

Upgrading informal housing units: preliminary evidence from Sejake Square

A fierce debate has prevailed until the present time as to just what role low-income households can play in providing their own housing environment. The main question is whether it can be assumed that low-income households should be held responsible for their housing needs, or whether the state should be more actively involved in providing housing for these households. In this paper it is argued, by means of a literature overview as well as empirical evidence from Sejake Square, that low-income households, given the right environment, are in fact actively involved in upgrading their informal housing units to better, more formal units. The two most prominent aspects that play a role in this regard are the period of residence and the size of the household in the area. The availability of funding also plays a role in formalisation. The conclusion reached in this paper is that government could consider providing only the infrastructure, and leaving the construction of housing units to low-income households.

Die opgradering van informele behuisingsseenhede: voorlopige getuienis uit Sejake Square

Daar is tans nog 'n heftige debat oor die rol wat lae-inkomste-huisgesinne in die behuisingsomgewing kan speel. Kan dit aanvaar word dat lae-inkomste-huisgesinne vir hulle behuisingsbehoefes verantwoordelik gehou moet word, of kan die staat nie 'n groter rol in die verband speel nie? In die artikel word aan die hand van 'n literatuuroorsig sowel as empiriese gegewens uit Sejake Square geargumenteer dat lae-inkomste-huisgesinne, gegewe die geskikte omgewing, aktief by die opgradering van behuisingsbehoefes betrokke is. Die twee mees prominente faktore is die tyd wat op die spesifieke plek spandeer word en die grootte van die huishouding. Die beskikbaarheid van befondsing speel ook 'n belangrike rol in die uitvoerbaarheid. Die slotsom is dat die regering dit kan oorweeg om slegs die infrastruktuur te voorsien en die behuisingskonstruksie by die lae-inkomste-huisgesinne te laat.

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The magnitude of the housing subsidy was one of the fundamental questions raised during the development of the South African housing policy by the National Housing Forum (NHF) during the early 1990s (cf Goodlad 1996; Tomlinson 1998). It is the main factor determining the size of the final end-product to be delivered. During the NHF process, pressure was applied by certain groups to implement a housing subsidy of approximately R30 000 (cf Tomlinson 1998). However, the question of affordability was fundamental to the final decision that the subsidy should be R12 500.¹ With this amount, according to Tomlinson (1998: 138), the end-beneficiary would be able to receive one of the following products:

- a serviced site;
- a serviced site with a rudimentary structure;
- the *in situ* upgrading of a settlement, or
- a portion of the costs for either a house or a flat.

Tomlinson (1998: 139) describes this decision on the subsidy amount as “a victory for width over depth”. In other words, it was a victory for the incremental approach to housing delivery, rather than the once-off delivery of a housing unit. In the process, much of the responsibility for improving the house over time has shifted to the end-beneficiary, while the state undertakes to provide only a starter home. At the same time, however, the product envisaged in terms of the housing subsidy (including a housing unit) is very different from the site-and-service approach followed since 1990 by the Independent Development Trust, in particular (cf Marais & Krige 2000). It also differs from the World Bank’s proposals (1993) which suggest that the subsidy for housing should not be used for housing structures but only for the infrastructure (cf Marais & Krige 2000). The housing subsidy, as developed by the NHF, was something of a compromise between those arguing for the incremental housing approach (providing virtually only site and service) and those arguing for a large housing unit and subsidy. The fundamental assumptions underlying these two possibilities are concerned with the degree to which low-

1 The subsidy has since been raised to R15 000, R16 000 and, as from April 2002, R20 300, with an additional 15% to make provision for geo-technical issues.

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income earners are able to contribute to their own housing. The full incremental route assumes that low-income households are actively involved in producing housing, while those arguing for bigger state involvement assume that low-income households do not have the financial means to make any impact in this regard. In the Free State Province, the emphasis on the housing product was further enforced by the adoption of a policy permitting only housing units of at least 40m² (cf Marais & Krige 1999 & 2000; Marais & Botha 2001).

So, despite the international proposals of the World Bank and the national guidelines of the housing policy, the Free State accepted a policy emphasising the government's duty to provide a standardised housing unit and assuming that low-income households do not have the financial means to improve their housing. However, in contrast to these Free State regulations, while the national policy did not leave the actual building of housing units to the individuals, it accepted the state-aided people's housing process as a mechanism of delivery. This delivery approach enables the end-beneficiary to be directly involved in the construction of a housing unit, in contrast to the situation where a developer or housing contractor builds housing units for people according to scale.

Against the background of the contrasting national and Free State policies, a number of fundamental questions may thus be posed:

- Do low-income households invest in their housing units if they do not receive subsidies?
- What are the patterns of investment for low-income dwellers?
- What is required to induce low-income dwellers to invest in their housing units?
- Could the construction of housing units be left to low-income dwellers?
- Could more people not be assisted by means of a basic infrastructure grant, with the actual construction of the housing units being left to the households?

Gilbert *et al* (1998) are of the opinion that the rate of incremental upgrading of housing units in South Africa is far lower than is the case in Latin America. In this context, this paper aims to reflect on the results of a preliminary investigation of factors which could play

a role in inducing low-income households to invest, or not to invest, in their housing units. The case was carried out in Sejake Square (in the Mangaung Municipality — formerly the Bloemfontein TLC — in the Free State). Against this background, the paper starts with a literature study on possible reasons for housing investment by low-income households. This is followed by a brief description of the research methodology. Finally, the results of the research conducted in Sejake Square are assessed and certain policy-related comments are provided.

1. Literature survey

Housing consolidation refers to the process by which families allocated plots in a project progressively developed their houses over time (cf Gilbert *et al* 1998). According to De Beer (1989), self-help housing or housing consolidation is not a new phenomenon since people have always assumed responsibility for finding shelter for themselves. At the same time, it should be mentioned that the shift away from state rental housing to self-help housing, where it is assumed that the end-beneficiary should play a significant role in the construction of housing, has been highly influenced by the neo-liberal pressures related to the World Bank's policy approach (cf Pugh 1994). These neo-liberal pressures resulted from the unaffordability of state rental housing, to both governments and the beneficiaries of housing programmes. In order to make housing more affordable to the state budget, the housing product had to be smaller. Making the product more affordable to the end-beneficiaries meant that only the site and service were to be provided, and that beneficiaries would have to construct their own housing units. The World Bank (1993), for economic reasons, therefore argued that households and the private sector had to be responsible for building their own housing units.

Assuming that households will embark on housing consolidation is all very well, but the question arises: what factors influence such participation? Although South African studies on the topic are fairly limited (cf Marais 1995; Gilbert 1998; Napier 1998), international studies are more prolific (cf Turner 1976; Perlman 1981; Laquian 1983; Williams 1984; Tipple 1998; Yahya *et al* 2001). In this context, this section aims to provide a literature overview of factors inhibiting

Maishoane, Marais & Barker/Upgrading of informal housing units or enhancing housing consolidation in low-income communities. The assessment of the reasons reflected in the literature will serve as background information to the case study undertaken in Sejake Square in Bloemfontein.

1.1 Security of tenure

Security of tenure is a sensitive primary aspect in respect of housing and the consolidation processes. Studies focusing on or mentioning this issue include those by Turner (1976), Dix (1983), World Bank (1993), Marais (1995), Marais & Krige (1997) and Tipple (1998). Turner's (1976) main hypothesis was that if people were assured of security of tenure, they would voluntarily improve their dwellings as much as possible (cf also Harrison 1992). Laquian (1983: 112) states further that in the city of Tondo, once security of tenure was assured by the sale of land to *bona fide* residents, the pace of housing consolidation accelerated rapidly. In three months, more housing improvements had been effected than in the previous twenty years. Although this accelerated consolidation could also be attributed to other factors, such as infrastructure, building materials and loans to most Tondo residents, the legitimisation of their land claims through the outright sale of land was the most important reason for the phenomenon. What is important, therefore, is the certainty that people will not be removed in future, not necessarily the type of secure tenure (cf Marais & Krige 1997). In the light hereof, it seems that insecure tenure rights can limit people's efforts to consolidate their housing. The current slow pace of consolidation in most developing countries is directly linked to this and related factors, since most people lack tenure.

1.2 Building materials and standards

According to Laquian (1983: 114), the building materials used in a project have a direct effect on housing consolidation, due to the following factors:

- cost considerations;
- the availability or scarcity of the materials;
- the skills needed to work with the materials, and
- the people's attribution of status or prestige to certain types of materials.

The World Bank (1993) is of the opinion that government's efforts in respect of consolidation projects should focus on encouraging the building industry to reduce import controls and on facilitating licensing requirements for small producers, transporters, contractors and developers. Research stations could also facilitate the development and use of local construction materials and building technologies, as well as helping to ensure efficient construction management. Over-exacting building standards and regulations have also been cited as impacting negatively on housing consolidation. Yahya *et al* (2001) mention various cases where the deregulation of building standards has played a positive role in housing consolidation.

1.3 Infrastructure and services

The availability of infrastructure cannot be ignored in housing consolidation. Dix (1983) and Devas & Rakodi (1993) note that infrastructure and services represent important economic activities in their own right and that they should be regarded as key contributors to development (including housing consolidation). The World Bank (1993) argues that the provision of infrastructure in slums and squatter settlements is of great importance, as it has proved to be an effective method for assisting and organising the poor, enabling them to house themselves. Laquian (1983: 142) notes the following in respect of the provision of infrastructure and services in developing countries: "[D]esirable phasing of project activities does not always happen; however, the effect on housing consolidation in such instances is negative". The critical areas outlined by these international studies on infrastructure and service provision should be the yardsticks for establishing principles in respect of housing consolidation projects in developing countries.

1.4 Family income and economic factors

Income levels may contribute to housing consolidation, for example by means of savings or access to external funding. Studies by Dix (1983), Laquian (1983) and Marais (1995b) highlight the important relationship between family income and housing consolidation. Tipple (1998) has found in a number of case studies that other economic reasons, such as the expansion of the housing unit in order to

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rent out rooms, to start a business or to increase its value, are also important considerations. In the same study, Tipple (1998) also found that the most difficult problem encountered in the process of extending the housing unit was lack of finance.

1.5 The value of the existing house

Housing consolidation, which is a continual process, will rely mainly on the structure of the existing house. This implies that a house built with conventional building material (bricks and mortar) may not need much consolidation. However, where cheap materials (corrugated iron or boards) have been used, consolidation is highly necessary. Dix (1983) notes that a detailed knowledge of the existing buildings available to the target population is essential for both upgrading and new settlement projects. This should include aspects such as the housing type, materials and condition.

The effect of existing houses on consolidation, according to Laquian (1983), represents the most potent argument for keeping and improving existing housing, based on the finding that it represents a considerable sum invested by low-income families. Jimenez (1982) notes that the value of squatter houses in Tondo provides an example, since it was found that the average house represented a value about 90% greater than the average *per capita* income of the typical household. The study stresses that families occupying complete houses may not be prepared to participate in consolidation projects on the grounds that they already own a house, and have other priorities besides housing.

1.6 Hired labour, mutual aid and self-help

According to Dix (1983) mutual support is vital to help overcome the economic problems in many low-income areas. It provides a means of financing and building individual houses and complete urban settlements. Although the ideal situation would be for the household to take personal responsibility for consolidating its own housing unit, Laquian (1983) rightfully points out that in practice, in Zambia and Senegal, most project participants preferred to use hired labour in housing construction, whereas mutual aid and self-help tended to be used more in El Salvador and the Philippines.

Tipple (1998) also found that separate contractors were appointed. In projects where hired labour and contractors were used, the housing consolidation occurred more rapidly. However, these projects usually cost more and thus excluded many low-income families. Laquian (1983) notes that delays in housing construction are often related to cases where mutual aid and self-help require project participants to be trained in construction skills and organised decision-making and better working relationships to be established between the people and the housing agencies. Difficulties were also encountered in the collection and distribution of building materials because self-help projects tend to use a wider variety of such materials than projects in which contractors and hired labour play a predominant role. It could therefore be concluded that where skilled labour is available, housing consolidation will probably take place at a faster rate than where it is not.

1.7 Demographics

Tipple (1998) has found that changes in household demographics (which he calls “housing stress reasons”) strongly influencing housing consolidation. Such household demographics refer, for example, to more people joining the household, children growing up and the need to house the family. In various case studies Tipple (1998) found that housing extension is usually the result of an increase in the size of the household, rather than an increase in household finances.

1.8 Circular migration

Gilbert *et al* (1997) have argued that circular migration has a crucial impact. The authors note that while low income is an important factor, household finances in various communities and regions operate as an additional factor. This results in migrants being less likely to improve their homes in the city if their families are living in the countryside. Those sending money home will naturally have less money with which to consolidate a house in the city. Furthermore, the question of “where home is” still remains extremely relevant, since for very many low-income urban dwellers, home (“the place where I invest in a home”) is still in the rural areas.

1.9 Available time

Whether family members have time to take an active part in the process of housing construction is also mentioned as a factor influencing housing consolidation. Turner (1976) was of the opinion that such available time could be used to accumulate capital during the construction process. Tipple (1998) refers to such a process as self-help transformation.

The section above attempted to provide an overview of factors related to housing consolidation, on the basis of the available literature. The remainder of this article will perform a micro-analysis of factors which may play a role in housing consolidation. A selection of aspects, some but not all of which featured in the above overview, will be tested. However, before this more in-depth assessment can be carried out, an overview of the methodological procedures of the case study must be provided.

2. Methodology and study area

In essence three methods were employed, namely scheduled interviews with community and other stakeholders, followed by sampled questionnaire interviews and a land use survey. The research should be seen as a preliminary investigation, since the project has subsequently been expanded to include other areas and situations. Each of these methodological procedures is discussed in more detail below. However, a brief overview of the study area will first be provided.

2.1 Study area

Sejake Square is a former buffer-strip area between the industrial area and the former township of Mangaung. The area was invaded in the early 1990s in accordance with the spirit of the time (cf Botes *et al* 1991). Such areas remained informal settlements until 1997, when the municipality received a large amount of money to provide electricity to all informal settlements on condition that planning was carried out. This paved the way for the formalisation of the area. No ownership was provided although security of tenure was guaranteed by a letter legalising occupation. The main reason for the non-allocation of ownership was that once ownership has been granted, it is impos-

sible to access the full housing policy. While the research was under way, a housing project was planned for the area. However, according to the 1996 census, all the housing units were informal. It is probably fair to argue that the legalisation of occupation has played an important role in increasing housing consolidation in the area.

2.2 Scheduled interviews with stakeholders

Various stakeholders in Sejake Square were consulted to discuss the objectives of the study before the actual survey was conducted. A meeting with the settlement's ward councillor was also arranged and through him with the South African National Civic Organisation (SANCO). At this meeting, issues concerning the survey and the study area were discussed. These included:

- the purpose of the survey;
- the questionnaires (dealing with socio-economic and land-use issues);
- the socio-economic background of the residents;
- a suitable time and date to conduct the survey, and
- the target population group.

Copies of each of the two questionnaires, as well as of the confirmation letter from the University of the Free State, were left for the Executive Committee of SANCO. At the same time discussions were held with the town planning division of the Transitional Local Council.

2.3 The socio-economic survey

Data for the project were collected by means of a sample of 105 from a population of 526 households representing a sample size of 20%. The structured uniform sampling method was used in selecting respondents from the study area. During the week, the survey was conducted after working hours, from 16h00-19h00, and during the weekends from 14h00-19h00. This ensured that most of the people were at home. The survey was directed at the heads of the households, as identified by the households themselves.

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2.4 The land-use survey

The questionnaire survey was complemented by a land-use survey incorporating all 526 stands in Sejake Square. The purpose of this survey was to research the following aspects of the existing housing units:

- type of house;
- services available, and
- type of gardening.

3. Factors influencing housing consolidation in Sejake Square

Having provided a literature overview and outlined the research methodology of the study, the emphasis will now shift to the findings. This section begins with an overview of the physical condition and size of housing units in Sejake Square, then proceeds to discuss the role played by the age and gender of heads of households, the size of households, their education and income levels, the duration of their residence in the area, extended family commitments and attitudes towards long-term residence in Mangaung. As this was only a preliminary investigation, no attempt was made to test all the possibilities suggested in the literature. However, an attempt will be made to relate the case study's findings to those in the literature.

3.1 The physical conditions and size of the housing units in Sejake Square, 1993-2000

In this section the current physical conditions of the housing units in the Sejake Square settlement, based on the sample survey and the land-use survey, are discussed in order to establish the extent of the changes that have occurred since the settlement was first established in the 1990s. This will also serve as a background to the remainder of the analysis. Table 1 indicates the percentages for the various types of housing, based on the questionnaire survey and land-use survey.

Table 1: The physical conditions of housing units in the Sejake Square settlement, 2000

Type of house	Sample survey		Land-use survey	
	N	%	N	%
Corrugated iron ("informal")	72	68.6	365	69.4
Bricks ("formal")	29	27.7	131	24.5
Other ("informal")	4	3.7	16	3.0
Missing	0	0	14	3.1
Total	105	100.0	526	100.0

According to the results set out in Table 1, corrugated iron housing units are in the majority (68.6% and 69.4%, respectively, for the two surveys), followed by brick houses (27.7% and 24.5%, respectively). It is also enlightening to see the similarities between the results of the sample survey and the land-use survey. Furthermore, an interesting change is also discernible in the types of housing structures, if it is assumed that they all started out as informal housing units. Such an assumption is supported by the fact that, according to the 1996 census data, the area had informal housing units and no formal housing units. The above table indicates that housing consolidation is a reality in the area, as there has been an increase in the number of formal housing units.

This gives an overview of the current patterns in housing types. Next, the changing patterns of housing expansion in the Sejake Square settlement from 1993 to 2000 will be considered (see Table 2).

Table 2: An overview of the changes in housing size in Sejake Square, 1993-2000

Housing size	When settled originally		Jan 2000	
	N	%	N	%
One room	86	81.9	61	58.1
Two rooms	16	15.2	30	28.6
Three or more rooms	2	1.9	14	13.3
Missing	1	1.0	0	0
Total	105	100.0	105	100.0

According to Table 2, 81.9% of the houses in Sejake Square started as one-roomed homes. However, this figure had dropped to 58.1% by the year 2000. It is thus apparent that substantial impro-

vements had taken place. The percentage of two-roomed houses had increased from 15.2% to 28.6%. Households residing in three-roomed or larger houses had also increased from 1.9% to 13.3%. Irrespective of the small degree of change, when compared with the remaining number of one-roomed and two-roomed houses, it seems from the above statistics that people spontaneously expand their houses over time, a factor that was also noted in the literature overview. From the two tables above it is evident that some degree of change has taken place since the original settlement in the area. The questions still to be addressed are: What factors have contributed to this change? and, conversely: What factors would tend to contribute to a lack of change?

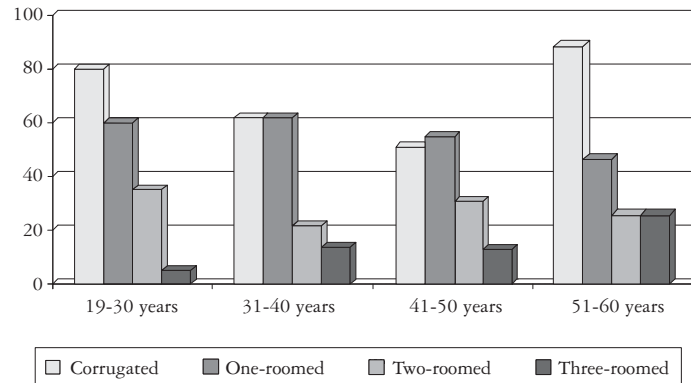
3.2 The role of the age of heads of households

This section will focus on the age of heads of households as a contributory factor in the housing consolidation processes at Sejake Square. The reason for including age as a possible causative factor is that younger people tend to be more mobile, and may not therefore wish to invest in housing units. For the purposes of this study, the ages of heads of households were categorised under four headings: 19-30; 31-40; 41-50, and 51 or over. These age groups were compared with the size of housing units occupied, namely: one-roomed houses; two-roomed houses, and houses of three or more rooms (see Figure 1).

According to Figure 1, heads of households aged 51 or over occupy the highest percentage of informal housing made of corrugated iron (89.7%), while the average percentage for corrugated iron housing is 68.6%. Heads of households in the 19-30 age group occupy the second-highest percentage (80.0%) of the corrugated iron housing (informal housing), above the average. In the light of these data, the question arises as to what reasons can be given for the patterns determined here. Unemployment figures for the various income groups were compared, but no relationship could be found which suggested that either the younger or the older income group was affected by higher rates of unemployment.

Regarding the number of rooms in the houses, viewed in terms of the age of the heads of households, Figure 1 indicates that three-roomed housing occupancy occurred among the older groups. Those

Figure 1: The age of heads of households in relation to the type and size of housing occupied in Sejake Square, 2000



aged 51 and over occupied the highest percentage of three-roomed housing (26.3%), well above the average (14.6%). The middle-aged group (41-50) occupied 13.8%, while those aged 31-40 occupied 14.3%. The youngest group (19-30) occupied 5.0% of the three-roomed housing, well below the average.

Further findings of the survey indicate that the oldest group (51 and over) had the highest percentage of families of more than three people (52.6%), well above the average (27.2%). On the other hand, the other age groups fall below the average. Therefore, it can be argued that the size of the housing occupied by the heads of households in Sejake Square has been influenced by the size of the families, as was suggested by the theoretical perspective. It would therefore seem that households whose head is over 51 tend to have bigger families and larger homes. However, the houses are less formal because these families tend to spend their money on expanding rather than on upgrading their houses. It thus appears from the above discussion that one of the major factors influencing the size of housing in Sejake Square may have been the size of the households.

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3.3 Gender and housing consolidation in Sejake Square

This section will provide an analysis of the impact of gender on the housing consolidation processes in the Sejake Square settlement. The occupancy of corrugated iron and one-roomed housing in the Sejake Square settlement is shown in relation to gender in Table 3.

Table 3: The gender of heads of households in relation to the type and size of housing in Sejake Square, 2000

	Corrugated iron		One-roomed		Total	
	N	%	N	%	N	%
Male	46	73.0	35	55.6	63	60.0
Female	26	61.9	25	59.5	42	40.0
Missing	0	0	1	0.1	0	0
Total	72	68.6	61	58.1	105	100.0

According to Table 3, more male heads of households (73.0%) than female heads of households (61.9%) occupy corrugated iron housing units, while fewer male heads of households occupy one-roomed housing (55.6%), than female heads of households (59.5%) in Sejake Square. Furthermore, the findings from the sample survey indicate that more male heads of households are illiterate, unemployed, have big families, spend a relatively large amount on transport, and occupy corrugated housing. The reason for the higher occupancy of one-roomed and formal housing by female heads of households relates to their smaller families. This factor gives them the opportunity to improve their housing, and is supported by their higher literacy and employment levels as well as the fact that they spend less money on transport to work.

3.4 Family size and the number of rooms occupied by heads of households in Sejake Square

In the previous sections, reference was made to the role potentially played by the size of households. In this section, this role will be analysed in more detail (see Table 4).

Table 4: The size of families in relation to the size and type of housing occupied in Sejake Square, 2000

	One-roomed		Two-roomed		Three-roomed or larger		Corrugated iron		Total	
	N	%	N	%	N	%	N	%	N	%
1-2 people	17	63.0	8	29.6	2	7.4	20	74.1	27	25.7
3-4 people	32	66.7	11	22.9	5	10.4	28	58.3	48	45.7
5 or more people	11	36.7	11	36.7	8	26.7	24	80.0	30	28.6
Missing	1	0.1	0	0	0	0	0	0	0	0
Total	61	58.1	30	28.6	15	14.3	72	68.6	105	100.0

Table 4 confirms the previous conclusion that the size of dwellings in Sejake Square increased along with the size of the family. Occupancy of one-roomed housing is most common among heads of households with families of 1-2 people (63.0%) or 3-4 people (66.7%), in both cases exceeding the average occupancy of 58.1%. Families of 5 and more dominate the occupancy of the two-roomed (36.7%), three-roomed (26.7%) and corrugated iron housing (80.0%), exceeding the average (28.6%, 14.3% and 68.6%, respectively) in all three cases. What is also noteworthy from the above statistics is that, percentage-wise, households with 1-2 people also occupy more corrugated iron units. This is probably attributable to their need for a greater degree of mobility, with the result that housing investment is a low priority.

In conclusion, it may be argued that the size and type of housing in Sejake Square were largely influenced by the size of families. Larger families occupy larger dwellings and more corrugated iron housing than smaller families, who tend to occupy smaller dwellings and brick houses (excluding households of only 1-2 persons).

3.5 Education

In this section, an attempt will be made to establish the impact of the level of education achieved by heads of households on the type and size of housing that they occupy (see Table 5).

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Table 5: The impact of education on the size and type of housing occupied in Sejake Square, 2000

	Corrugated iron		One-roomed		Two-roomed		Total	
	N	%	N	%	N	%	N	%
Primary and below	42	72.4	29	50.0	17	29.3	58	55.2
Grade 10 and above	30	63.1	27	57.4	10	21.3	47	45.0
Missing	0	0	5	4.8	3	2.9	0	0
Total	72	68.6	61	58.1	30	28.6	105	100.0

According to Table 5, household heads with only primary or lower education occupy a higher percentage of corrugated iron housing (72.4%) than those with standard 8 (grade 10) or a higher qualification. At the same time, heads of households with a primary or lower education have fewer one-roomed housing units, and more two-roomed housing units, than the better qualified heads of households. Once again the question can be posed as to what the reasons for this could be. Household size again seems to be an important consideration, as heads of households with primary or lower education tend to have larger families, according to the data.

3.6 The income of heads of households in Sejake Square

Income is usually cited as one of the main reasons for the low levels of housing consolidation or expansion. This section will focus on the impact of income on the type and size of housing in Sejake Square.

Table 6: The impact of income on the size and type of housing in Sejake Square, 2000

	Bricks		Corrugated iron		One-roomed		Two-roomed		Total	
	N	%	N	%	N	%	N	%	N	%
Less than R800.00 per month	20	23.2	61	71.0	49	57.0	24	27.9	86	81.9
R800.00 or more per month	7	36.8	11	58.0	11	58.0	6	31.6	19	18.1
Missing	0	0	0	0	1	1.0	0	0	0	0
Total	27	25.7	72	68.6	61	58.1	30	28.6	105	100.0

According to Table 6, heads of households earning less than R800-00 occupy more corrugated iron housing units (71.0%) than those earning R800-00 or more (58%). The reverse is true of brick housing units. If the trends in respect of the size of housing units are investigated, it seems that there is virtually no difference in terms of one-roomed housing units, but that the higher income group has a slight advantage over the lower income group. In addition to occupying fewer brick housing units (23.2%), the lower income group also occupies more one-roomed (57.0%) and two-roomed (27.9%) corrugated iron housing units. Heads of households earning R800-00 or more occupy more one-roomed and two-roomed housing units.

The implication of these findings is that the salaries of the heads of households influence the type and size of housing occupied by them and their families. Hence, owners with better salaries occupy better, but smaller, housing. From the perspective of housing finance, the various methods of funding housing would be an interesting issue for future research.

3.7 Period of residence of heads of households in Sejake Square

This section will focus on the impact of the period of residence of heads of households in Sejake Square on the type and size of their housing. As already mentioned in the literature overview, the actual time spent in a specific area has a major influence on housing consolidation.

Table 7: The impact of the duration of residence on the type and size of housing in Sejake Square, 2000

Year of first occupancy	Corrugated iron		Bricks		One-roomed		Two-roomed		Total	
	N	%	N	%	N	%	N	%	N	%
<1991	20	67.0	8	27.0	13	43.3	11	36.7	30	28.5
1992-1993	16	59.3	9	33.3	16	59.3	8	30.0	27	25.7
1994-1995	25	76.0	7	21.2	22	66.7	8	24.2	33	31.4
1996-2000	11	73.3	3	20.0	9	60.0	3	20.0	15	14.3
Total	72	68.6	29	28.0	61	58.1	30	28.6	105	100.0

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According to Table 7, heads of households who had been residing in Sejake Square for a lengthy period (since 1992 or 1993, or since before 1991) occupied higher percentages of two-roomed and brick housing than those who had settled in the area since 1994. It therefore seems — as confirmed in the literature — that there is some relationship between the time spent in a specific area and the levels of housing consolidation. Longer occupancy generally implies more security in terms of income. However, what is important from a policy perspective is that the longer period of residence plays an important role, despite the lack of land tenure.

3.8 Extended family commitments and the influence of a second home

The literature overview indicated that extended family commitments, especially in the Western Cape, have had a negative impact on housing consolidation. The present case study found that the percentage of heads of households who have another dwelling somewhere else is small (2.0%). The implication is probably that heads of households in Sejake Square are committed to their dwellings. These findings are in contrast to those of Gilbert *et al* (1997) in respect of circular migration in Cape Town, in terms of which low consolidation processes were seen to result from household finances being stretched between various communities, making it difficult for heads of households to improve their homes in the city if their families were living in the countryside. Linked to the aspect of a second home is the question of the degree to which households contribute financially to extended households residing elsewhere (see Table 8).

From Table 8 it can be seen that 29.5% of the households interviewed were contributing financially to other households. However, despite the assumption that households with financial commitments to other households elsewhere would be worse off in terms of housing, the table actually reveals the opposite state of affairs. It indicates that households making contributions to extended family members residing elsewhere are actually better off in terms of housing. For instance, such households occupy a higher percentage of brick housing units and more two-roomed housing units than their counterparts who are not making similar financial contributions. It would proba-

Table 8: A comparison of the types of housing units occupied by households contributing to the upkeep of family members elsewhere

	Yes		No		Total	
	N	%	N	%	N	%
Regular financial contribution to family member(s) living somewhere else (Total)	31	29.5	74	70.5	105	100.0
Contribution according to housing type						
Corrugated iron	12	38.7	60	81.1	72	68.6
Bricks	12	38.7	17	23.0	29	27.9
Contribution according to housing size						
One-roomed	14	45.2	47	63.5	61	57.2
Two-roomed	10	32.3	20	27.0	30	28.6

bly be correct to assume that those households which do, in fact, make such financial contributions earn more in order to make such contributions, or have fewer direct dependants in their housing units (aspects which could not be tested empirically).

3.9 The attitudes of heads of households to their place of residence and the types of housing occupied

An aspect linked with the above issues of a second home and financial contributions to extended family members is the commitment of heads of households to their place of residence. Three specific questions were asked in this regard (see Table 9).

According to Table 9 it is apparent that the majority of heads of households consider Sejake Square, and Bloemfontein, as their permanent place of residence (90.5%). The majority mentioned that they would be staying in Mangaung for the next five years (88.6%). The percentage of heads of households who consider Mangaung as a potential place of retirement is even higher (92.4%). The general implication is that the majority of heads of household feel positive about continuing to reside in Mangaung and Sejake Square, which may in turn have a positive implication for housing consolidation and expansion, in contrast to the situation in the Western Cape.

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Table 9: The attitudes of heads of households to their place of residence in Sejake Square, 2000

Response	Strongly agree		Agree		Neutral		Disagree		Strongly disagree		Total	
	N	%	N	%	N	%	N	%	N	%	N	%
I regard this house as my permanent home	95	90.5	2	1.9	0	0	5	4.8	3	2.9	105	100.0
I will leave Mangaung in the next five years	7	6.7	1	1.0	0	0	4	3.8	93	88.6	105	100.0
I will retire in Mangaung	97	92.4	1	1.0	0	0	3	2.9	4	3.8	105	100.0

4. Conclusion

Housing consolidation seems to be a reality in Sejake Square. It seems that the two most prominent contributory factors are the size of the household and the period of residence in the area — factors that were also identified in the literature. Income seems to play a role in improving the housing structure while household size plays a specific role in the expansion of the housing area. In terms of policy, the ideas of Turner and the World Bank are relevant: before housing consolidation can take place, it is necessary to provide the basic conditions such as tenure (the commitment that people will not be forcibly removed) and infrastructure (which was not tested empirically in this study). From a policy perspective, it seems that individuals could take a great degree of responsibility for housing consolidation. Other empirical evidence from Bloemfontein has already indicated a greater degree of ownership with regard to housing stock (cf Methlomakulu & Marais 1999). This will also mean that the government can increase the breadth of the South African housing policy by simply providing the infrastructure. In this way, it will be possible to assist more people than would be the case if both the housing structure and the infrastructure had to be provided. Although this policy will prolong the process of housing consolidation, it will also ensure that more households in need will receive a basic settlement grant from the government.

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