lei per month for the average apartment.

In conclusion, it is fair to say that municipal rented housing cannot be compared to the social rented housing available in many European countries for people most in need and unable to arrange their own housing in the market place.

Privately rented housing

Very little information is available about the private rented sector in the Republic of Moldova. The sector exists largely outside of the formal economy and without regulation. In Chisinau, 20,000 - 30,000 dwellings, some 10% of the stock, are estimated to be rented on the black market.

There are several reasons why dwellings are rented out. For example:

- Households with surplus accommodation rent out a portion of their apartment to boost their income.
- Households move in with friends or relatives in order to rent out their own apartment.
- Some households acquired more than one dwelling on privatization. Others have inherited property.
- Owners are working abroad.
- Municipal apartments are sublet.

The sector is apparently not sufficiently organized or profitable to allow private renting to operate as a business on its own. There is no market for the sale of predominantly rented apartment blocks.

There are no laws in place to control the private rental sector. Tenancies are informal, there is no security of tenure as such, and possession may well be regained by landlords through unlawful means.

Rents are in the region of 6-7 lei/m² (over 30 times municipal rents), clearly demonstrating the potential for this sector. However, earnings from letting out property tend to be undeclared, and form part of the black economy.