Office of the Quartet Representative Tony Blair

# Effective housing demand survey: West Bank

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# Contents

# Executive Summary

This effective housing demand survey has been financed and supported by the Office of the Quartet Representative and the World Bank, with the objective of contributing to the development of affordable housing in the context of the Initiative for the Palestinian Economy (IPE) and the World Bank's long-standing commitment to affordable housing.

It is a study of 631[1] households in the West Bank with a monthly income of between 1,500 and 5,500 NIS per month (approx $425 - $1570), who are considering building or buying a new dwelling. Their existing housing conditions are not harsh. With a mean size of four rooms per dwelling and 0.94 persons per room they are not badly housed (mean occupancy in the West Bank as a whole is 1.5 persons per room). Relatively few (16.01%) of the respondent families are renting.

Households in the study sample have sufficient assets to raise, on average, a down payment of $7,600, and aspire to a dwelling with a mean cost of $52,185. For those spending less than 30% of their income on housing the mean house price that could afford was $37,642, while for the low income group (less than 3,150 NIS ($900) per month) spending less than 30% of their income on housing it was $31,521.

A substantial proportion of families state that they are willing to spend more than 30% of their income on housing – in some cases over 50%. Whether this is realistic cannot be clarified without in-depth discussions with the respondents concerning the true extent of their disposable income.

The most popular house size chosen by respondents was 75m$^2$, with 90m$^2$ and 105m$^2$ close behind. However, when we look at the mean sizes, there is remarkably little difference between the income groups. The mean dwelling size for the low income group spending less than 30% of their income is 92.7m$^2$, for those paying less than 30% of their income, 93.3m$^2$ and for the sample as a whole it is 105.8m$^2$.

For the lower income groups 40% chose a three bedroom house, but 30% selected a four bedroom unit. There was no significant demand for a two bedroom unit.

The obvious question is how to reconcile the two sets of facts: one, the relatively small difference in unit size desired by different income groups, and the other the relatively large difference in capital cost. This is explained by the fact that the lower earners made every possible saving – opting to have an unfinished unit with basic kitchen and modest bathrooms, and no stone cladding. Some of them were able to make substantial savings by having their own land, though the majority of land-owners were in the higher income groups.

Respondents could choose between apartments and houses. There were substantial differences between different regions. There was an overwhelming preference for houses in Hebron, and a sizeable majority in Ramallah, Jenin, Qalqiliya and Salfeet. In Bethlehem the situation was reversed, with most people preferring apartments.

Overall 63.9% preferred a house. The typical such unit selected has a floor area of 112m$^2$, on a plot of 10 x 20 metres, with walls all round, served by a 5m asphalt road.

Among the key recommendations arising from the study are:

### Rental

About one fifth of the targeted population prefers to rent, whether because they do not have the capital to build, or for other reasons. There is a need to update the regulations regarding rental to make it equitable for both parties, and thereby increase rental stock.

### Self build

The number of families who wish to manage their own house-building programme (what the study calls self-build) was significant. Mechanisms need to be found to give loans for such builders without onerous down-payment conditions.

[1] The original plan was to survey 500 houses. However, the number was increased by the survey company as a gesture of good will

## Affordability

The study has shown that there are considerable differences in what people think they can afford. About half the respondents planned units costing less than $50,000: 79% of those earning less than $900 (3,150 NIS), and spending no more than 30% of their income on housing, planned a dwelling costing less than $37,500. However, most respondents do not have access to sufficient cash to make a down payment of 20%, even for low cost units.

## Agency

The private sector can develop the majority of the housing required in the West Bank. However, a hybrid model in which the state, or one of its agencies, services land on which private developers or individuals develop houses could be an effective way of kick starting development for the lower income groups. The buyers (whether individual or corporate) would buy the plots. In the case of individuals they would use long-term finance to buy the plots, while developers would finance the deal with bridge financing and subsequently sell completed units. Either way the state would recover the costs within a few months of completing the development.

## Scale of programme

There are many different estimates of housing demand. However, using the rate of population growth alone (ignoring, for example, the need to replace overcrowded or dilapidated housing), and dividing the market by income group, it is estimated that there is a **minimum** annual demand of at least 4,500 units costing between $22,500 and $37,500, and 4,200 units costing between $37,500 and $53,000. Of these, based on the choices in the survey, most will be individual housing units and about 1,300 will be plots on which residents may build their own houses.

## Implications

The findings of this study have important implications in terms of policy and development practice. These may be summarised as follows:

1. The market for housing goes substantially further down the cost scale than previously considered. Moreover there is substantial effective demand for housing costing less than $45,000.

2. There is a demand for units that are not, in the conventional sense, fully finished as a means of gaining access to space than can be upgraded over time.

3. There is a very substantial market for houses (as opposed to apartments) on the urban fringe. People are willing to accept small plots in order to reduce costs.

4. The normal requirement by banks for a 20% down payment is a major hurdle for many families. This should be addressed by instigating a system of government guarantees for loans to first time home buyers, and/or a system of rent-to-buy whereby the occupier accumulates equity through rental payments.

5. There is currently an unmet demand for self-built incremental housing, which can be met by a programme to develop serviced plots. There is also a need to look at the regulatory framework as far as self build and incremental housing is concerned.

# Part I: Introduction and Background

## 1. Introduction

This effective housing demand survey has been financed and supported by the Office of the Quartet Representative and the World Bank, with the objective of contributing to the development of affordable housing in the context of the Initiative for the Palestinian Economy (IPE) and the World Bank's long-standing commitment to affordable housing.

Due to the serious shortfall in data on effective demand for housing in general and affordable housing in particular in the West Bank and Gaza, the need for this kind of survey is clear and present.

The Initiative for the Palestinian Economy (IPE) is designed to effect transformative change and substantial growth in the Palestinian economy and create hundreds of thousands of new jobs. It is a complementary process to the now suspended political negotiations between Israel and the Palestinian Authority (PA), led by U.S. Secretary of State John Kerry, and is not a substitute for it.

The ambitious plan was drafted by a team of policy advisors, external economic analysts and international domain experts under the leadership of Quartet Representative Tony Blair in support of renewed Palestinian-Israeli negotiations.

The initiative focuses on catalysing private sector-led growth in the West Bank, the Gaza Strip and East Jerusalem. The success of the IPE relies heavily on the inflow of new financing into the Palestinian economy, in particular from the private sector, continued and significantly expanded Israeli easing measures and boosted institutional capacity within the PA.

The Office of the Quartet Representative (OQR) is working closely with the Palestinian Authority (PA) and the Israeli government on implementation of the initiative, and on ensuring that the necessary enablers are in place to safeguard the success of the plan.

Expanding construction in housing is a central part of the Initiative as we aim to better meet the huge demand for affordable housing. The IPE envisions the construction of different types of housing to address the various demographic and geographic segments across the West Bank, East Jerusalem and Gaza - including on available land in city centres, around the urban periphery, and in new locations.

## 2. Background

In 2013 two important documents regarding housing were produced by UN Habitat: the Housing Sector Profile and the Housing Policy[2]. The former used the results of surveys undertaken by the Palestine Central Bureau of Statistics specially for the study, and the latter proposed a policy framework based on the findings of the study to identify the principal issues of concern.

The data regarding housing demand and supply in the Housing Sector Profile (HSP) reveal an extremely unusual situation, notable mainly for the massive range of different analyses and projections. The 2007 Census reveals that there were 57,031 vacant housing units, corresponding to 8.3% of the total housing stock of Palestine. It is difficult to reconcile this figure with the estimate by developers discussed in the Housing Policy (HP), p.5, of an unmet demand of 80,000 units in the West Bank alone.

Regarding annual demand for housing an assessment of the affordable housing market in 2013, prepared for the Affordable Mortgage and Loan Company (AMAL), estimated "potential demand" (i.e. not effective demand) for housing in all of Palestine to be as high as 50,000 units per year, while the Ministry of Public Works and Housing assumes a housing *deficit* until 2019 of 29,400 units per year in the West Bank and Gaza, based on current demographic trends and forecasts. And private developers estimate housing demand in Palestine to be around 15,000 units per annum. They assume that *effective* demand constitutes no more than one-third of total demand, i.e. approximately 5,000 units per annum. (HP, p4).

[2] Palestine Revised Housing Sector Profile: Revised Final Version, UN Habitat, 27 November 2013
Palestine Draft National Housing Policy, Revised Final Version, UN Habitat, 27 November 2013

Regarding the type of housing required, the existing average size is 134m$^2$ (HSP, p25), Data for the West Bank show the distribution of housing sizes as follows:

West Bank: Size of existing dwelling units

| <80m$^2$ | 81-119m$^2$ | 120 – 159m$^2$ | 160 – 199m$^2$ | >200m$^2$ |
|---|---|---|---|---|
| 16.7% | 23.7% | 36.2% | 14.8% | 8.7% |

*Source: Revised Housing Sector profile, p 25*

Respondents in the survey undertaken for the HSP were asked what their ideal housing unit would be. In urban areas their average house size was 158m$^2$, in rural areas 177m$^2$, and 151m$^2$ in refugee camps. The explanations given for these large house sizes were as follows:

- Palestinian families are large, and children stay in the home until they marry.
- There is no tradition of households completing their own housing units (through self- build) over time, as in many other developing countries. Palestinian consumers expect a completed house or apartment, with high-quality (or at the very least, medium quality) finishing materials.
- For the majority of Palestinians housing is a once-in-a-lifetime investment. There is no culture of frequent moving or even of "moving up" the housing ladder over time (as in most Western countries), as household income increases. Consequently, there is an expectation that the first home may be for life and should therefore include all desired amenities.
  (HSP, p32 - 3)

In response to the clearly conflicting data about housing demand and supply, and the obvious gap between housing expectations and affordability, the Housing Policy stresses the need for an effective demand survey. Under *Policy Objective 1, Enable adequate healthy and affordable housing for all its citizens, Strategy 1.1: Launch an affordable housing program to expand adequate housing, including for vulnerable groups, Main Priorities*, it states:

> ***Estimates of Housing Need and Demand and Government Responses Thus Far***
> There is currently a lack of adequate data in Palestine on unmet housing need and demand, particularly effective demand for housing (i.e. what households can actually afford to pay). (HP, p4)

Under *Policy Objective 3: Improve the efficiency of the housing finance market, strategy 3.1 Introduce needed reforms to laws and policies related to finance, to achieve a more efficient housing finance market*, one of the main "challenges" is stated as follows:

> Supporting the implementation of a large household survey assessing *effective* household demand for housing, as distinct from housing need. Such a survey will provide a critical input to the planning of future housing projects, including the anticipated affordable housing program (see Strategy 1.1). The survey should provide an accurate picture of effective demand (ability to pay) and housing preferences across different demographics and market segments and across different locations in Palestine. (HP, p 17)

This challenge was taken up by the Office of the Quartet Representative, with support from the World Bank, in early 2014, and this survey was commissioned.

## 3. The survey

An "effective housing demand survey" differs from normal surveys in that it provides respondents the information to make an informed choice regarding their solutions based on actual costs, and is therefore the product of a dialogue between the respondent and the interviewer regarding the options.

The starting point for such a survey has to be the question "What can you afford to spend per month on housing?" (Months are used as the unit of expenditure because most people plan their expenses on a monthly basis). Once this is established, the respondent can then experiment with different house designs until he or she has found the optimum – for him or her – within the affordable range.

This survey methodology, using the same principles but different tools depending on circumstances, has been used over a period of thirty years and in a variety of countries, including Zambia, Kenya, South Africa, Swaziland and Botswana[3].

In order to be reliable, an effective demand survey must have the following characteristics:

- Financial choices must be realistic
- Respondents must have freedom to choose – in effect to design their selection.

To elaborate on these points:

## 3.1 Financial

**Quantum:** Everyone has a relatively accurate idea of how much they currently spend on housing, typically rent. This is normally paid monthly. When deciding what they can afford, this will be the starting point. Some may be living rent free in extended family dwellings, but even they will have a good appreciation of their monthly income and expenditure.

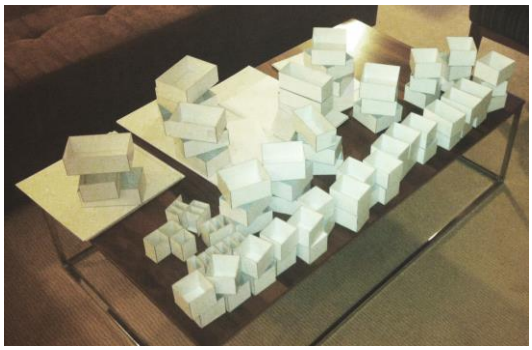
The first step in any survey must therefore be to establish with the respondent household what they are willing to spend monthly on housing. This figure will typically be less than they finally agree, given the cost of their preferred solution, but is an important benchmark. In some cases respondents will have unrealistic expectations regarding how much they are willing to spend – say 60% of their income – in order to obtain their dream house. In such cases the interviewers must interrogate the respondent quite carefully to determine how their current monthly income is being spent, and what current expenditure will be foregone in order to allow such massive increases in housing expenditure. But normally, anything above 30% of income should be treated with caution.

**Understanding the choices:** In order to give respondents information that the respondents can understand easily, costs need to be expressed in monthly terms. Thus, capital costs should be expressed in terms of monthly debt repayment. This must be established on the basis of a realistic loan, based on prevailing interest rates and likely loan terms. It should also take into account savings that the household can use towards a down payment.

## 3.2 Design

**Being in charge:** The essence of a good survey is that the respondent feels in charge of the process. For this to happen he or she must have all the information required to make informed choices in real time.

**Understanding the choices:** The use of physical model rooms is an essential component of an informed choice. The models allow, however imperfectly, the respondent to visualise the options available, and make changes to fit the design into his or her financial limitations. *(see photo)*



*The cardboard scale models of rooms and plots to be used by respondents to visualise their design*

**The iterative process:** An essential part of the process is that the respondent must have the time to try out different options until he or she is satisfied. Experience has shown that options that were initially considered unacceptable are accepted happily when the respondent understands the reality of the financial limits.

[3] For a more complete discussion of the model, see: Richard Martin: *Development of a model for determining affordable and sustainable sanitation demand in denser settlements of South Africa; User Manual and Guidelines,* Water Research Commission Report No TT379/08, Pretoria, March 2010, *and*
Richard Martin and P Pansegrouw: *Development of a model for determining affordable and sustainable sanitation demand in denser settlements of South Africa***;** Water Research Commission Report No 1664/1/09, Pretoria, March 2009.

## 3.3 The data entry form

**3.3.1 Existing conditions:** To assess the household's status the survey starts with questions about income, occupation, family size and existing housing.

**3.3.2 The Options:** In outline, the options presented are:

- Number and size of rooms
- Number of bathrooms, WCs and Showers
- Standard of finishes
- Standard of kitchen fittings
- Whether the unit is in an apartment or a house.
- If house:
  - Size of plot
  - Location of plot
  - Standard of access
  - Whether boundary walls are required

**3.3.3 Cost inputs:** The costs in the model are compiled from data provided by the developer Amaar, using competitive prices from commercial contractors. We were informed that the prices are representative of both large and small building contractors. There are regional variations in labour prices which are factored into the model. A detailed explanation of the build-up of the prices is contained in Annex 2.

Developers maintain that high quality plumbing fittings (German or Italian), and ceramic basins and WCs from Spain or Italy are big selling points, as are high quality kitchen fittings. However, it must be stressed here that *the lowest available prices for plumbing and sanitary fittings* were selected in the model to accord with the means of the intended beneficiaries, which makes a significant difference to overall costs as compared to most dwellings currently on the market.

Based on local enquiries the survey team entered a cost factor for each region – a factor of the costs prevailing in Ramallah, from where the base costs were taken.

## 3.4 Data Capture

An essential part of the process is that the respondent's choices are reflected immediately in the model, thus allowing him or her to decide whether or not to accept the design.

The decisions are recorded in an Excel spreadsheet which instantly reflects the cost of the option selected. Screen shots are given in Annex 4. The first page of the Annex gives an example of where an apartment was selected, while the second page is where a house is selected.

## 3.5 Income groups

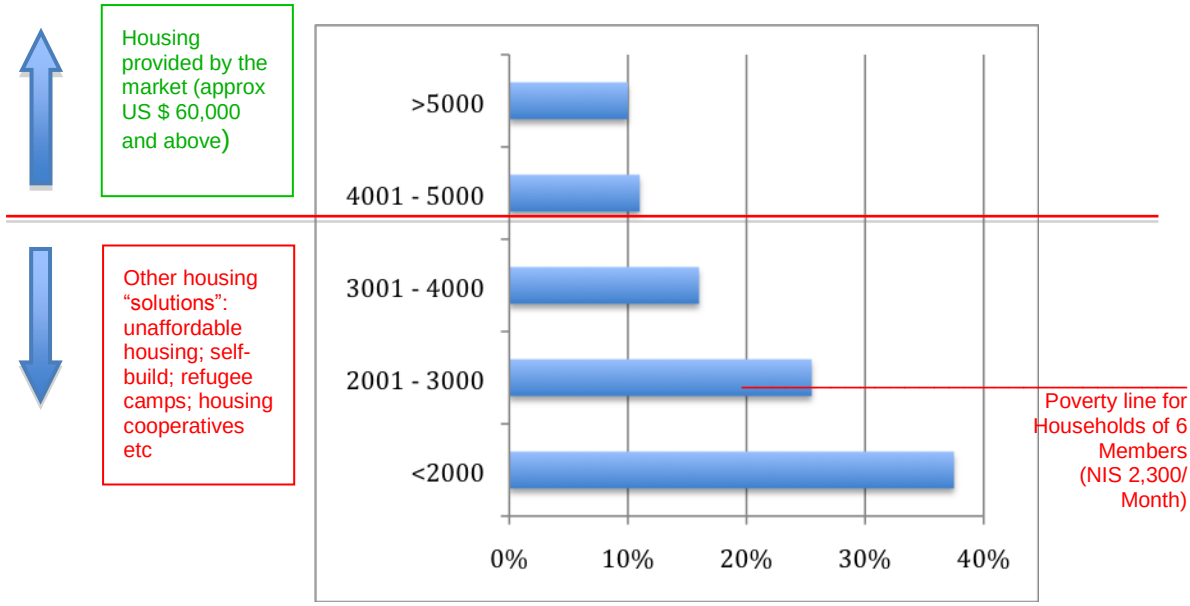
One of the early decisions to be made regarding the survey was which income groups should be covered. On the one hand there was clearly a need to concentrate on lower income groups. Traditionally this is defined as the below 50% percentile group – i.e. that half of the population which is earning less than the other half. On the other hand, it was clear that if the study was to concentrate solely on this half of the population, it would result in a "missing middle", that section of the population which is neither rich enough to be able to afford the standard private sector products (for the most part costing $75,000 or more), nor poor enough to be considered as lower income.

The situation is further complicated by the fact that income data in the West Bank is difficult to obtain. One source is a study produced by the Affordable Mortgage and Loan Program (AMAL) in 2010 which analysed incomes and affordability, from which the table below is taken:

| Monthly household income (NIS) | Percentage of households in West Bank | Maximum affordable housing (USD)* |
|---|---|---|
| | | |
| <1,500 | 18% | <26,700 |
| 1,500 – 1,999 | 17% | 26,700 |
| 2,000 – 2,499 | 14% | 33,000 |
| 2,500 - 2,999 | 13% | 40,000 |
| 3,000 - 3,499 | 11% | 47,000 |
| 3,500 - 3,999 | 5% | 53,000 |
| 4,000 - 4,499 | 4% | 60,000 |
| 4,500 - 4,999 | 4% | 67,000 |
| >5,000 | 13% | >67,000 |

*At four times the annual household income. This assumes a 20% down payment
*Source: Source: Al-Markaz (Affordable Housing Market Assessment in the West Bank, produced for AMAL), 2010, reproduced in HSP, p 24.*

The same study included the chart below which vividly illustrates the current situation as far as housing demand and supply are concerned[4].




*Redrawn from HSP, P24, Data from Al-Markaz (Affordable Housing Market Assessment in the West Bank, produced for AMAL), 2010.*

The number of units being supplied by the private sector at $60,000 is very low, so perhaps the above chart is slightly misleading in this respect. Also, because it assumes a down payment of 20%, the affordability calculations may be optimistic.

Income calculations made in this consultant's report of April 2009[5], using expenditure figures as a proxy for income, put the 50% somewhat higher at about 3080 NIS.

[4] Although the methodology used for these calculations of bases affordability on the cost of the housing unit as a multiple on annual income it is reproduced here because it is relied upon, to some extent, in the Housing Sector Profile. A more reliable method uses the three data points of income, interest rate and mortgage term to determine affordable capital cost. The question of affordability is discussed in more detail in Annex 6.

**Monthly gross expenditure, West Bank, Urban Areas[6] (US$) 2007/2008.**

| | Urban West Bank expenditure, deciles, midpoint | |
|---|---|---|
| Percentage of population | US $ | NIS |
| 10 | 358 | 1,253 |
| 20 | 502 | 1,757 |
| 30 | 600 | 2,100 |
| 40 | 730 | 2,555 |
| 50 | 880 | 3,080 |
| 60 | 980 | 3,430 |
| 70 | 1,220 | 4,270 |
| 80 | 1,400 | 4,900 |
| 90+ | 1,500 | 5,250 |

*Source:* PCBS *Levels of Living in the Palestinian Territory, Final Report (January 2007 – January 2008).* Table 2.25

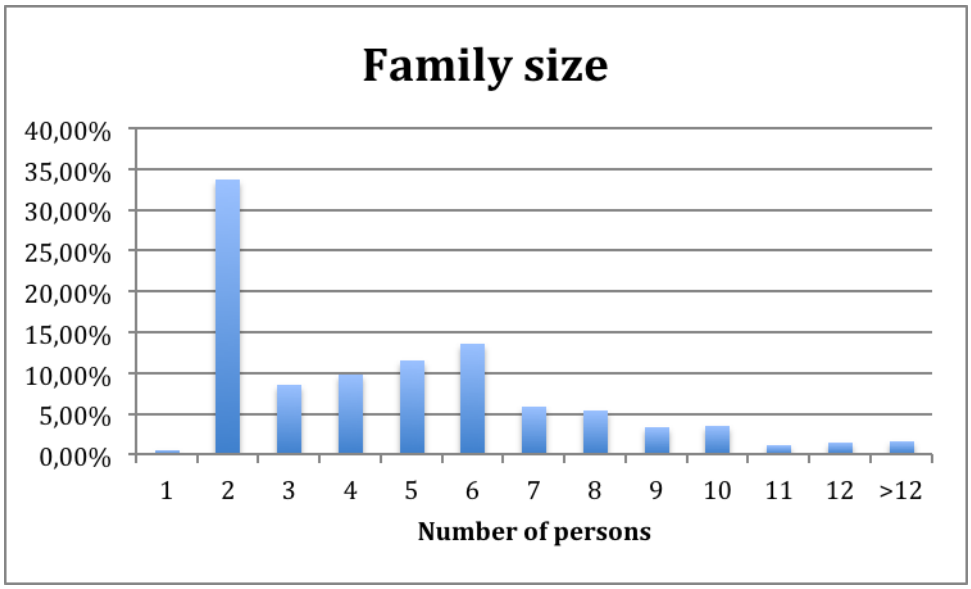
Since this data is more than seven years old we can expect current figures to be higher.
The income range for the survey was therefore selected at 1,500 - 5,500 NIS.
The other criterion for selection was that the family had to wish to build or buy a new home.

[5] Palestine: Public Private Partnerships in the Housing Sector, April 2009, Annex 2, p.29
[6] These data are for the urban areas of the West Bank.

# Part II: the Respondents

## 1. Family size

The mean family size is 4.78 persons. Some respondent families were very large – over 10 persons, but there were many small ones as shown in the chart below, with 2 person families dominating.




## 2. Occupations

Many of the entries regarding occupation were very vague, and were therefore difficult to classify. Nevertheless, an attempt has been made to place the occupations within a recognised framework: the social grades first used in the UK by market researchers for readership surveys[7]. The grades are:

| Social grade | Description |
|---|---|
| A | High managerial, administrative or professional |
| B | Intermediate managerial, administrative or professional |
| C1 | Supervisory, clerical and junior managerial, administrative or professional |
| C2 | Skilled manual workers |
| D | Semi and unskilled manual workers |
| E | State pensioners, casual or lowest grade workers, unemployed |

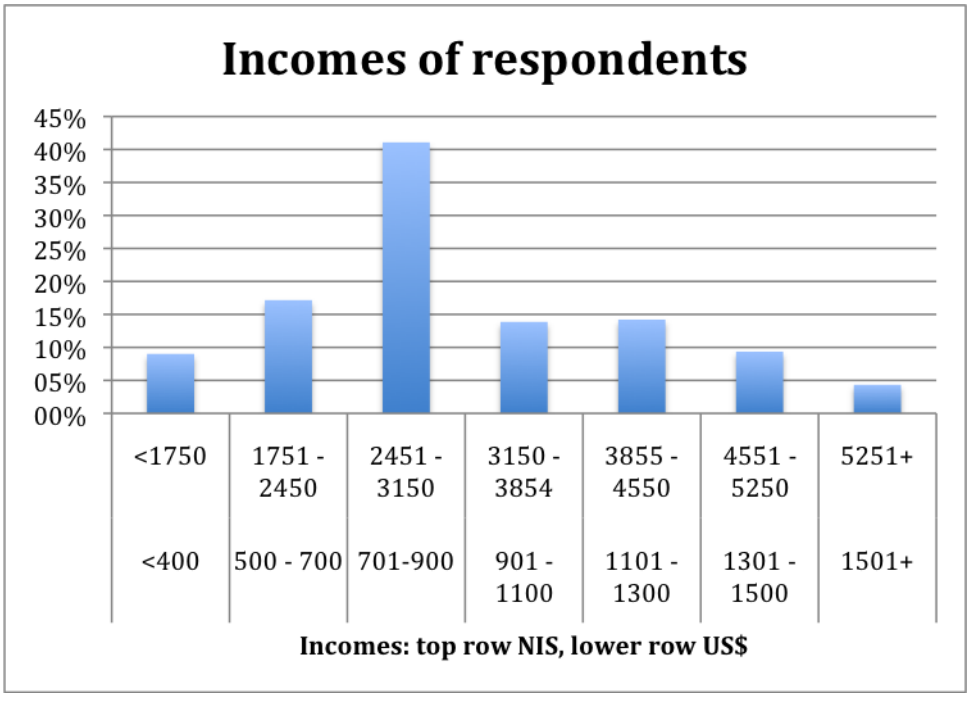
[7] The data is reported annually on the National Readership Survey web site: www.nrs.co.uk

Using these classifications, the social grades of the respondents have been tabulated below.

| | number | Supervisory, clerical and junior managerial, administrative or professional | Skilled manual | Semi and unskilled | Not stated |
|---|---|---|---|---|---|
| Bethlehem | 60 | 0.0% | 50.0% | 45.0% | 5.0% |
| Hebron | 121 | 10.7% | 64.5% | 19.8% | 5.0% |
| Jenin | 124 | 8.1% | 54.8% | 22.6% | 14.5% |
| Jericho | 7 | 42.9% | 42.9% | 14.3% | 0.0% |
| Nablus | 67 | 4.5% | 82.1% | 13.4% | 0.0% |
| Qalqiliya | 38 | 15.8% | 52.6% | 31.6% | 0.0% |
| Ramallah | 56 | 10.7% | 66.1% | 21.4% | 1.8% |
| Salfeet | 53 | 0.0% | 1.9% | 67.9% | 30.2% |
| Tubas | 30 | 0.0% | 60.0% | 40.0% | 0.0% |
| Tulkarem | 75 | 1.3% | 16.9% | 6.5% | 75.3% |
| All | 631 | 6.6% | 51.0% | 26.2% | 16.1% |

## 3. Incomes

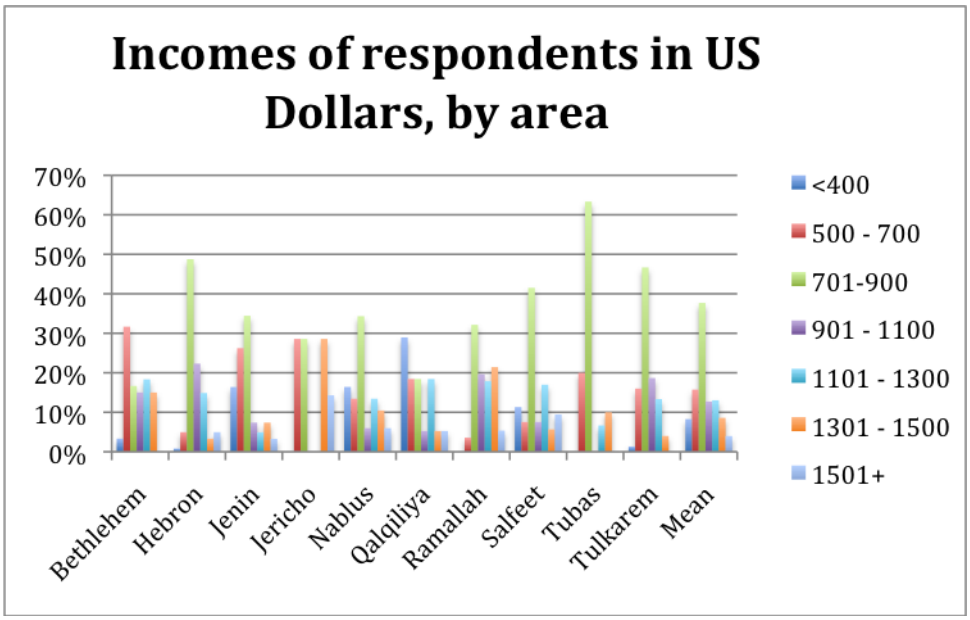
The chart below shows the distribution of incomes.




(The Table for this and all other charts are included in Annex 1)

This places 65% of the respondents below the median income, and 37.43% earning between 3,150 and 5,250 NIS per month. 4.34% earn more than this. This is therefore quite a good distribution in the range of the target group.

There are substantial variations in incomes in terms of area. The chart below shows the percentage of income groups within each area.

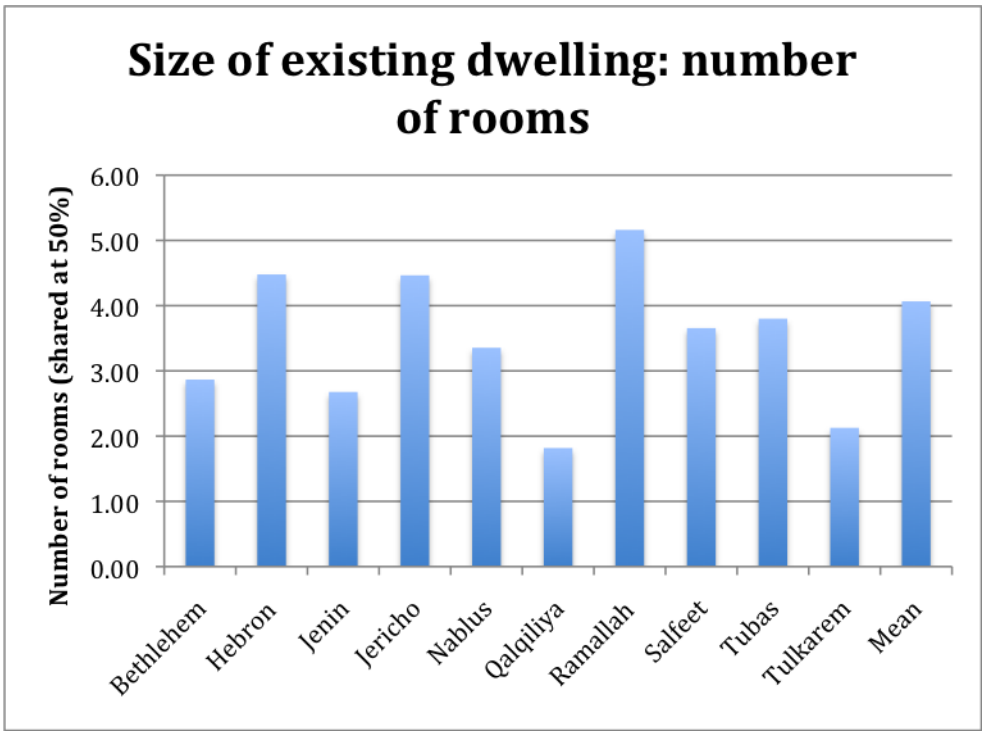



## 4. Housing conditions

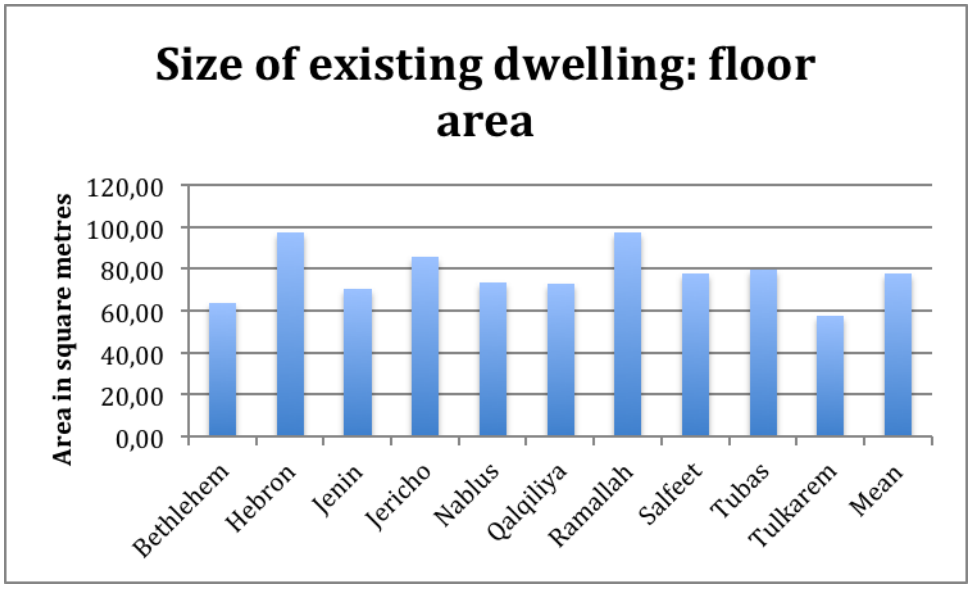
Although income is the most important criterion as far as the survey was concerned, the respondents were also asked about their existing housing conditions. This was partly to determine how powerful the “push” factor might be in their housing decision – were they living in such difficult circumstances that they were looking to move as soon as suitable property became available? – or whether they were in a position to take their time. We also wanted to know more about the rental market. Lastly, so as to determine how representative they were of the population at large, we asked details of their family size.

### Existing house size

To verify the representative nature of the sample we compared the size of the dwelling and the number of persons per room. This may be done in two ways. The first, based on the responses to the survey gives the number of rooms occupied. This is shown in the chart below which shows a mean size of four rooms per dwelling, but variations from 1.82 in Qalqiliya to 5.16 in Ramallah. This may be compared to the mean of 3.6 rooms per dwelling as shown in the PCBS survey done for the HSP (p.26).

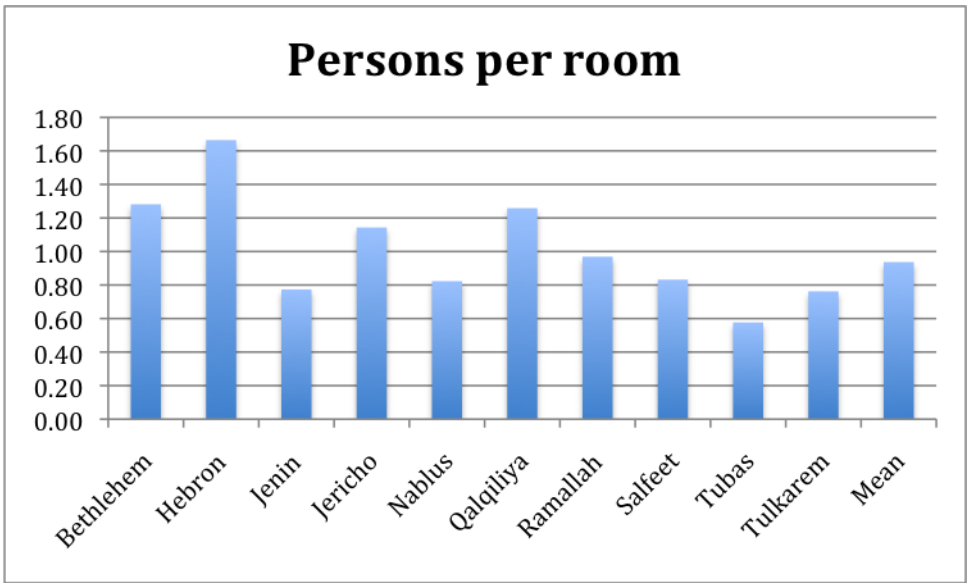



Another method is to compare the size in square metres. Because it is not practical to measure an existing unit, and people's responses in these matters are typically unreliable, this question was not put to the respondents. However, it is possible to make fairly accurate estimates based on the commonest rooms sizes. Using the figure of 20 $m^2$ for the living room, 10$m^2$ for the kitchen and 12$m^2$ for all other rooms, to which is added 6$m^2$ for bathrooms and 10% for circulation one can arrive at a fairly accurate idea of the size of the units occupied. The result of this exercise is presented in the chart below. It will be seen that the mean is about 80$m^2$ – thus demonstrating that the respondents are by no means badly housed at present. This reinforces the view that the respondents are not choosing to move because they have to, but because they perceive the need to have their own place.




Lastly, it is interesting to use the criterion of persons per room – an indicator typically used to define overcrowding. The figure of 2 persons per room is often used as the criterion for overcrowding, though it must be stressed that different indicators are used in different countries. The survey shows that conditions are worst in Bethlehem, Hebron and Qalqliya, but at 1.66 persons per room even Hebron cannot be considered to be suffering from overcrowding. These

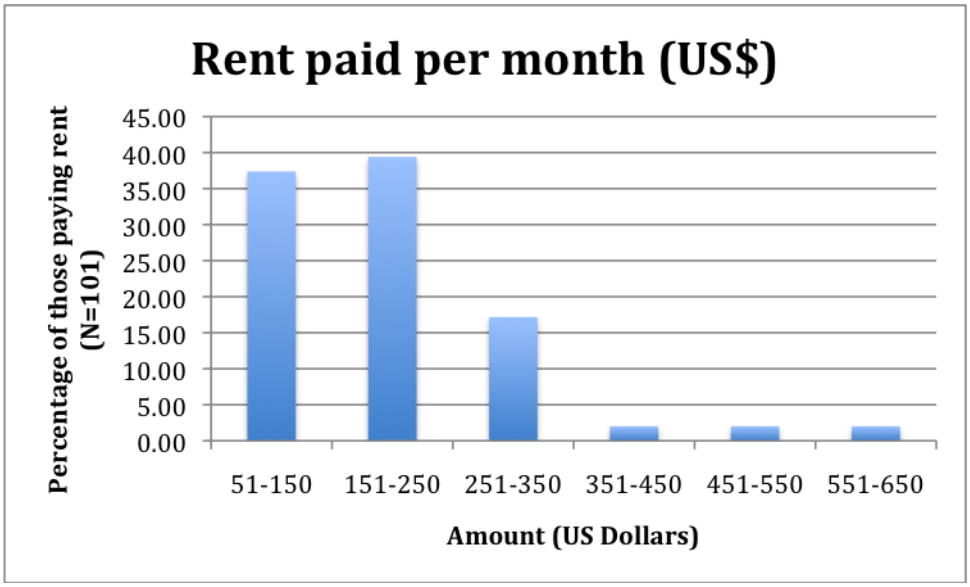
figures may be compared to the results of the PCBS survey, reported in the Housing Profile which has a mean of 1.5 persons per room (HSP, p 28) whereas the mean result of the current survey is 0.94 persons per room.




Thus the housing conditions of the respondents are better than that of the West Bank population as a whole. This may be explained by the fact that the bottom income groups were excluded from the survey.

## 5. Renting

Respondents were asked whether they were renting their current dwelling. Renting is relatively uncommon in the West Bank. The PCBS survey undertaken for the HSP has the figure of 12.2% of families renting. The figure for the present survey is 16.01%. The mean rent currently paid is $189. (For comparison, the mean amount respondents plan to spend per month on their proposed home is $342; and for those earning less than $900 the mean monthly payment was $181.)



# Part III: the Survey Results

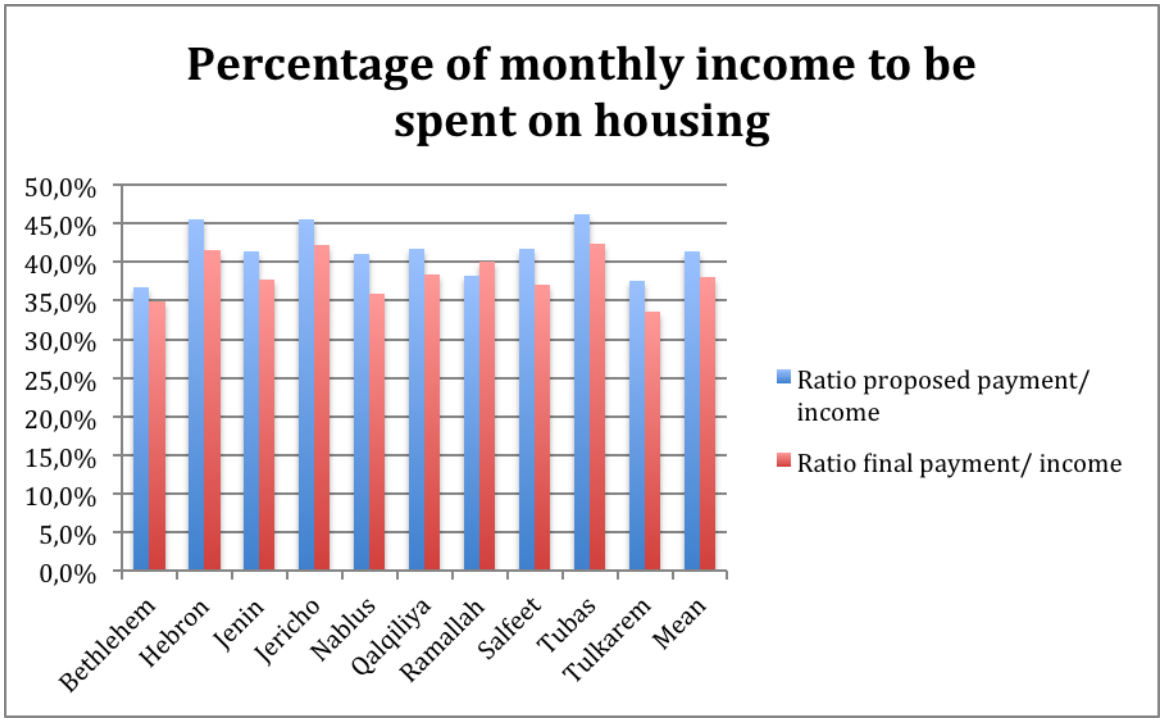
In presenting the results there are many criteria of interest. What percentage of their income are people willing to spend on their housing? How much can they raise for a down payment? What size of dwelling can they afford? How important are finishes and fittings? How many respondents prefer apartments to houses? For those preferring houses, how many have access to land on which to build? How willing are people to build their own houses?

The answers to these questions will help us to answer two crucial questions: First, how uniform are these preferences? Or is it necessary to plan for a wide range of different solutions? Secondly, how well is the market responding to these needs and if not what can be done to rectify the situation?

## 1. Affordability and costs

The term affordability can be used in two senses. The first, used in policy contexts, uses a norm to define it. The usual such norm is 25% of income[8]. This is based on standards prevailing in middle and higher income countries, and cannot be applied to the very poor, for example, for whom the basics of food and transport consume a higher percentage of income than the 75% that the norm allows. Similarly some households can afford more – those with two incomes and small families, for example, have the financial flexibility to spend more on housing.

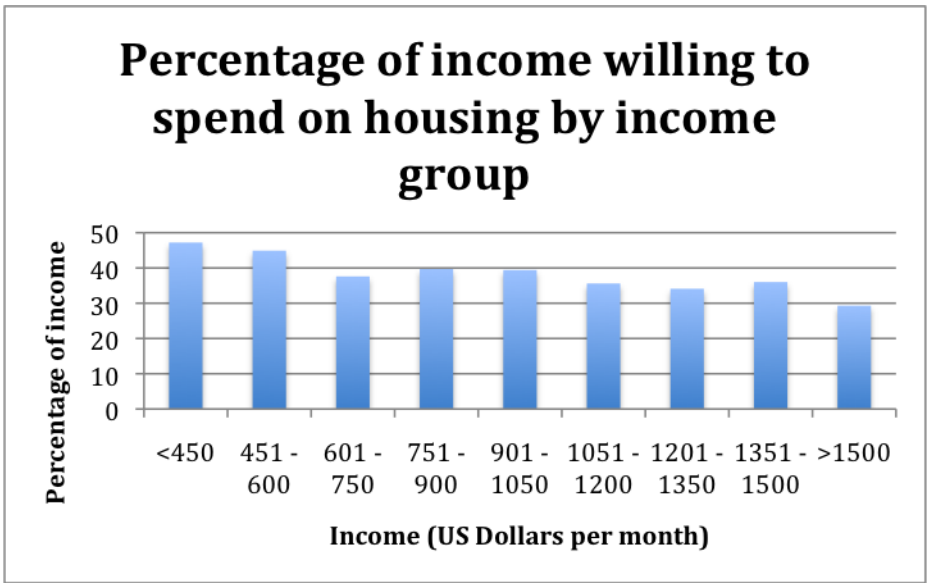
The maximum given to the interviewers in the survey was not based on any prescribed percentage as such, but the amount that the respondent considered an affordable amount. This amount was declared at the beginning of the interview and was thus not based on any physical solution. Knowing that people typically underestimate costs, the interviewers allowed the respondents to rethink their original decision. However, the difference between the amount first stated and the final amount was, unusually, often less than originally quoted. The mean amount stated as the "target expenditure" at the beginning of the interview was 41.3% and the result, once the design had been completed was 37.3%.




The data can be analysed in numerous ways. One hypothesis to be tested is that the mean values hide big discrepancies between the income groups: one would normally expect higher income groups to spend a higher percentage of their income. However the data show that the reverse is

[8] Throughout this report, housing expenditure and affordability refer only to monthly expenditure on the dwelling, either by way of rent or loan repayment. The figure excludes utility costs which are often included as a component of housing affordability. For a full discussion of such norms and the concept of affordability see Annex 6.

true: lower income groups are the ones willing to spend the highest proportion of their incomes on housing. This gives support to the view expressed in the HSP that there is an ideal house to which all Palestinians aspire.




An important factor in affordability is the question of whether a family has the necessary funds to make a down payment.

In order to test assumptions about affordability, the respondents were divided into three affordability classes as defined here:

1. All respondents, some of whom claimed to be able to repay substantially higher than normal percentage of their income in housing.
2. Those, no matter what their income group, who planned to spend less than 30% of their income on housing, and
3. Those who planned to spend less than 30% of their income and whose income was less than $900 (3,150 NIS) per month.

Those who do not have the means to make a down payment, or do not feel ready to commit to purchase for some reason were able to select renting as an option. The results of this question were as follows.

### 1.1 Respondents wishing to rent

Not everyone wishes to buy. They may prefer to rent in their present place of abode, for example to be close to their work; may not have the capital required for a down payment, or have other reasons for taking such a decision.

The model was constructed in such a way that the monthly cost of purchasing a dwelling and renting would both be based on the loan repayment. However, in the case of renting the total cost would be repaid through monthly rental payments, whereas the capital cost *less the down payment of 15 – 20%* would be repaid in the case of purchase. (The assumption is that landlords make their profits in later years, due to the fact that loan repayments stay more or less static, while rents increase in line with inflation.)

As show in the table below, 28% of the total sample preferred to rent, but those in the lower income groups are much more reluctant to rent.

| Affordability class | Number | % |
|---|---|---|
| Under 30% and below $900 | 8 | 12% |
| Under 30% | 44 | 28% |
| All | 158 | 28% |

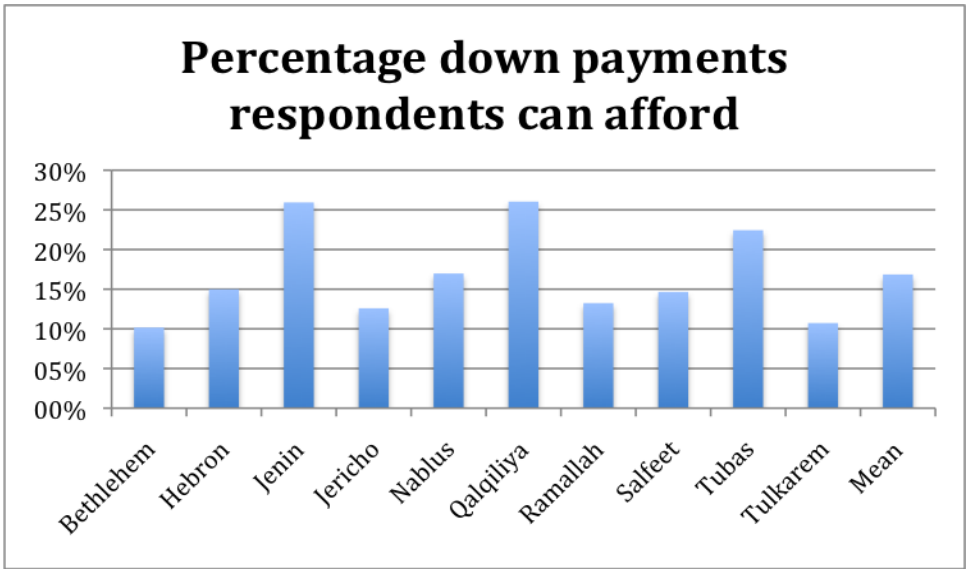
This result is surprising: normally we would expect the lowest income group to be the least able to find the sums required for a down payment.

Equally surprising is the split between those wishing to rent apartments and houses.

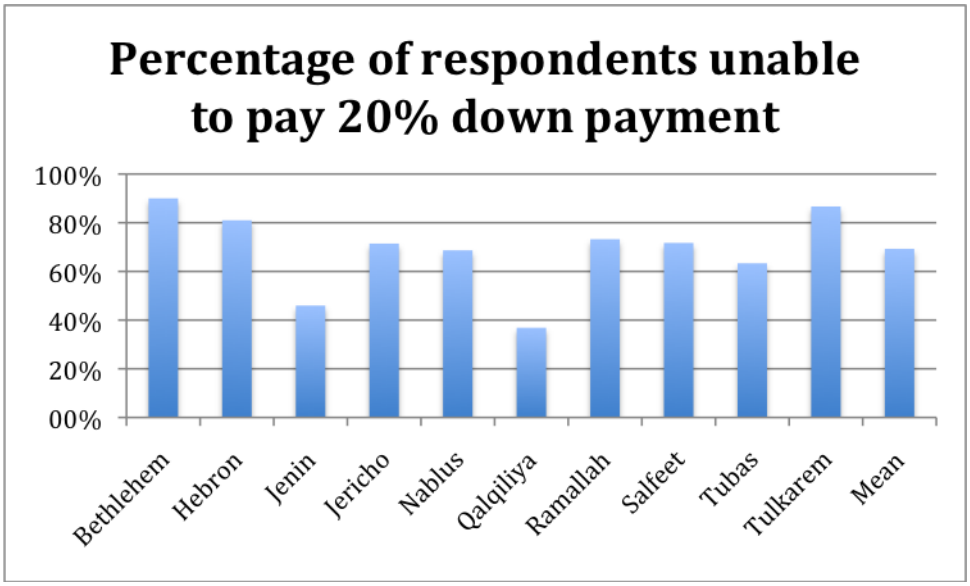
| | |
|---|---|
| Wishing to rent an apartment | 8,33% |
| Wishing to rent a house | 40,45% |

### 1.2 Down Payments

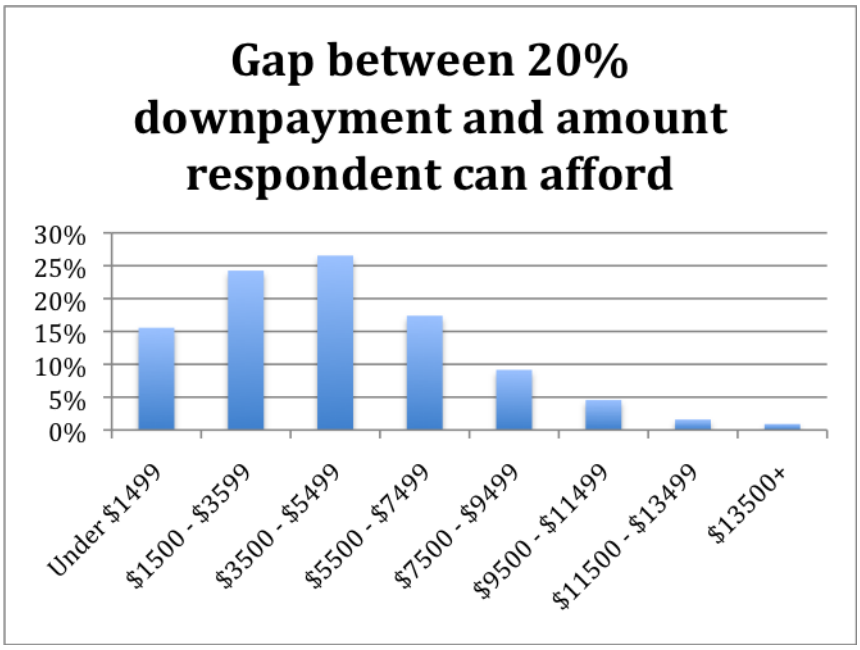
The survey shows that there are many who cannot afford the standard 20% down payment – the mean say they can afford 16.86% of the cost of the unit. 50% could not afford more than $7,000. There are substantial variations regionally, with Jenin, Qalqiliya and Tubas able to afford over 20% while the mean of the remainder is substantially less.



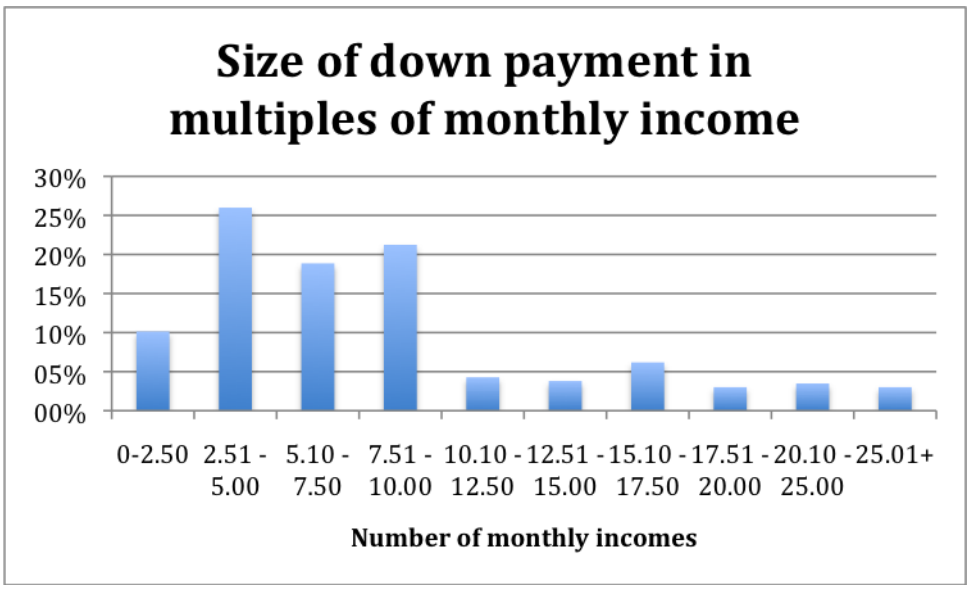

Looking at the picture from the point of view of the number which can afford the 20% down payment required by banks, the situation is even clearer, as shown in the chart below. The mean percentage who cannot afford 20% is 69.3%.



The chart below shows the shortfall facing the respondents below the 20% deposit required in theory. It can be seen that the majority are in the region of $500 - $7500.

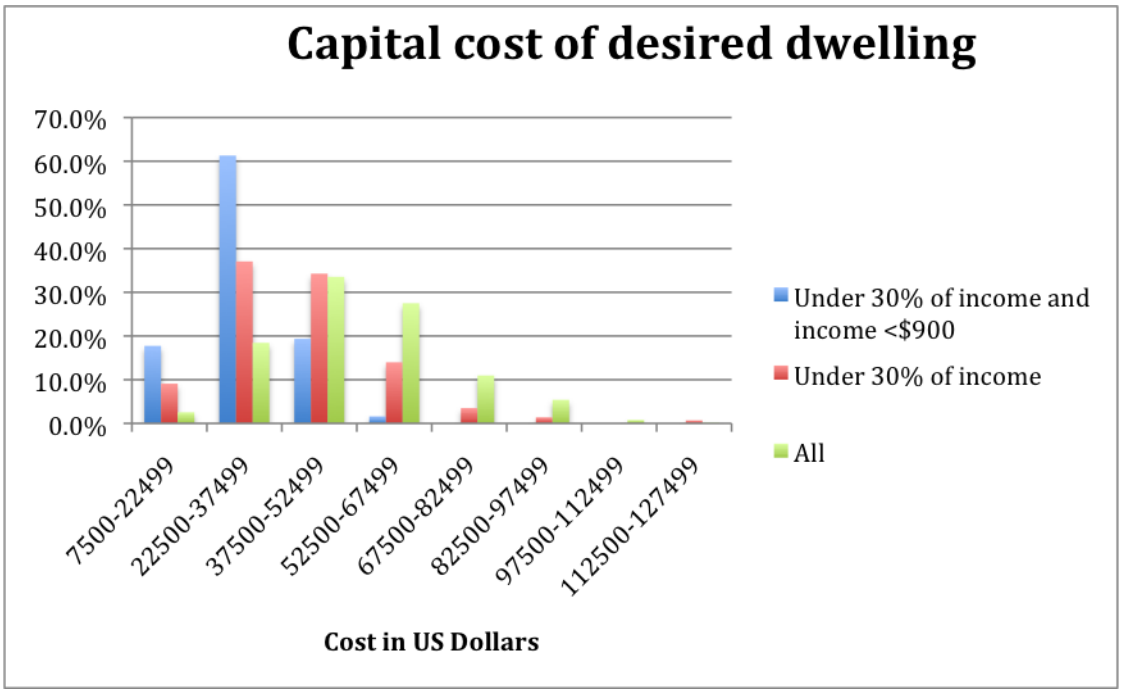



If we consider the down payments from the point of view of target groups, and calculate the value of house that they can afford within their income if they must pay 20%, we get a very different picture from the one to which they aspire. Over one quarter can only afford up to five times their annual income, so if you take a target capital cost of $50,000 (down payment of $10,000), most of those earning less than $1,300 would have trouble finding the funds. For $40,000 (down payment of $8,000) those earning just over $1,000 per month would not have the necessary funds.



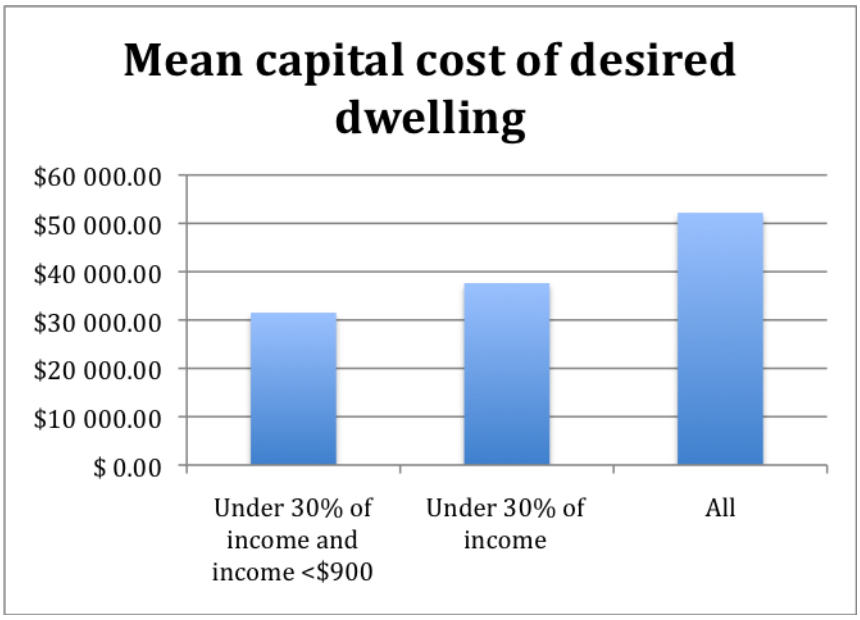

### 1.3 Capital costs of desired dwelling

Even though there are substantial deviations from the mean it is interesting to note that even without the filtering by affordability, the mean cost of the desired dwelling is under $60,000.




The cost of the units[9] varies with the three affordability classes as defined above. This demonstrates that there is a real and substantial demand for units below $40,000.

The mean capital cost of the desired dwelling is shown in the chart below.

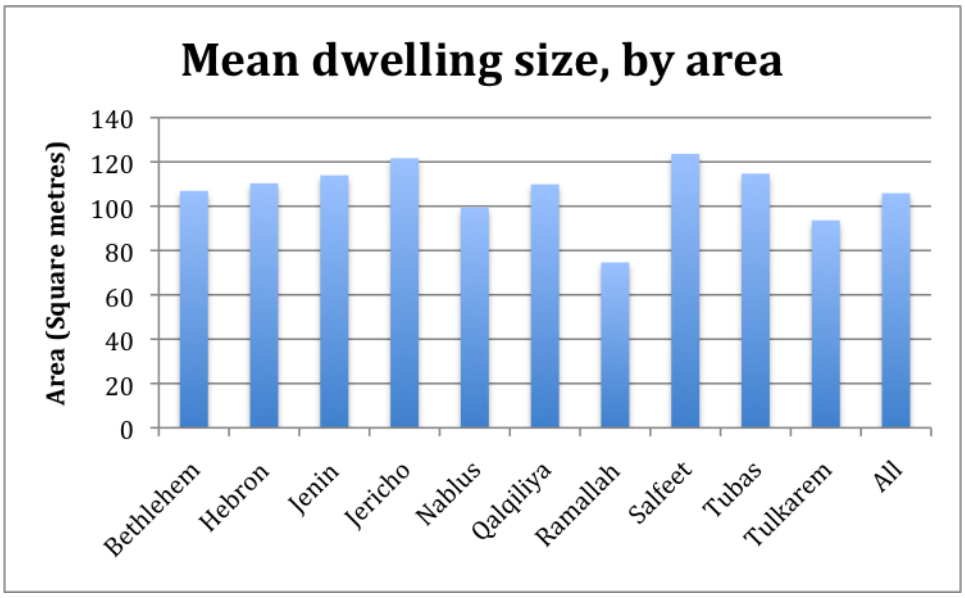



## 2. Dwelling size

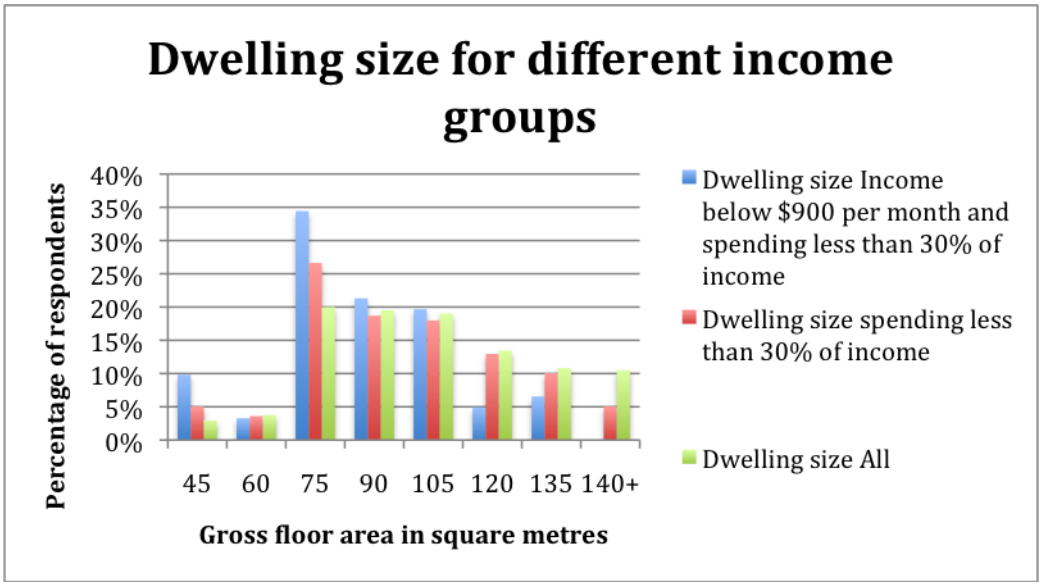
There are two methods of expressing dwelling size: floor area and number of bedrooms. The latter measure is discussed below. This section looks at the floor area.

The chart below shows that there is little difference between the regions covered by the survey, with the exception of Ramallah. The reduced size in Ramallah is probably due to the high land costs in the city which leave less room for building costs.

[9] All costs referred to here are derived from actual construction costs as suppled by a commercial developer, as discussed in paragraph 3.3.3 above.




Before turning to the split between apartments and houses it is useful to establish the overall picture – the size of the units by affordability class, and by area. The mean house size for the sample as a whole is 105.8m$^2$, for those who are spending less than 30% of their income it is 93.3m$^2$, and for those spending less than 30% and a monthly income of under $900 it is 92.7m$^2$. However, these means hide large variations. A fuller picture is given in the chart below which shows the most commonly selected house sizes.

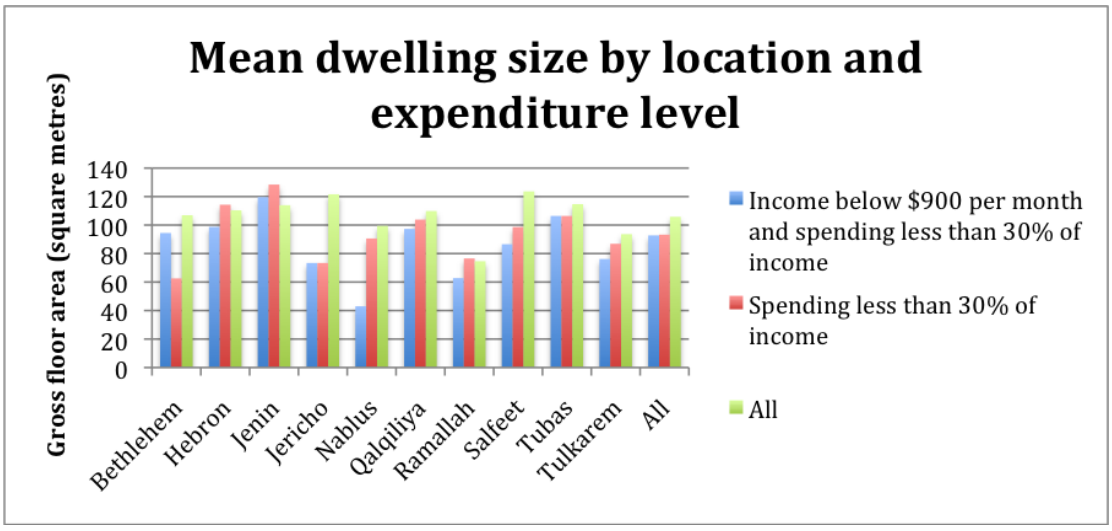



The chart above[10] shows the preference (34.3%) for the 75m$^2$ unit among those earning less than $900 per month, with 9.84% and 3.28% opting for the 45 m$^2$ and 60m$^2$ respectively. As we move up the affordability ladder, to those spending less than 30% of their income without the $900 per month cap, 75m$^2$ remains the most popular at 26.62%, with 90m$^2$ and 105m$^2$ following closely behind at 18.71% and 17.90% respectively. Much the same story is true of the sample as a whole, but with a higher proportion of the larger units.

There are also dramatically different expenditure levels by region. For example in Jenin even the lowest income group (earning less than $900 per month and spending less than 30% per month on housing) achieves a size of 120m$^2$, while in Ramallah the figure is 63m$^2$. Nablus is even lower at 43m$^2$. These figures can partially be explained by the fact that many people in some areas have

[10] The dwelling sizes are rounded to the nearest 15m$^2$

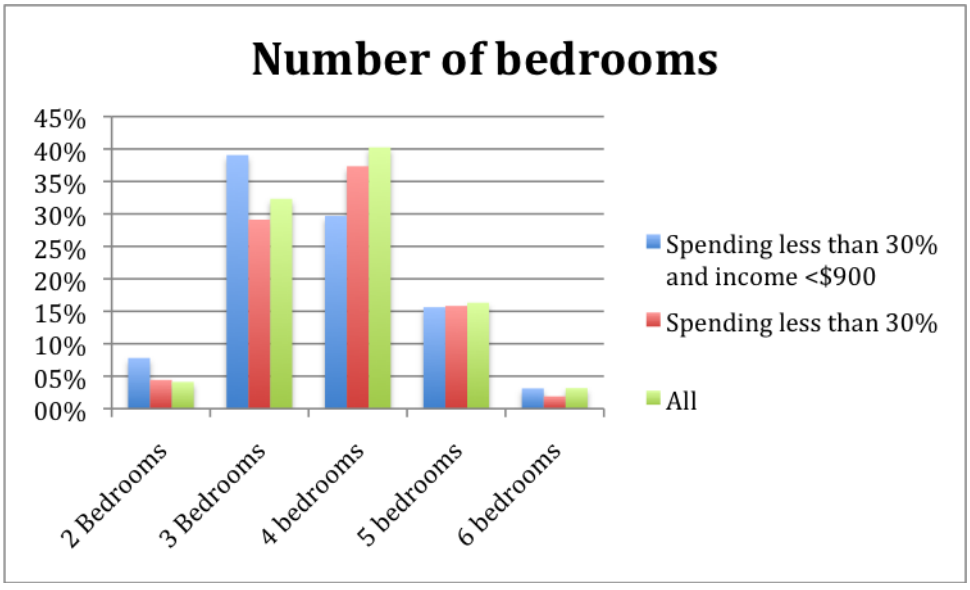
their own land – clearly the saving they make by not having to pay for land increases the funds available for housing.




## 3. Bedrooms and bathrooms

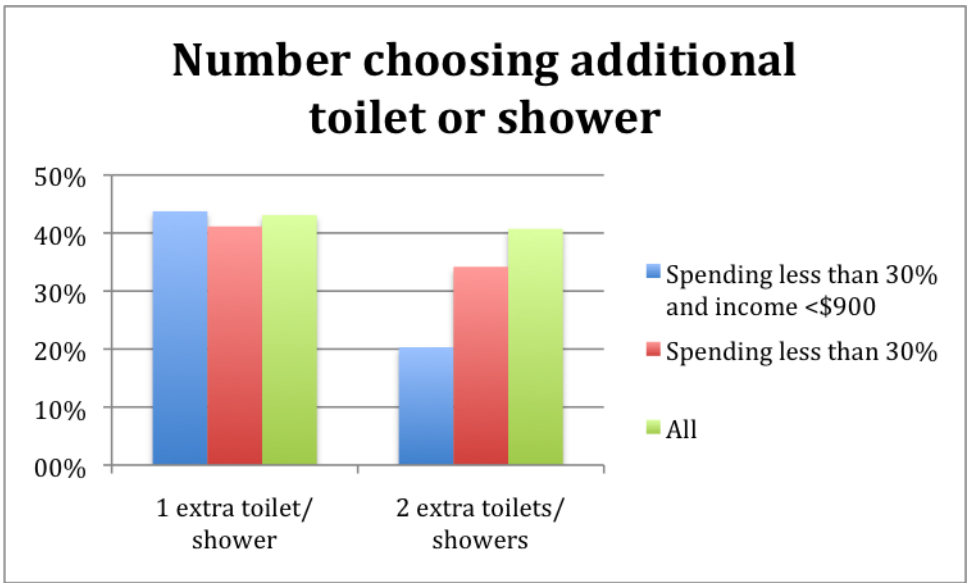
Dwellings are often defined in terms of the number of bedrooms, rather than the floor area. It is, of course, possible to divide space in such a way that it has few large bedrooms or more small ones, so both area and number of bedrooms are of interest.

The chart below shows the results regarding number of bedrooms for the three affordability classes.




It demonstrates the marked preference for three and four bedroom dwellings, and even among the poorer section of the community a significant percentage (15%) opting for five bedrooms. Taking the case of those spending less than 30% of their income and with income below $900, the largest group is the three bedroom unit, whereas for the higher income groups, four bedrooms is the most common choice.

Turning to bathrooms, the questionnaire gave respondents different sizes of bathroom – that is literally a room with a bath, wash hand basin and WC – and the option of additional rooms for toilet or shower. The mean number of basic bathrooms of 2m x 2m per dwelling was 1.5. However, many wished to have additional facilities. The number selecting an additional toilet or shower is quite substantial, as shown in the chart below.




## 4. Apartment or House?

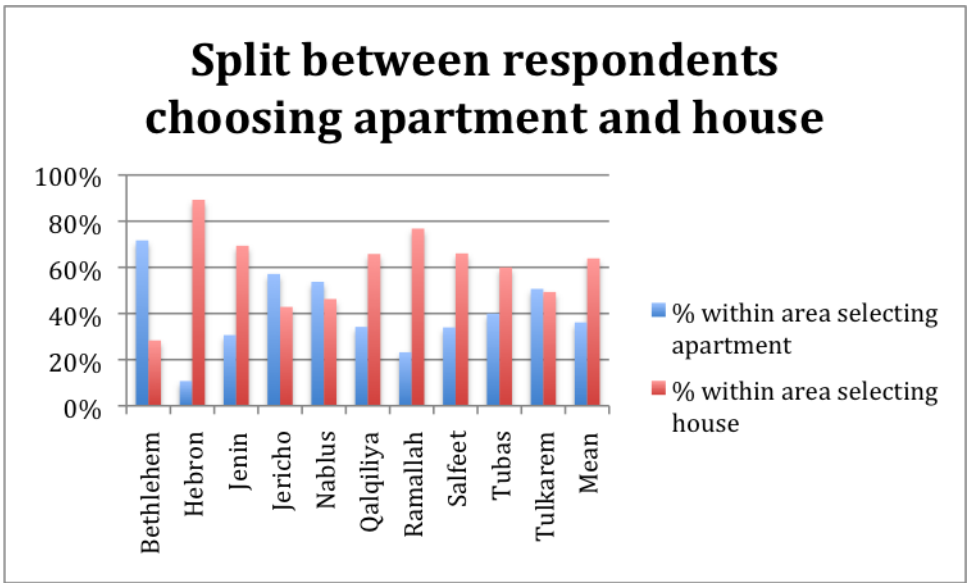
Respondents were asked whether they would prefer to live in an apartment or a house. The former would be, by definition, in a central location where land values were high.

The overall pictures is as follows:

Preferences for dwelling types

| | Apartment | House |
|---|---|---|
| Percentage choosing | 36.13% | 63.86% |
| Mean cost of unit selected (US$) | 42,376 | 57,736 |
| Area (Sq m) | 95 | 112 |

However, there are important regional differences as shown in the chart below.




This shows the strong preference for apartments in Bethlehem, the relative evenness of the choice in Jericho, Nablus and Tulkarem, and the overwhelming preference for houses in Hebron (89%).

What is perhaps surprising is the big ratio in favour of housing in Ramallah (77%) and more than 60% preferring housing in Jenin (69%), Qalqiliya (66%), and Salfeet (66%) and Tubas (60%).

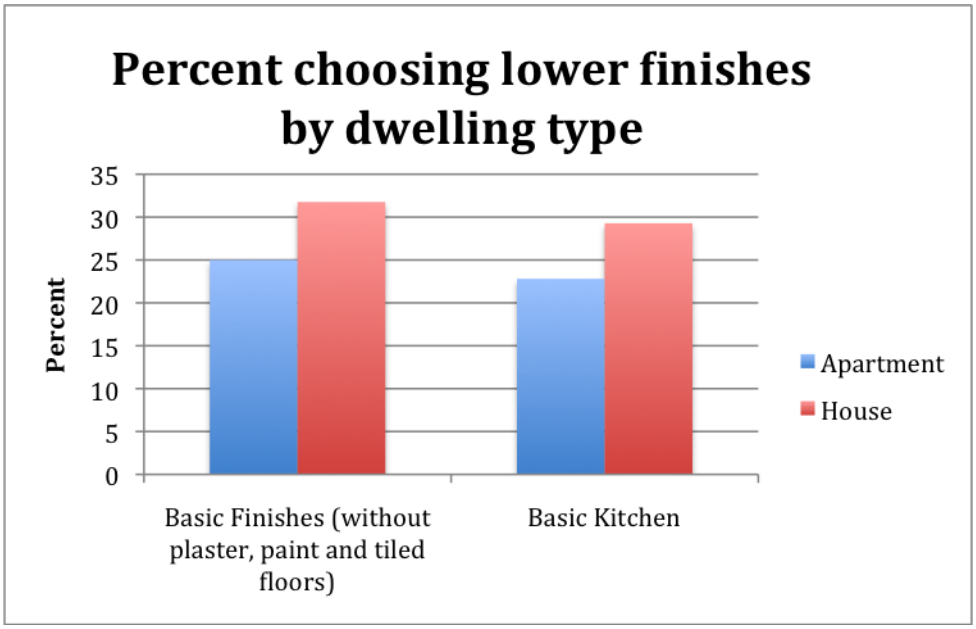
There are several advantages for those selecting housing, one of which is the relative ease with which the unit may be expanded over time and the finishes and fittings improved.

While it is not practical to expand an apartment, the questionnaire offered respondents the possibility of opting for lower standards of finishes and fittings. Specifically these were a basic kitchen – i.e. one with a sink and worktop but without fittings, cupboards and drawers; and a unit that was not fully finished in that it did not have plastered walls or tiled floors. The floors would be smooth concrete screed (technically known as granolithic) – a perfectly workable surface but one that looks less attractive than tiles. (Note: there are coloured screeds that could be used at only slightly higher cost than the grey concrete of the basic granolithic – see photo).

*Coloured screed – a much cheaper alternative to tiles*

With the above points in mind we can examine the options selected by the "apartment" group and "house" group.

In the chart below, the percentage of the group (apartment or housing) opting for lower finishes is shown. This shows that a lower percentage of the apartment group opt for lower basic finishes than does the house group.




As noted above, the apartments are smaller on average than the houses. Does this difference in area equate to fewer rooms, or are the rooms in apartments smaller?

The table below provides this information.

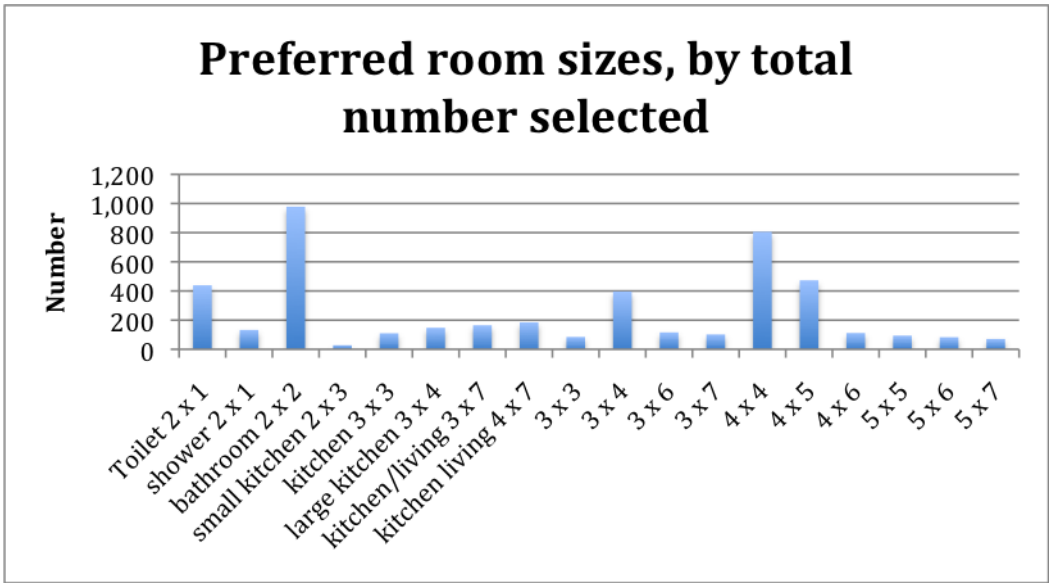
**Mean number of rooms selected**

| | All rooms | Habitable rooms | % of mean "house" area | % of "house" number of rooms | % of "house" number of habitable rooms |
|---|---|---|---|---|---|
| Apartment | 7.1 | 4.9 | 84.57% | 93.43% | 96.47% |
| House | 7.6 | 5.1 | | | |

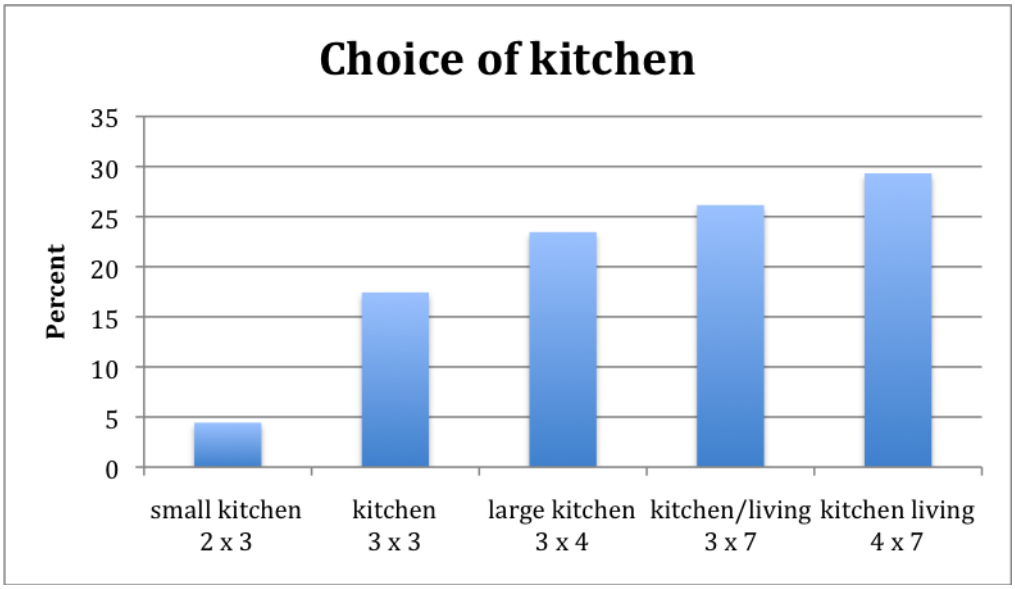
Thus though the mean size of apartments is about 16% smaller than houses, the number of habitable rooms is only about 3.5% less. This suggests that the respondents are selecting roughly the same number of rooms, but making them smaller.

Looking at the number of rooms, the size and type of room selected showed large variations, though one room size is overwhelmingly popular – 4m x 4m, alongside the standard bathroom.

The chart below shows the distribution of preferred room sizes.



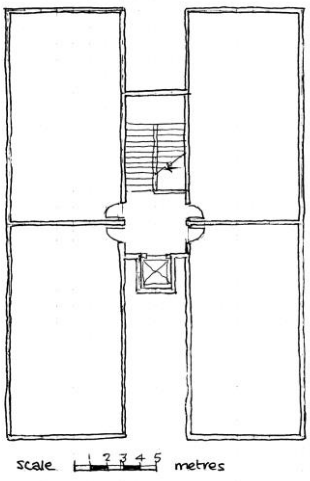

Kitchens are always an important factor in house design. The preferences are interesting – there was a tendency to prefer a generously proportioned open-plan combined kitchen and living room as shown in the chart below.

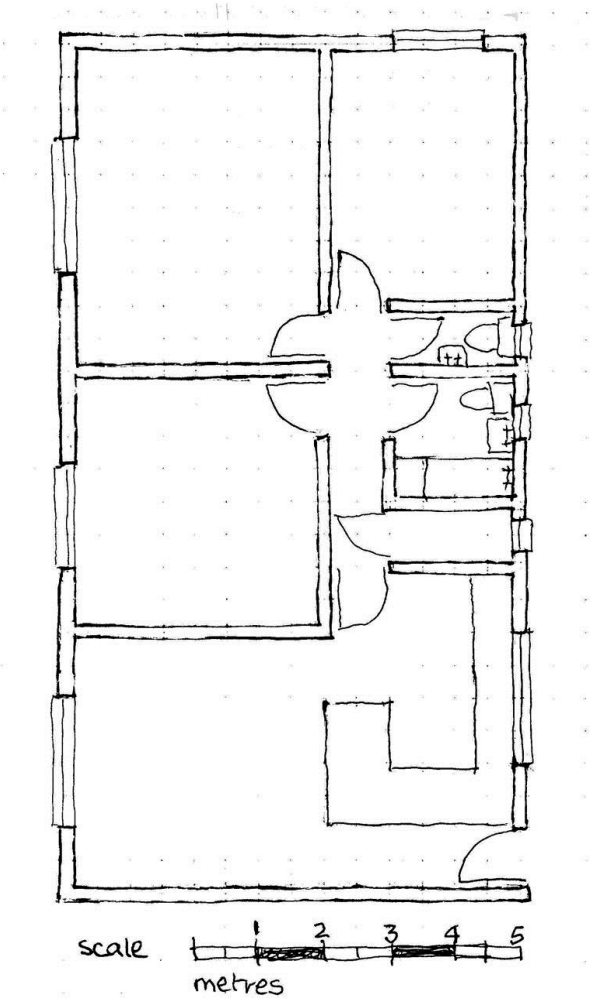



Using the options selected most frequently, it has been possible to construct a typical unit, which is as follows.

**Typical Dwelling Design**

| Room type | Size (m) | Area ($m^2$) |
|---|---|---|
| Toilet | 2 x 1 | 2 |
| Bathroom | 2 x 2 | 4 |
| Kichen/Living room | 4 x 7 | 28 |
| Bedroom | 3 x 4 | 12 |
| Bedroom | 4 x 4 | 16 |
| Bedroom | 4 x 5 | 20 |
| Circulation, storage | | 13 |
| | Total | 95 |




*Right: a possible layout for the typical dwelling*
*Left: how such units would be linked if in an apartment block*

It should be stressed that the above was derived by using the room sizes that occurred with the greatest frequency (the median). An alternative, and almost equally valid choice, could be three 4m x 4m bedrooms instead of the three bedroom types selected above.

## 5. Houses

400 out of the 631 (63.86%) respondents selected the “house” option. This gave respondents the option to build anywhere, and in some cases people had their own land on which to build. This was clearly a cost saving. Because there are so many variables in the case of housing this section is devoted solely to the housing design choices.

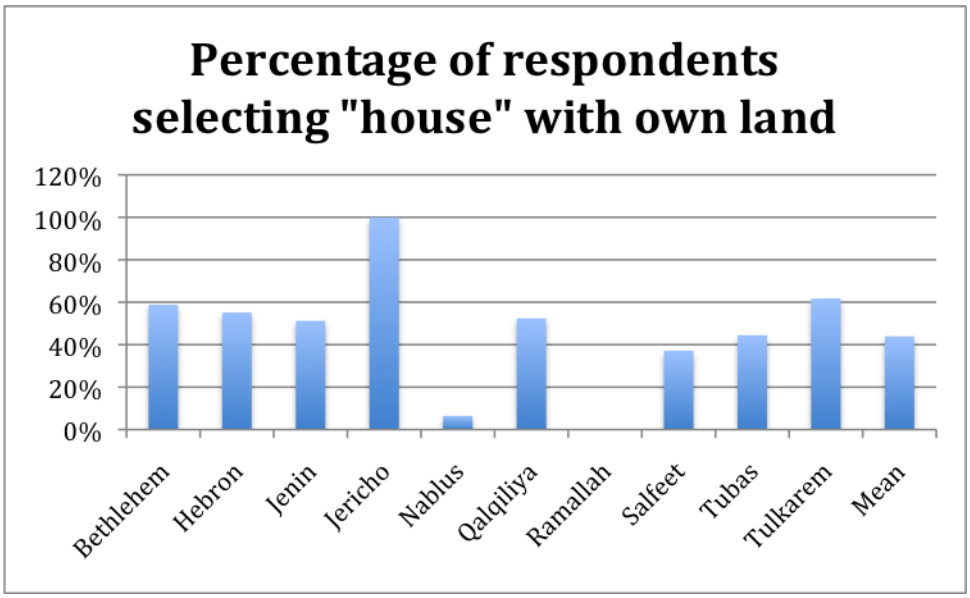
Analysis of housing choices is more complex than it is for apartments.

Firstly there is the question of land. A surprisingly high percentage of respondents (41.75%) claimed that they already had land on which to build. The breakdown was as follows:

| Category | Total in sample | Number with own land* | Percentage of column (2) |
|---|---|---|---|
| All | 631 | 170 | 26.9% |
| Those spending less than 30% of income | 158 | 41 | 25.9% |
| Those spending less than 30% and earning less than $900 p.m. | 64 | 14 | 21.9% |

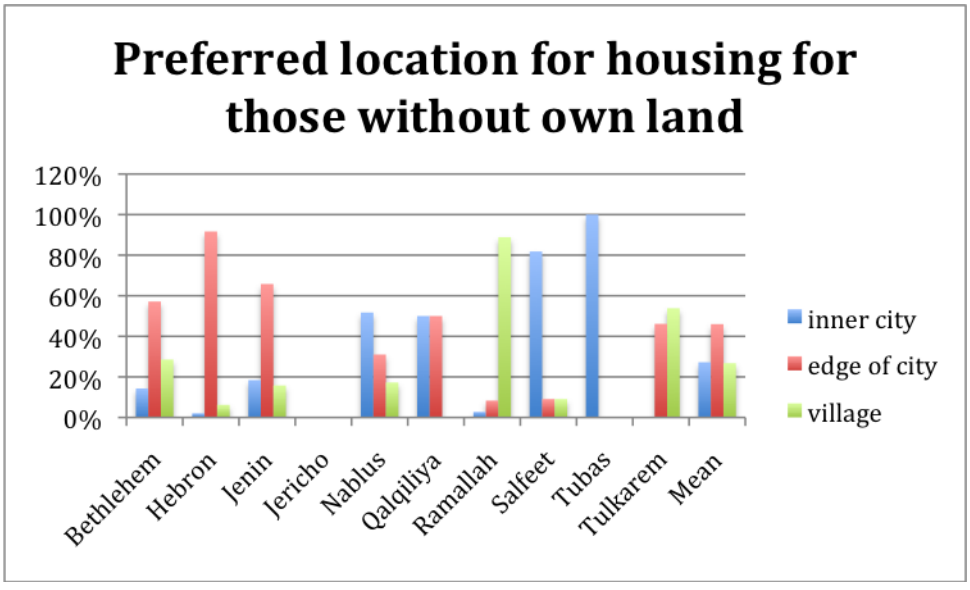
*This figure include three respondents who opted for an apartment

The regional distribution of these is shown on the chart below. This shows that distribution of land varies very widely, with Hebron and Jenin being the areas with the preponderance of available land.



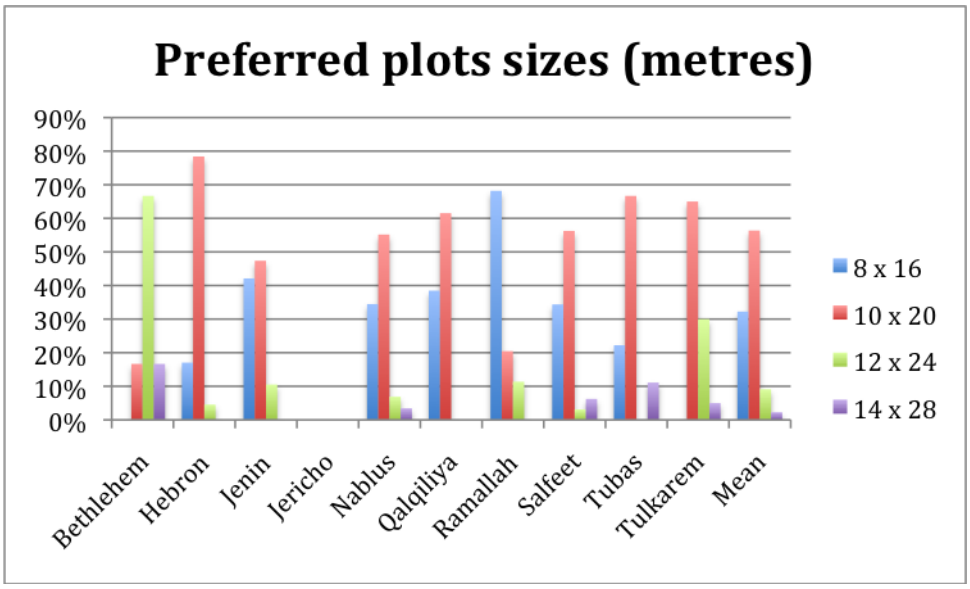

Those without land were asked to select the type of location they would prefer. Linked to this was land price, so the decision was not simply one of location.

The choices were inner city, edge of city or village. Respondents were made aware of the land prices, so could make an informed choice between the trade-off of land price and transport costs. The results of this were as follows:



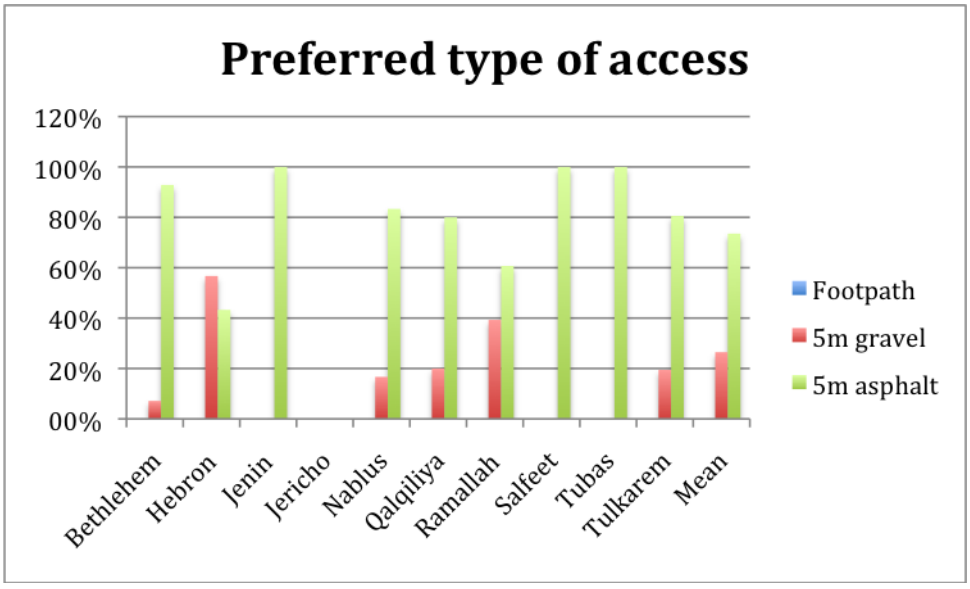
The case of Ramallah is interesting. The response is probably conditioned by the fact that land is so expensive in the town that buying a plot, even near the edge of the city, is so expensive that it would leave little money to build a house.

The second question that those selecting houses were asked concerned the size of the plot and access that they required. In order to help them assess the plot sizes, scale models of the land of the appropriate size were shown to the respondents, at the same scale as the house that they had selected. This allowed them to appreciate the amount of space available as private open space on the plot.



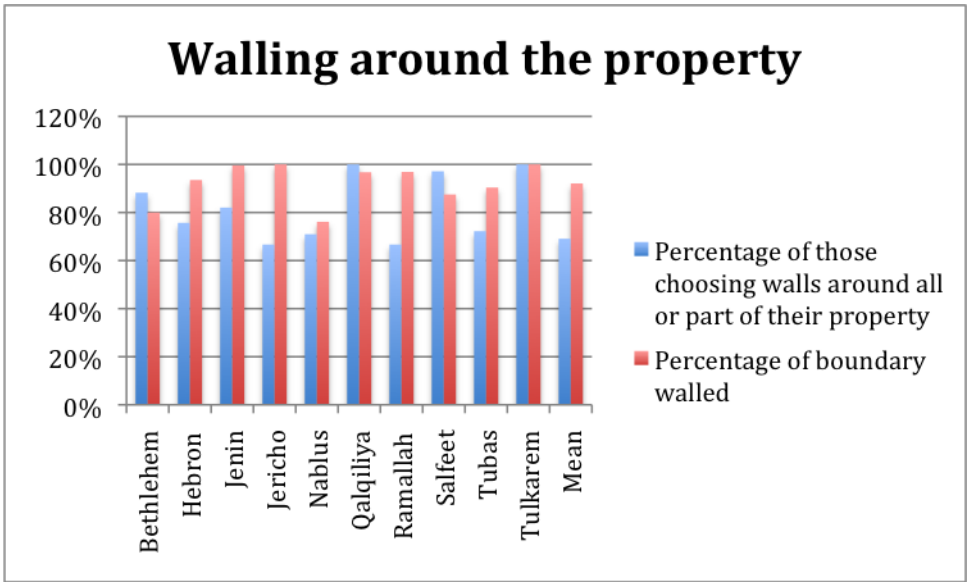

There are striking differences between regions. Ramallah showed a striking preference for the smallest plots of 8m x 16m, presumably due to the land costs. Jenin, Qalqiliya Nablus and Salfeet also had an important minority selecting this size, which was selected by 32.5% of the respondents. However, by far the most common choice was 10m x 20m, chosen by 56.35%.

Concerning road access there was no interest in reducing costs by having only a footpath access. Instead people opted for a 5m road, with a large majority (89%) preferring that it be asphalted, even though asphalting added to the cost.



The last option that house-builders were given was to construct walls around their property. They could select front, sides and back or any combination that they wished. Few did not select walls all round, though in Bethlehem 24% chose front walls only, the remainder choosing walls all round; similarly in Nablus the figure was 23% choosing the front wall only option. In Qalqiliya and Tubas there were also a few who made this choice, while in Hebron 18% chose to have the walls at the sides and the back, but not the front. Overall, however, there was a preference for walling all around, and the mean was that 92% of the boundary was walled.

The chart below presents the results by region.

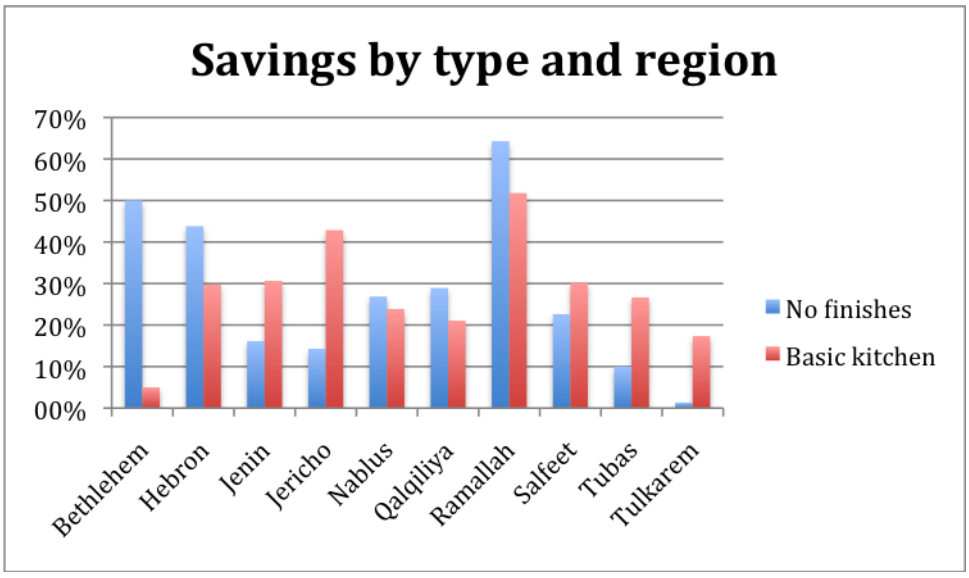



## 6. Reducing costs by having a lower standard of finishings and fittings

In addition to reducing the floor area, the other method of cost saving offered to the respondents as a quick and easy solution was to lower the standard of finishes and fittings. Substantial sums can be spent on kitchen fittings, and the standard kitchen offered in the model included fittings of about $4,200. Some of the apartments that are currently on the market have fittings worth about $7,000, so this figure is considered conservative.

273 respondents (43.26%) chose to make savings by reducing the standard of kitchen and omitting finishes. 13.00% chose both types of saving and 56.74% chose not to make any saving in this way. The table shows the results for the sample as a whole, while the chart below shows the percentage of respondents, by region, for both housing types who chose to save money by using either method.

| | Lower finishes | Basic kitchen |
|---|---|---|
| Apartment | 25.00% | 22.81% |
| House | 31.76% | 29.28% |



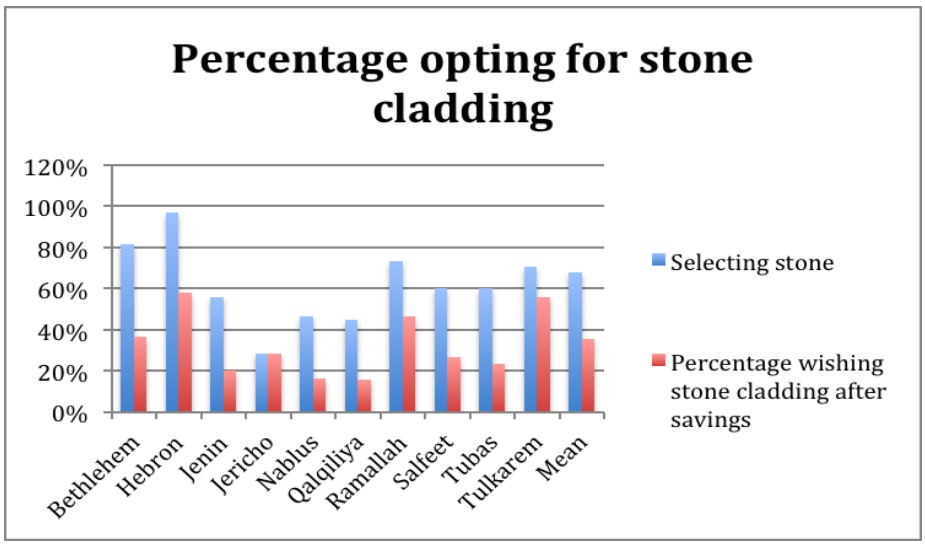

## 7. Stone cladding

It is a requirement in some parts of the West Bank for buildings to be clad in stone. This adds to the cost, and respondents were asked (a) whether they would like stone cladding on their dwelling, and, at a later stage when they came to evaluate whether they needed to make saving to keep within their affordability, they were asked (b) whether they would like to save by omitting the stone cladding. The amount to be saved varied: for apartments it was less because they have a smaller area of external wall. The mean amount was $2,267, but in the case of large houses it could come to over $7,000.

A total of 429 respondents (68%) said they would like stone, however when it came to the chance to save by omitting it, 47% of those initially preferring stone cladding chose to do so, leaving 225 respondents (36%) wishing to have stone cladding. The table below summarizes the data.

| Initially selecting stone cladding | Omitting stone cladding to make cost saving | Final number of those selecting stone cladding | Number of those not wishing to have stone cladding |
|---|---|---|---|
| 429 | 204 | 225 | 406 |
| 68% of total | 47% of those in column 1 | 36% of total | 64% of total |

The chart below shows the breakdown of these preferences by region.



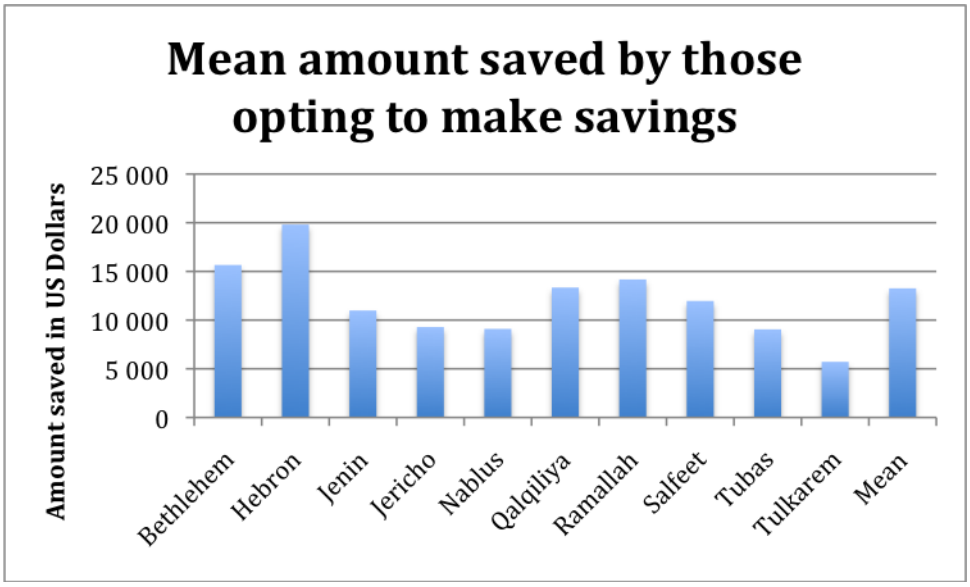
## 8. Total savings made

The table below gives an indication of the scale of the savings that respondents were willing to make to obtain a solution within their means. These savings included simpler kitchens, omitting finishes, exterior stone, and increasing the down payment thereby reducing monthly payments. (In practice the number able to increase the down payment and the amounts concerned were so small as to be negligible.)

403 respondents (64%) made savings of one type or another with the savings as follows:

| | Mean cost before savings | Mean cost after savings | Mean saving | Percentage saved |
|---|---|---|---|---|
| Total sample | $58,720 | $50,251 | $8,469 | 14.42% |
| Respondents who made savings | $61,573 | $48,314 | $13,259 | 21.5% |

However, the mean hides substantial variations. The chart below shows the amounts saved by those opting to do so by region.




## 8. Length of stay

One question posed difficulties for many respondents. It was:

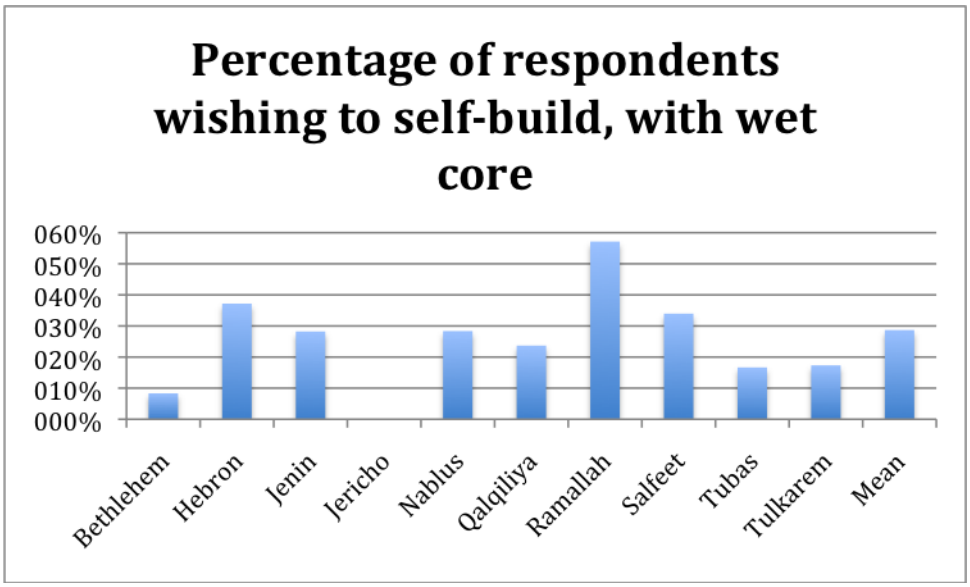
*Q: How long do you intend to stay in your new house?*
*A: Always?*
*A: If not always, how long? (enter number of years)*

Most interviewers left the response blank: this probably reflected their lack of understanding of the concept of a house as a commodity which could be bought and sold – there was no response in 84% of the cases. In Ramallah there was 100% response for “Always”, but otherwise there were very few such responses (seven at Nablus and one at Hebron).

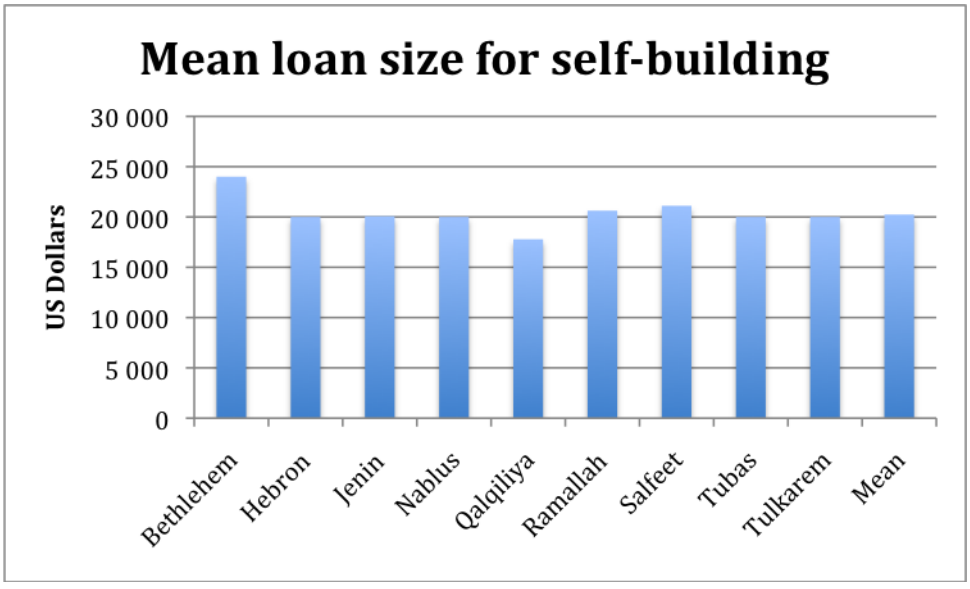
Of the 39 respondents who stated they would not stay in the house for ever, 12 said they wanted to stay in the house for 6 – 10 years, and one for 11 – 15 years: most of the rest stated that they were planning to sell after one, two or three years, suggesting a speculative motive, which was not, of course, the idea of the survey. The mean period for these 39 respondents was 5.2 years. There was little difference between the responses of apartment dwellers and house dwellers.

## 9. Self Build

The questionnaire included a section to be completed by those who chose a house, but did not wish to have it built by a contractor. Instead they could take a loan for building materials and construct a unit using their own or family labour, or a contractor employed directly by them. This is a popular solution in many parts of the world. In order to kick-start the process, the serviced plot can be provided with the basic sanitary and cooking facilities so that the family may move onto the plot without having to wait for the new house to be completed. This solution turned out to be quite popular, as shown in the chart below.




Respondents who proposed to self build were asked what size of loan they would require. The response was almost unanimous – an optimistic $20,000. This response is not untypical: all too often people assume that building materials are cheaper than they really are, and that family labour will be available for all the work. However, even if we accept that the true figure might be much higher, this finding is an important indicator of the willingness and interest in self-building.




The questionnaire was constructed in such a way that respondents could first design the house they wanted within their means. Only at the end was the alternative presented to them of self build. In processing the results, for completeness, the preferred design and affordable costs have been included for all respondents, irrespective of whether they subsequently chose self build or not.

# Part IV: Findings and Recommendations

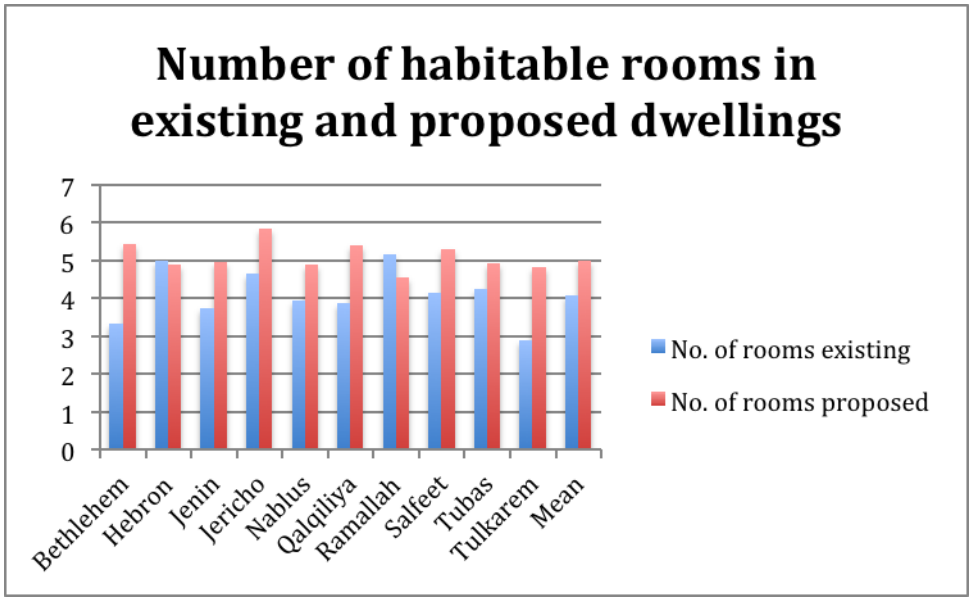
## Findings

The volume of material generated by this survey is such that brief summaries of the findings cannot do it justice. However, some points stand out with great clarity.

### 1. The aspirations of the respondents in terms of their house size.

The mean size of the new dwelling is 106m$^2$. The most popular house size was 75m$^2$, with 90m$^2$ and 105m$^2$ close behind. However, when we look at the mean sizes, there is remarkably little difference between the income groups. The mean dwelling size for the low income group (earning less than $900 per month) spending less than 30% of their income is 92.7m$^2$, for those in all income groups paying less than 30% of their income, 93.3m$^2$ and for the sample as a whole it is 105.8m$^2$.

This may be compared to the mean in the West Bank as a whole of 134m$^2$, but as the chart below shows in terms of the number of rooms, the new solutions are an improvement over their existing dwelling. It also shows an increase of about 10 m$^2$ over their existing dwelling (though this calculation is slightly speculative due to the difficulty of precise calculation of existing house size – as explained above).




It is important to note that a substantial proportion (34.3%) of the respondents with an income of under $900 per month preferred the 75m$^2$ unit, with 9.84% and 3.28% opting for the 45 m$^2$ and 60m$^2$ respectively, thus making a total of 47.42% opting for a unit of under 75m$^2$. As we move up the affordability ladder, to those spending less than 30% of their income without the $900 per month cap, 75m$^2$ remains the most popular at 26.62%, with 90m$^2$ and 105m$^2$ following closely behind at 18.71% and 17.90% respectively. These figures show that current supply does not match the needs of the income groups concerned.

However, turning to the sample as a whole (but excluding those who are currently sharing their dwelling) the question must be asked as to whether the decision to invest so much makes sense from the point of view of family finances. They are putting their capital into the project (the down payment) and committing to a loan of 20 years in most cases for what is a modest improvement in space standards. Moreover, many have adopted a solution that defers expenditure on fittings and finishings, so their total commitment over time will be even greater.

The explanation must lie in the concept of the house as a life-time investment for the family and their descendants rather than as either a space in which to conduct the families' daily lives or a tradable investment. This is borne out by the relative lack of difference between the space requirements of the different income groups in the survey. Whereas the higher income groups can afford a fully finished unit, the lower groups cope with the affordability gap by stretching their family

expenses to the limit (for example, by spending more than 40% of their income on housing) or drastically reducing the standards of the finishes and fittings, choosing an area where land prices are low or a combination of all three. So whereas in the world of global housing policy, affordability is presumed to demand substantially smaller units for lower income groups, this effect is not marked in the case of the West Bank[11].

## 2. Affordability

The degree to which people are prepared to stretch their personal finances to achieve their dream is remarkable. Even if we doubt whether their plans are achievable in practice, it is important to note the degree of motivation that exists in this respect.

A substantial proportion of families state that they are willing to spend more than 30% of their income on housing – in some cases over 50%. Whether this is realistic cannot be clarified without in-depth discussions with the respondents concerning the true extent of their disposable income. The situation is complicated by the fact that relatively few (16.01%) of the respondent families are renting. Their current expenditure on housing is therefore negligible, so to switch from almost nothing to 50% of their income might be unrealistic.

## 3. Capital cost

The mean cost of dwellings is $52,185. For those spending less than 30% of their income it was $37,642, while for the low income group (less than 3,150 NIS ($900) per month) spending less than 30% of their income it was $31,521.

## 4. Difficulty of finding 20% down payment

The 20% down payment typically demanded by banks is too much for most households – almost 70% cannot find this amount.

## 5. Renting

22% of the sample chose to rent rather than buy. This is almost certainly because the households concerned do not have the funds required for a down payment.

## 6. Availability of land

203 respondents (32.2%) own land, and would prefer to build on that land. The question to be posed, but to which the answer cannot be found in this survey, is whether there are any obstacles to them doing so – such as obtaining long-term finance, obtaining building approval, etc.

## 7. Regional differences

There are important differences between different areas of the West Bank. For example, the percentage of income that people are willing to spend on housing is significantly lower in Bethlehem than elsewhere. Preferences for apartments are highest in Bethlehem, Jericho, Nablus and Tulkarem: elsewhere the majority would prefer to live in a house. The most marked preference for housing is in Hebron, where only 10% prefer to live in apartments.

## 8. Stone cladding

Stone cladding is a popular choice – selected by 68% of the respondents. However, when given the choice of saving money by omitting the stone, almost 50% changed their mind.

## 9. Self build

29% of the respondents wish to construct their own house, using a loan to buy materials, but with a wet core already built on the plot.

[11] It should be noted that for the 25% of those earning less than $900 per month who are renting, the monthly payments are very similar to the rent being paid. The above argument therefore fails for people in this category.

# Recommendations

## 1. Choice

The survey has shown that there is considerable diversity among the population as regards the type of housing they prefer, the cost, the size, the type of finish and suchlike. In addition there is a demand for both rental and house purchase options.

There is a significant percentage of the population that prefers to rent, whether because they do not have the capital to build, or for other reasons. As recommended in the Housing Policy (p.7) there is therefore a need to update the regulations regarding rental to make it equitable for both parties.

Houses – as opposed to apartments – are preferred by more than 60% of the respondents. Large scale housing programmes have implications for land use in that they tend to be at lower densities than apartments. Annex 5 looks at the effect of housing on densities in more detail.

An important finding of the study is the number of families who wish to manage their own house building programme (what the study calls self-build). The advantages of this system are many: the opportunity to have a tailor-made design; to save costs through the use of family labour; to build at one's own pace; to expand when necessary, etc. Mechanisms need to be found to give loans for such builders without onerous down-payment conditions.

## 2. Affordability

Annex 7 contains scatter graphs concerning cost, house size and income. From these it can be seen that in spite of a general trend for those with higher incomes to have larger units, there is very substantial deviation from the norm and that there are considerable differences in what people think they can afford. But even if we do not discount the more optimistic estimates there is a considerable demand for units costing less than $40,000. In addition the survey has demonstrated that there is a strong demand for housing in the range of $40,000 - $70,000, the market segment in which developers have traditionally been reluctant to enter.

A point of concern here is that most respondents do not have access to sufficient cash to make a down payment of 20%, even for low cost units. It is therefore important, as stressed in the Housing Policy (p7) to explore the options concerning rent to buy as a means of accumulating sufficient security for the lender.

## 3. Agency

In very many jurisdictions, it is considered the duty of the state to provide housing solutions for low income families. This is often translated into publicly managed housing which suffers from poor maintenance and of which the supply is insufficient to meet demand. Rents are often below sustainable levels, resulting in long-term deficits.

Given the scale of the problem, it is not considered either appropriate or economically feasible for the Palestinian Authority to attempt such programmes. There may, however be scope for a hybrid model in which the state, or one of its agencies, services land on which private developers or individuals develop houses. The buyers (whether individual or corporate) would buy the plots. In the case of individuals they would use long-term finance to buy the plots, while developers would finance the deal with bridging finance and subsequently sell completed units. Either way the state would recover the costs within a few months of completing the development.

## 4. Building and land use standards

Certain aspects of these recommendations do not fall within the requirements of existing building and land use regulations, for example the minimum plot size, which is currently 350$m^2$ in most cases. Similarly, permitting incremental house construction may require more flexible application of the regulations than is currently permitted. It is therefore important that a review be undertaken to determine the extent to which current legislation and regulations make certain types of development impracticable or unaffordable for the poor.

## 5. Scale of programme

### 4.1 Distribution of income groups

The AMAL study divided the population into affordable housing groups. Though there may be room to make alternative calculations, it provides a sufficiently well reasoned basis for estimating the

demand by different income groups. It also coincides sufficiently well with the findings of the present study to allow us to use it as a basis for estimating the demand by income groups. For convenience their table is reproduced here.

| Monthly household income (NIS) | Percentage of households in West Bank | Maximum affordable housing (USD)* |
|---|---|---|
| <1,500 | 18% | <26,700 |
| 1,500 – 1,999 | 17% | 26,700 |
| 2,000 – 2,499 | 14% | 33,000 |
| 2,500 – 2,999 | 13% | 40,000 |
| 3,000 – 3,499 | 11% | 47,000 |
| 3,500 – 3,999 | 5% | 53,000 |
| 4,000 – 4,499 | 4% | 60,000 |
| 4,500 – 4,999 | 4% | 67,000 |
| >5,000 | 13% | >67,000 |

## 4.2 Total housing demand

As noted in the background section of this report there are many different estimates of housing demand.

The Housing Sector Profile quoted above refers to many different estimates of demand and supply.

In its *Strategic Plan for Developing the Housing Sector in Palestine, p13* (2010) the MoPWH assumes a total deficit in Palestine of almost 294,000 housing units until 2019, based on the then current demographic trends and forecasts. Their estimate is contained in the Table below.

| Indicator | Number (Units) |
|---|---|
| Total needed residential units in Palestinian territories until 2010 | 132,759 |
| Deficit in residential units until 2010 in West Bank | 24,048 |
| Deficit in residential units until 2010 in Gaza | 33,255 |
| Residential units needed for replacement and reserve in Palestinian territories | 74,456 |
| Residential units needed for replacement and reserve in West Bank | 50,437 |
| Residential units needed for replacement and reserve in Gaza | 25,019 |
| Total deficit until 2019 | 293,995 |
| Number of produced residential units with building permits | 5,700 |
| Annual deficit in residential units in the next ten years | 29,400 |

The Housing Sector Profile (at p 24) uses this table as a starting point for demand estimates. However, it must be noted that (a) the figures cover Gaza and the West Bank, (b) there is no clear definition of what is required and why, in the category of “replacement and reserve”. There can be little doubt that the figure of 29,400 units per year is extremely high and is probably unrealistic in terms of effective demand. In effectively questioning these figures, the HSP quotes developers estimates of gross demand of 15,000 units per annum and effective demand at about 5,000 units.

For practical purposes it is much more useful to look at the demand derived only from natural growth rates: this provides a relatively reliable minimum figure. With the number of households in the West Bank at 427,533, and the annual growth rate at 2.6% natural growth of additional households is 11,116 in year one, climbing to 13,650 in 2019. From this table it can be seen that

the annual demand in the West Bank in 2015 is 12,318 units, and this figure is used in the calculations below.

**Minimum annual housing demand, West Bank**

| Year | Additional units required, by year |
|---|---|
| 2010 | |
| 2011 | 11,116 |
| 2012 | 11,405 |
| 2013 | 11,701 |
| 2014 | 12,006 |
| 2015 | 12,318 |
| 2016 | 12,638 |
| 2017 | 12,967 |
| 2018 | 13,304 |
| 2019 | 13,650 |

Using this number it is possible to establish a breakdown of the effective demand for a single year, based on the findings of the survey. Using the year 2015 as an example, the table below divides the total number into those requiring apartments and housing. Apartments are additionally divided into those wishing to rent and those wanting units for purchase; the same is done for housing. Purchased housing units are further divided into those to be contractor built and those to be self-built.

**Housing Programme for the Year 2015**

| | |
|---|---|
| Number of Households in West Bank | 427,533 |
| Annual growth rate | 2.60% |
| Household formation 2015 | 12,318 |

| | | | **Apartments** | | **Houses** | | |
|---|---|---|---|---|---|---|---|
| | | | Renting | Ownership | Renting | Ownership | Self built |
| Apartments (36.13%) | | 4,471 | 8.33% | 91.67% | 40.45% | 59.55% | |
| Houses (63.83%) | | 7,807 | | | | 71.32% | 28.68% |
| | | Number | 372 | 4,099 | 3,158 | 3,316 | 1,333 |
| House cost | Percentage | | 3.03% | 33.38% | 25.72% | 27.00% | 10.86% |
| $7,500-$22,499 | 9.09% | 1,120 | 34 | 374 | 288 | 302 | 122 |
| $22,500-$37,499 | 37.06% | 4,565 | 138 | 1524 | 1174 | 1233 | 496 |
| $37,500-$52,499 | 34.27% | 4,221 | 128 | 1409 | 1086 | 1140 | 458 |
| $52,500-$67,499 | 13.99% | 1,723 | 52 | 575 | 443 | 465 | 187 |

These figures are minima, and there is little doubt that given the right solutions in the right locations the demand could be higher.

## 5. Conclusion

There is a very substantial unmet demand for the large majority of West Bank households. The survey has demonstrated the scope of the solutions that would be accepted by the market. It shows the importance that Palestinians attach to housing, and the lengths they are prepared to go to achieve their dreams.

## Annex 1
# Tables

# Tables

### 1. Family size

| Family size | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | >12 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Percentage | 0.5% | 33.8% | 8.6% | 9.9% | 11.5% | 13.5% | 5.9% | 5.4% | 3.3% | 3.5% | 1.1% | 1.4% | 1.6% |

### 2. Distribution of Incomes of Respondents

| Percentage of respondents | 9.01% | 17.16% | 41.07% | 13.86% | 14.21% | 9.36% | 4.33% |
|---|---|---|---|---|---|---|---|
| US $ | <400 | 500 - 700 | 701-900 | 901 – 1,100 | 1,101 – 1,300 | 1,301 – 1,500 | 1,501 + |
| NIS | <1,750 | 1,751 – 2,450 | 2,451 – 3,150 | 3,150 – 3,854 | 3,855 – 4,550 | 4,551 – 5,250 | 5,251+ |

### 3. Distribution of incomes by area

| Distribution of Monthly income, by area | <400 | 500 - 700 | 701-900 | 901 - 1100 | 1,101 – 1,300 | 1,301 – 1,500 | 1,501+ |
|---|---|---|---|---|---|---|---|
| Bethlehem | 3% | 32% | 17% | 15% | 18% | 15% | 0.00% |
| Hebron | 1% | 5% | 49% | 22% | 15% | 3% | 4.96% |
| Jenin | 16% | 26% | 34% | 7% | 5% | 7% | 3.28% |
| Jericho | 0% | 29% | 29% | 0% | 0% | 29% | 14.29% |
| Nablus | 16% | 13% | 34% | 6% | 13% | 10% | 5.97% |
| Qalqiliya | 29% | 18% | 18% | 5% | 18% | 5% | 5.26% |
| Ramallah | 0% | 4% | 32% | 20% | 18% | 21% | 5.36% |
| Salfeet | 11% | 8% | 42% | 8% | 17% | 6% | 9.43% |
| Tubas | 0% | 20% | 63% | 0% | 7% | 10% | 0.00% |
| Tulkarem | 1% | 16% | 47% | 19% | 13% | 4% | 0.00% |
| Mean | 8% | 16% | 38% | 13% | 13% | 9% | 3.97% |

### 4. Existing dwelling size

| Area | Bethlehem | Hebron | Jenin | Jericho | Nablus | Qalqiliya | Ramallah | Salfeet | Tubas | Tulkarem | Mean |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Mean number of rooms | 2.87 | 4.48 | 2.68 | 4.46 | 3.35 | 1.82 | 5.16 | 3.66 | 3.80 | 2.13 | 4.07 |

**5. Mean area of existing dwelling units (square metres)**

| Bethlehem | Hebron | Jenin | Jericho | Nablus | Qalqiliya | Ramallah | Salfeet | Tubas | Tulkarem | Mean |
|---|---|---|---|---|---|---|---|---|---|---|
| 63.91 | 97.44 | 70.22 | 85.49 | 73.78 | 72.77 | 97.27 | 77.91 | 79.35 | 57.61 | 77.52 |

**6. Persons per room**

| Area | Bethlehem | Hebron | Jenin | Jericho | Nablus | Qalqiliya | Ramallah | Salfeet | Tubas | Tulkarem | Mean |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Persons per room | 1.28 | 1.66 | 0.77 | 1.14 | 0.82 | 1.26 | 0.97 | 0.83 | 0.58 | 0.76 | 0.94 |

**7. Rent**

| Rent paid per month (US $) | 51-150 | 151-250 | 251-350 | 351-450 | 451-550 | 551-650 |
|---|---|---|---|---|---|---|
| Percentage of renters | 37.37 | 39.39 | 17.17 | 2.02 | 2.02 | 2.02 |

**8. Number in the below $900 income group who are renting**

| | |
|---|---|
| Bethlehem | 4 |
| Hebron | 1 |
| Jenin | 6 |
| Jericho | 0 |
| Nablus | 0 |
| Qalqillya | 1 |
| Ramallah | 2 |
| Salfeet | 0 |
| Tubas | 0 |
| Tulkarem | 2 |
| Total | 16 |

**9. Percentage of income to be spent on housing: Initial Estimate and final result**

| | Ratio proposed pmt/ income | Ratio final pmt/ income |
|---|---|---|
| Bethlehem | 36.8% | 28.6% |
| Hebron | 45.6% | 41.5% |
| Jenin | 41.5% | 37.7% |
| Jericho | 45.6% | 42.2% |
| Nablus | 41.1% | 34.5% |
| Qalqiliya | 41.8% | 38.3% |
| Ramallah | 38.2% | 40.1% |
| Salfeet | 41.6% | 37.0% |
| Tubas | 46.2% | 42.3% |
| Tulkarem | 37.5% | 33.5% |
| Mean | 41.3% | 37.3% |

**10. Percentage of income willing to spend on housing by income group**

| Monthly income (US Dollars) | Percentage willing to spend |
|---|---|
| <450 | 47.20% |
| 451 - 600 | 44.90% |
| 601 - 750 | 37.60% |
| 751 - 900 | 39.70% |
| 901 – 1,050 | 39.40% |
| 1,051 – 1,200 | 35.60% |
| 1,201 – 1,350 | 34.10% |
| 1,351 – 1,500 | 36.00% |
| >1,500 | 29.30% |

**11. Shortfall by respondents who cannot afford the 20% down payment**

| Amount of shortfall | Percentage of respondents who cannot afford 20% down payment |
|---|---|
| Under $1499 | 16% |
| $1,500 - $3,599 | 24% |
| $3,500 - $5,499 | 27% |
| $5,500 - $7,499 | 17% |
| $7,500 - $9,499 | 9% |
| $9,500 - $11,499 | 5% |
| $11,500 - $13,499 | 2% |
| $13,500+ | 1% |

**12. Percentage of respondents unable to pay 20% down payment**

| | |
|---|---|
| Bethlehem | 90.0% |
| Hebron | 81.0% |
| Jenin | 46.0% |
| Jericho | 71.4% |
| Nablus | 68.7% |
| Qalqiliya | 36.8% |
| Ramallah | 73.2% |
| Salfeet | 71.7% |
| Tubas | 63.3% |
| Tulkarem | 86.7% |
| Mean | 69.3% |

**13. Size of down payment as multiple of monthly income**

| Number of monthly incomes | Number | Percentage |
|---|---|---|
| 0-2.50 | 64 | 10.14% |
| 2.51 - 5.00 | 164 | 25.99% |
| 5.10 - 7.50 | 119 | 18.86% |
| 7.51 - 10.00 | 134 | 21.24% |
| 10.10 - 12.50 | 27 | 4.28% |

**14. Cost of dwelling by affordability class**

| | n= | Mean capital cost by income group |
|---|---|---|
| All | 631 | $52,185 |
| Spending less than 30% of income | 158 | $37,642 |
| Earning less than $900 and spending less than 30% of income | 64 | $31,521 |

**15. Capital cost of units**

| Affordability | $7,500-$22,499 | $22,500-$37,499 | $37,500-$52,499 | $52,500-$67,499 | $67,500-$82,499 | $82,500-$97,499 | $97,500-$112,499 | $112,500-$127,499 |
|---|---|---|---|---|---|---|---|---|
| Under 30% of income and income <$900 | 17.74% | 61.29% | 19.35% | 1.61% | 0.00% | 0.00% | 0.00% | 0.00% |
| Under 30% of income | 9.09% | 37.06% | 34.27% | 13.99% | 3.50% | 1.40% | 0.00% | 0.70% |
| All | 2.54% | 18.44% | 33.55% | 27.50% | 10.97% | 5.41% | 0.79% | 0.16% |

**16. Dwelling size**

| Rounded size (square metres) | All | spending less than 30% of income | Income below $900 per month and spending less than 30% of income |
|---|---|---|---|
| 45 | 2.95% | 5.04% | 9.84% |
| 60 | 3.77% | 3.60% | 3.28% |
| 75 | 20.00% | 26.62% | 34.43% |
| 90 | 19.51% | 18.71% | 21.31% |
| 105 | 19.02% | 17.99% | 19.67% |
| 120 | 13.44% | 12.95% | 4.92% |
| 135 | 10.82% | 10.07% | 6.56% |
| 140+ | 10.49% | 5.04% | 0.00% |

**17. Number of bedrooms**

| | 2 | 3 | 4 | 5 | 6 |
|---|---|---|---|---|---|
| Spending less than 30% and income <$900 | 7.8% | 39.1% | 29.7% | 15.6% | 3.1% |
| Spending less than 30% | 4.4% | 29.1% | 37.3% | 15.8% | 1.9% |
| All | 4.1% | 32.3% | 40.3% | 16.3% | 3.2% |

**18. Extra sanitary facilities**

| | 1 extra toilet/ shower | 2 extra toilets/ showers |
|---|---|---|
| Spending less than 30% and income <$900 | 43.8% | 20.3% |
| Spending less than 30% | 41.1% | 34.2% |
| All | 43.1% | 40.7% |

**19. Mean dwelling size by location ($m^2$)**

| | Income below $900 per month and spending less than 30% of income | Spending less than 30% of income | All |
|---|---|---|---|
| Bethlehem | 94 | 63 | 107 |
| Hebron | 99 | 114 | 110 |
| Jenin | 120 | 128 | 114 |
| Jericho | 73 | 73 | 122 |
| Nablus | 43 | 91 | 99 |
| Qalqiliya | 97 | 104 | 110 |
| Ramallah | 63 | 77 | 75 |
| Salfeet | 87 | 99 | 124 |
| Tubas | 106 | 106 | 115 |
| Tulkarem | 76 | 87 | 94 |
| All | 93 | 93 | 106 |

**20. Preference for dwelling type by location**

| | % within area selecting apartment | % within area selecting house |
|---|---|---|
| Bethlehem | 71.67% | 28.33% |
| Hebron | 10.74% | 89.26% |
| Jenin | 30.65% | 69.35% |
| Jericho | 57.14% | 42.86% |
| Nablus | 53.73% | 46.27% |
| Qalqiliya | 34.21% | 65.79% |
| Ramallah | 23.21% | 76.79% |
| Salfeet | 33.96% | 66.04% |
| Tubas | 40.00% | 60.00% |
| Tulkarem | 50.67% | 49.33% |
| Mean | 36.13% | 63.87% |

**21. Respondents choosing to reduce costs by reducing finishes and fittings**

| | Lower finishes | Basic kitchen |
|---|---|---|
| Apartment | 25.00% | 22.81% |
| House | 31.76% | 29.28% |

**22. Preferred location for housing by those without own land**

| | inner city | edge of city | village |
|---|---|---|---|
| Bethlehem | 14% | 57% | 29% |
| Hebron | 2% | 92% | 6% |
| Jenin | 18% | 66% | 16% |
| Jericho | none | | |
| Nablus | 52% | 31% | 17% |
| Qalqiliya | 50% | 50% | 0% |
| Ramallah | 3% | 8% | 89% |
| Salfeet | 82% | 9% | 9% |
| Tubas | 100% | 0% | 0% |
| Tulkarem | 0% | 46% | 54% |
| Mean | 27.23% | 46.01% | 26.76% |

**23. Plot size (percentage choice without own land)**

| size in metres | 8 x 16 | 10 x 20 | 12 x 24 | 14 x 28 |
|---|---|---|---|---|
| Bethlehem | 0.00% | 16.67% | 66.67% | 16.67% |
| Hebron | 17.05% | 78.41% | 4.55% | 0.00% |
| Jenin | 42.11% | 47.37% | 10.53% | 0.00% |
| Jericho | 0.00% | 0.00% | 0.00% | 0.00% |
| Nablus | 34.48% | 55.17% | 6.90% | 3.45% |
| Qalqiliya | 38.46% | 61.54% | 0.00% | 0.00% |
| Ramallah | 68.18% | 20.45% | 11.36% | 0.00% |
| Salfeet | 34.38% | 56.25% | 3.13% | 6.25% |
| Tubas | 22.22% | 66.67% | 0.00% | 11.11% |
| Tulkarem | 0.00% | 65.00% | 30.00% | 5.00% |
| Mean | 32.25% | 56.35% | 9.12% | 2.28% |

**24. Preferred type of access**

| | Access footpath | access 5m gravel | access 5m asphalt |
|---|---|---|---|
| Bethlehem | 0% | 7.14% | 92.86% |
| Hebron | 0% | 56.72% | 43.28% |
| Jenin | 0% | 0.00% | 100.00% |
| Jericho | 0% | 0.00% | 0.00% |
| Nablus | 0% | 16.67% | 83.33% |
| Qalqiliya | 0% | 20.00% | 80.00% |
| Ramallah | 0% | 39.29% | 60.71% |
| Salfeet | 0% | 0.00% | 100.00% |
| Tubas | 0% | 0.00% | 100.00% |
| Tulkarem | 0% | 19.44% | 80.56% |
| Mean | 0% | 26.47% | 73.53% |

**25. Percentage of those choosing walls around their property**

| | Percentage of those choosing walls around all or part of their property | Percentage of boundary walled |
|---|---|---|
| Bethlehem | 88% | 80% |
| Hebron | 76% | 94% |
| Jenin | 82% | 100% |
| Jericho | 67% | 100% |
| Nablus | 71% | 76% |
| Qalqiliya | 100% | 97% |
| Ramallah | 67% | 97% |
| Salfeet | 97% | 88% |
| Tubas | 72% | 90% |
| Tulkarem | 100% | 100% |
| Mean | 73% | 92% |

**26. Percentage not choosing walls all round**

| | Front walls but not side | Side walls but not front |
|---|---|---|
| Bethlehem | 23.53% | 0.00% |
| Hebron | 0.00% | 17.59% |
| Jenin | 0.00% | 0.00% |
| Jericho | 0.00% | 0.00% |
| Nablus | 22.58% | 0.00% |
| Qalqiliya | 0.00% | 0.00% |
| Ramallah | 0.00% | 0.00% |
| Salfeet | 17.14% | 0.00% |
| Tubas | 11.11% | 0.00% |
| Tulkarem | 0.00% | 0.00% |

**27. Savings by type and region**

| | No finishes | Basic kitchen | Additional down payment (Mean % of capital cost after down payment) |
|---|---|---|---|
| Bethlehem | 55.81% | 6.98% | 2.73% |
| Hebron | 15.38% | 30.77% | 1.12% |
| Jenin | 10.53% | 36.84% | 0.00% |
| Jericho | 25.00% | 75.00% | 0.00% |
| Nablus | 16.67% | 19.44% | 0.35% |
| Qalqiliya | 38.46% | 38.46% | 0.00% |
| Ramallah | 69.23% | 15.38% | 0.00% |
| Salfeet | 22.22% | 22.22% | 0.00% |
| Tubas | 16.67% | 16.67% | 0.00% |
| Tulkarem | 0.00% | 21.05% | 3.40% |
| Mean | 25.00% | 22.81% | 1.18% |

**28. Quantum of savings made by respondents**

| | Mean cost before savings | Mean cost after savings | Mean saving | Percentage of original cost | Mean of those who opted to make savings | Percentage saving of those opting to save |
|---|---|---|---|---|---|---|
| Bethlehem | 58,886 | 47,142 | 11,744 | 19.94% | 15,658 | 26.59% |
| Hebron | 67,310 | 53,069 | 14,242 | 21.16% | 19,808 | 29.43% |
| Jenin | 55,980 | 49,159 | 6,821 | 12.18% | 10,984 | 19.62% |
| Jericho | 56,351 | 52,372 | 3,979 | 7.06% | 9,285 | 16.48% |
| Nablus | 55,847 | 50,959 | 4,888 | 8.75% | 9,096 | 16.29% |
| Qalqiliya | 57,195 | 50,174 | 7,022 | 12.28% | 13,341 | 23.33% |
| Ramallah | 65,845 | 53,189 | 12,656 | 19.22% | 14,174 | 21.53% |
| Salfeet | 61,771 | 54,549 | 7,223 | 11.69% | 11,963 | 19.37% |
| Tubas | 56,738 | 51,912 | 4,826 | 8.51% | 9,048 | 15.95% |
| Tulkarem | 46,134 | 43,314 | 2,820 | 6.11% | 5,717 | 12.39% |
| Mean | 58,720 | 50,251 | 8,469 | 14.42% | 13,260 | 22.58% |

**29. Respondents wishing to have stone cladding**

| | Selecting stone | Percentage | Number wishing to have stone cladding after savings | Percentage |
|---|---|---|---|---|
| Bethlehem | 49 | 82% | 22 | 45% |
| Hebron | 117 | 97% | 70 | 39% |
| Jenin | 69 | 56% | 25 | 35% |
| Jericho | 2 | 29% | 2 | 0% |
| Nablus | 31 | 46% | 11 | 30% |
| Qalqiliya | 17 | 45% | 6 | 29% |
| Ramallah | 41 | 73% | 26 | 27% |
| Salfeet | 32 | 60% | 14 | 34% |
| Tubas | 18 | 60% | 7 | 37% |
| Tulkarem | 53 | 71% | 42 | 15% |
| Total | 429 | 68% | 225 | 36% |

**30. Previous and proposed house: number of rooms**

| | No. of rooms existing | No. of rooms proposed | Increase (%) |
|---|---|---|---|
| Bethlehem | 3.32 | 5.45 | 39.14% |
| Hebron | 4.99 | 4.91 | -1.66% |
| Jenin | 3.74 | 4.96 | 24.63% |
| Jericho | 4.64 | 5.86 | 20.73% |
| Nablus | 3.95 | 4.90 | 19.36% |
| Qalqiliya | 3.88 | 5.42 | 28.40% |
| Ramallah | 5.16 | 4.55 | -11.76% |
| Salfeet | 4.16 | 5.30 | 21.53% |
| Tubas | 4.27 | 4.93 | 13.51% |
| Tulkarem | 2.89 | 4.84 | 40.22% |
| Mean | 4.07 | 5.00 | 18.76% |

**31. Number of years wishing to stay in new house**

| | Mean | 1-5 | 6-10 | 11-15 | Always | No response |
|---|---|---|---|---|---|---|
| Bethlehem | 0.0 | 0 | 0 | 0 | 0 | 60 |
| Hebron | 6.2 | 2 | 3 | 0 | 1 | 115 |
| Jenin | 4.0 | 15 | 1 | 0 | 0 | 108 |
| Jericho | 3.0 | 1 | 0 | 0 | 0 | 6 |
| Nablus | 5.3 | 7 | 4 | 0 | 7 | 49 |
| Qalqiliya | 7.5 | 1 | 4 | 1 | 0 | 32 |
| Ramallah | 0.0 | 0 | 0 | 0 | 56 | 0 |
| Salfeet | 0.0 | 0 | 0 | 0 | 0 | 53 |
| Tubas | 0.0 | 0 | 0 | 0 | 0 | 30 |
| Tulkarem | 0.0 | 0 | 0 | 0 | 0 | 75 |
| Total | 5.2 | 26 | 12 | 1 | 64 | 528 |

**32. Number proposing to self build, with wet core**

| | Number | Percentage of all respondents | Those spending less than 30% of income (n=24) | Those spending less than 30%, income <$900 (n=10) |
|---|---|---|---|---|
| Bethlehem | 5 | 8.33% | 2.94% | 0.00% |
| Hebron | 45 | 37.19% | 15.79% | 0.00% |
| Jenin | 35 | 28.23% | 29.63% | 31.25% |
| Jericho | 0 | 0.00% | 0.00% | 0.00% |
| Nablus | 19 | 28.36% | 14.29% | 33.33% |
| Qalqiliya | 9 | 23.68% | 14.29% | 100.00% |
| Ramallah | 32 | 57.14% | 20.00% | 0.00% |
| Salfeet | 18 | 33.96% | 30.77% | 42.86% |
| Tubas | 5 | 16.67% | 0.00% | 0.00% |
| Tulkarem | 13 | 17.33% | 7.69% | 0.00% |
| Mean | 181 | 28.68% | 15.19% | 15.62% |

**33. Mean loan size for self build (US$)**

| | |
|---|---|
| Bethlehem | 24,000 |
| Hebron | 20,000 |
| Jenin | 20,072 |
| Nablus | 20,000 |
| Qalqiliya | 17,778 |
| Ramallah | 20,625 |
| Salfeet | 21,111 |
| Tubas | 20,000 |
| Tulkarem | 20,000 |
| Mean | 20,235 |

## Annex 2
# Basis for construction costs

# Methodology for compiling pricing information and applying it to the model

1. Use of prime prices

   The model is compiled from prime prices which are aggregated into the cost of an element. They are market prices as at February 2014, as supplied by Amaar's quantity surveyor, taken from actual bids by building contractors in commercial housing development projects. He assured us that they were true market prices and that (a) the differences between prices in different parts of the West Bank are relatively minor (+/- 2.5%), apart from the cost of external walling due to regulations about stone cladding, and (b) there is little difference between the prices on offer between large and small contractors – they receive quotations from both large and small.

2. Compiling prices into elements

   The basic unit of the model is an **element** consisting of a complete room, or a specific service. For example, in the case of a bathroom, there are many components to include:

   2.1 The service elements

   In the case of a bathroom, the components are:
   - Bath tub, wash basin and WC unit.
   - Hot and cold water taps for bath, shower and wash basin.
   - Hot and cold water pipes and valves, cold water pipes for the WC.
   - Drain from the bath and basin
   - Drain from the WC
   - Electric lights

   2.2 The building element

   This comprises:
   - Walls
   - Floor
   - Ceiling
   - Window
   - Door
   - Finishes to the elements such as plaster, paint, floor tiles

   The model aggregates the costs of all components in an element, thus allowing users to evaluate the cost of any one choice. Each room has one window and one door, except that every housing unit has one additional, front, door.

3. Adding elements together

   When adding rooms together the model has to make corrections for the fact that walls are shared between elements. Also, the model calculates the percentage of external and internal walls (which are different).

   In the case of houses, in addition to the house building cost the model includes options for boundary walls and access roads.

4. Circulation space

   As dwellings become larger there is an increased need for circulation space (corridors), and the model automatically adds in a percentage of circulation space for all units larger than 50 square metres.

   In the case of detached houses, the model assumes that respondents will prefer a two storey solution if the house is larger than 50 square metres.

5. Extras in the case of apartments

   The cost of each apartment includes its share of the access balcony, vertical circulation costs (stairs and elevator), and its share of the land, roof and foundation costs.

6. Savings, etc.

   The model assumes that all elements selected are fully finished, i.e. rooms are plastered, painted and have floor tiles. Kitchens are fully equipped with the necessary cupboards and worktops.

   The model allows users to make savings by:
   - Omitting finishes
   - Selecting a basic kitchen
   - Reducing the size and number of rooms

7. Financial variables

   Users can test the impact of different financial arrangements by:
   - Changing the term of the loan
   - Changing the amount of a down payment

   Also, the model allows different interest rates to be used, though the normal is set at 5.5%.

8. Overheads

   The model incorporates overheads as follows:
   - Developer's profit – 8%
   - Professional fees – 1.5%
   - Interest during construction – 5%, over 1 year (effectively the total cost over six months)
   - Marketing – 1.5%

9. Validation

   The model was validated by entering the elements for typical apartments and comparing the resulting price with the prices on offer by commercial developers.

## Annex 3

# Survey Methodology

# (Source Alpha Consultants)

# Survey Methodology

## Sampling

***Target population*:** The study population consists of all low income west (1,500 NIS to 5,500 NIS) bankers and willingness to acquire a new housing who resides in the West Bank including

***Sample frame:*** The sample frame consists of all population locales in the West Bank published by Palestinian Central Bureau of Statistics. This consists of identified variables of the community as well as classifications that were used to produce clusters, and finally included size of the families.

***Sample design:*** A probability sample of 500 west bankers ages 22 years and above were selected***.*** The sample selection was conducted using a stratified multistage cluster sampling technique, which is the statistically approved methodology for sample selection when doing face-to-face interviews. First a sample of 50 clusters (statistical cell) were selected in different areas of the West Bank using probability proportional to the size sampling (PPS). Probability proportional to size sampling guarantees obtaining unbiased estimators for the parameters of interest. The sampling was done using the following stages:

1. Selecting 50 clusters (each cluster contains 100 to 150 households).
2. Selecting households using systematic sampling, that is 5 households from each cluster.
3. Listing all adults over the age of 22 years fits the selection criteria and available at the time of interview on a Kish table matrix.
4. Selecting an adult at random using Kish table from the obtained list.

This type of sampling guarantees a random and representative, in terms of geographical distribution, gender, and age.

The cluster selection process within each is given as in the following procedures.

| Location number | Population location size | Cumulative |
|---|---|---|
| 1 | S1 | C1=S1 |
| 2 | S2 | C2=S1+S2 |
| 3 | S3 | C3=S1+S2+S3 |
| . | | . |
| . | | . |
| . | | . |
| N | | CN=S1+. . . +SN |

1. A list of population locations in the target population was prepared. The primary sampling unit is a cluster of households (contains 100 to 150 households).
2. Calculate the sampling interval L = CN/ k, where k the number of clusters to be selected.
3. A random number X0 w selected from the interval [0,L].
4. The ith random number Ri=X0+(i-1)*L is calculated.
5. The ith cluster is selected in the sample if Ri belongs to the interval [Ci, C(i+1)].

The sample selection described above is approved by statistical theory to ensure getting unbiased estimators for the parameters of interest in this survey. *(See sampling techniques by Chocrane (1970), Sampling Techniques by Kiesh (1980)).*

## Error Analysis

In any survey there are two types of errors: sampling error and non-sampling error (measurement).

**a- Sampling error**

The sampling error in any survey using probability sampling is given in the following formula:

**E= 1.96*sqrt (P*(1-P)/n)**

Where,

P= the percentage of a parameter of interest.

n = sample size.

This type of error is already calculated in the above task which is ± **4.0%**.

**b- Non-sampling error (measurement error)**

Non-sampling error has several sources:

1. Interviewer bias
2. The questionnaire is not designed properly
3. The respondent is not in the right mood for answering questions (some respondents might lie in their responses).

Since there are no theoretical models that can be used to assess measurement error, Alpha was not be able to give a percentage figure that could reflect measurement error. Alpha did its best to reduce this type of error through rigorous training for field researchers and proper design for the questionnaire.

## Data Collection

***Field work team***

It is worth mentioning that Alpha International, through the 13 years of cumulative experience in survey research, maintained a highly developed database of a large number of field workers in the different districts.

A distinctive selection of field workers was performed. Field workers with profound experience in data collection, honesty, reliability and ability to work under harsh circumstances, were selected and recruited.

One field manager in addition to 9 experienced field workers were appointed. Field workers were located in the West Bank regions: south, centre and north.

***Training of the Field Researchers***

One day orientation workshops were conducted to train the field workers. The training included a comprehensive explanation of the aims and objectives of the study. As the trainees go over the questionnaire and model, an explanation of the different terminologies and indicators used was discussed.

Alpha's team also presented the criteria for quality and accuracy control that Alpha abides by in all its survey studies, as well as logistical, administrative and financial issues related to field work. The importance of not jeopardizing the quality of data collection in any case was expressed. The need for continuous communication and coordination with the area field supervisor for proper feedback was emphasized in order to solve any possible obstacles, and find solutions in case any field work is halted.

The following elements was introduced to the field researchers:

1. The overall objective of our study

2. Different indicators to be measured.
3. Consent statement
4. Criteria for quality data gathering and accuracy
5. Methods for proper data handling
6. Proper communication channels, protocols and chain of command
7. Continuous communication and coordination with the data collection supervisor

**Quality of Data during the data collection process**
To ensure data quality the following steps were followed in the field during the date collection process:

***Following sampling procedure***: to ensure randomness it is important for getting unbiased estimates from the collected data. Following a systematic random sample was emphasized in the training session. Moreover, the field research supervisor was conducting random field visits of the data collectors through the process of data collection. These visits are important to ensure that the field researchers are following the correct sampling procedure as well as making sure that the data collectors do problem solving in the field in case any emergencies occur through the data collection process.

***Quality control which includes:***

- Random visits by the field research supervisors for the data collectors while the field work is being conducted.
- Review all the questionnaires produced by the data collectors on a daily basis. Any questionnaire with mistakes will be cancelled and the data collector will be asked to redo the collection.
- Any field researcher that makes repeated mistakes will be suspended from working on the project.
- All field researchers will report to their field research supervisors. Field research supervisors will report on a regular basis to the project supervisor in the main office.
- Alpha researchers obtained the phone numbers of respondents in order to make call backs. This will help Alpha's in-house call centre staff do 5% call backs to ensure that the respondent answered the questionnaire.

## Time Frame
*9 weeks*

## Annex 4
# The questionnaire

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **HOUSING DESIGN** | | | | | | | | 3,5 | 0,71 |
| Rooms | | | | Area | capital cost | Pmt/month ($) | Pmt/month (NIS) | (JOD) | |
| Toilet | 2 x 1 | 0 | | 0 | 0 | 0 | 0 | 0 | |
| Shower | 2 x 1 | 0 | | 0 | 0 | 0 | 0 | 0 | |
| Bathroom | 2 x 2 | 2 | | 8 | 5 811 | 40 | 140 | 28 | |
| Small kitchen | 2 x 3 | 0 | | 0 | 0 | 0 | 0 | 0 | |
| Kitchen | 3 x 3 | 0 | | 0 | 0 | 0 | 0 | 0 | |
| Large Kitchen | 3 x 4 | 0 | | 0 | 0 | 0 | 0 | 0 | |
| Kitchen/Living | 3 x 7 | 1 | | 21 | 12 715 | 87 | 306 | 62 | |
| Kitchen/Living | 4 x 7 | 0 | | 0 | 0 | 0 | 0 | 0 | |
| | 3 x 3 | 1 | | 9 | 3 742 | 26 | 90 | 18 | |
| | 3 x 4 | 1 | | 12 | 4 785 | 33 | 115 | 23 | |
| | 3 x 5 | 1 | | 15 | 10 629 | 73 | 256 | 52 | |
| | 3 x 6 | 0 | | 0 | 0 | 0 | 0 | 0 | |
| | 3 x 7 | 1 | | 21 | 7 914 | 54 | 191 | 39 | |
| | 4 x 4 | 0 | | 0 | 0 | 0 | 0 | 0 | |
| | 4 x 5 | 0 | | 0 | 0 | 0 | 0 | 0 | |
| | 4 x 6 | 0 | | 0 | 0 | 0 | 0 | 0 | |
| | 4 x 7 | 0 | | 0 | 0 | 0 | 0 | 0 | |
| | 5 x 5 | 0 | | 0 | 0 | 0 | 0 | 0 | |
| | 5 x 6 | 0 | | 0 | 0 | 0 | 0 | 0 | |
| | 5 x 7 | 0 | | 0 | 0 | 0 | 0 | 0 | |
| Balcony | 3 x 1 | 0 | | 0 | 0 | 6 | 20 | 4 | |
| Internal circulation/ext wall | | | | 9 | 3 791 | 26 | 91 | 19 | |
| Apartment access etc | | | | | 11 855 | 82 | 285 | 58 | |
| House extra | | | | | 0 | 0 | 0 | 0 | |
| Total area | | | | 94,6 | | | | | |
| | | | | | | | | | |
| Apartment | 1 | | | | | | | | |
| | | | | | | | | | |
| Houses | own land | inner city | edge of city | village | | | | | |
| Land situation | 0 | 0 | 0 | 1 | | | | | |
| | | | | | | | | | |
| | Plot size | | Area | | | | | | |
| | 8 x 16 | 1 | 128 | | 0 | 0 | 0 | 0 | |
| | 10 x 20 | 0 | 200 | | 0 | 0 | 0 | 0 | |
| | 12 x 24 | 0 | 288 | | 0 | 0 | 0 | 0 | |
| | 14 x 28 | 0 | 392 | | 0 | 0 | 0 | 0 | |
| | | | | | | | | | |
| | | footpath | 5m gravel | 5m asphalt | | | | | |
| Access (optional if you own land alread | | 0 | 0 | 1 | 0 | 0 | 0 | 0 | |
| | | | | | | | | | |
| Boundary walls | front | side | side | back | | | | | |
| (1=yes, 0=no) | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | |
| | | | | | | | | | |
| | | | | Sub-total | 61 241 | 427 | 1 494 | 303 | |
| **Savings** | | | | | | | | | |
| Saving from no finishes (plaster, paint, floor tiles etc) 1=yes, 0=no | | | | 1 | 20 187 | | 70 654 | 14 333 | |
| | | | | | | | | | |
| Saving from Basic kitchen (1=yes, 0=no) | | | | 0 | 0 | | 0 | 0 | |
| Saving from omitting stone cladding (1=yes, 0=no) | | | | 1 | 1 464 | | 5 125 | 1 040 | |
| Additional down payment (enter amount) | | | | 0 | 0 | | 0 | 0 | |
| | | | | Total savings | 21 651 | | 75 778 | 15 372 | |
| | | | | Net cost | 39 590 | | 138 566 | 28 109 | |
| | | | Less planned | downpayment | -5 000 | | -17 500 | -3 550 | |
| | | | | Total | 34 590 | | 121 066 | 24 559 | |

| **Result: Apartment/house** | | | |
|---|---|---|---|
| Area (sq m) | **95** | **95** | **95** |
| Capital | 34 590 | 121 066 | 24 559 |
| Monthly payment | **238** | **833** | **169** |
| | Dollars | NIS | JOD |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **HOUSING DESIGN** | | | | | | | 3,5 | 0,71 |
| Rooms | | | | Area | capital cost | Pmt/month ($) | Pmt/month (NIS) | (JOD) |
| Toilet | 2 x 1 | 0 | | 0 | 0 | 0 | 0 | 0 |
| Shower | 2 x 1 | 0 | | 0 | 0 | 0 | 0 | 0 |
| Bathroom | 2 x 2 | 2 | | 8 | 5 811 | 40 | 140 | 28 |
| Small kitchen | 2 x 3 | 0 | | 0 | 0 | 0 | 0 | 0 |
| Kitchen | 3 x 3 | 0 | | 0 | 0 | 0 | 0 | 0 |
| Large Kitchen | 3 x 4 | 0 | | 0 | 0 | 0 | 0 | 0 |
| Kitchen/Living | 3 x 7 | 1 | | 21 | 12 715 | 87 | 306 | 62 |
| Kitchen/Living | 4 x 7 | 0 | | 0 | 0 | 0 | 0 | 0 |
| | 3 x 3 | 1 | | 9 | 3 742 | 26 | 90 | 18 |
| | 3 x 4 | 1 | | 12 | 4 785 | 33 | 115 | 23 |
| | 3 x 5 | 1 | | 15 | 10 629 | 73 | 256 | 52 |
| | 3 x 6 | 0 | | 0 | 0 | 0 | 0 | 0 |
| | 3 x 7 | 1 | | 21 | 7 914 | 54 | 191 | 39 |
| | 4 x 4 | 0 | | 0 | 0 | 0 | 0 | 0 |
| | 4 x 5 | 0 | | 0 | 0 | 0 | 0 | 0 |
| | 4 x 6 | 0 | | 0 | 0 | 0 | 0 | 0 |
| | 4 x 7 | 0 | | 0 | 0 | 0 | 0 | 0 |
| | 5 x 5 | 0 | | 0 | 0 | 0 | 0 | 0 |
| | 5 x 6 | 0 | | 0 | 0 | 0 | 0 | 0 |
| | 5 x 7 | 0 | | 0 | 0 | 0 | 0 | 0 |
| Balcony | 3 x 1 | 0 | | 0 | 0 | 6 | 20 | 4 |
| Internal circulation/ext wall | | | | 9 | 9 550 | 66 | 230 | 47 |
| Apartment access etc | | | | | 0 | 0 | 0 | 0 |
| House extra | | | | | 0 | 169 | 592 | 120 |
| Total area | | | | 94,6 | | | | |
| | | | | | | | | |
| Houses | own land | inner city | edge of city | village | | | | |
| Land situation | 0 | 0 | 0 | 1 | | | | |
| | | | | | | | | |
| | Plot size | | Area | | | | | |
| | 8 x 16 | 1 | 128 | | 12 800 | 88 | 308 | 63 |
| | 10 x 20 | 0 | 200 | | 0 | 0 | 0 | 0 |
| | 12 x 24 | 0 | 288 | | 0 | 0 | 0 | 0 |
| | 14 x 28 | 0 | 392 | | 0 | 0 | 0 | 0 |
| | | | | | | | | |
| | | footpath | 5m gravel | 5m asphalt | | | | |
| Access (optional if you own land alread | | 0 | 0 | 1 | 4 320 | 30 | 104 | 21 |
| | | | | | | | | |
| Boundary walls | front | side | side | back | | | | |
| (1=yes, 0=no) | 1 | 1 | 1 | 1 | 2 542 | 17 | 61 | 12 |
| | | | | | | | | |
| | | | | Sub-total | 74 808 | 672 | 2 352 | 477 |
| **Savings** | | | | | | | | |
| Saving from no finishes (plaster, paint, floor tiles etc) 1=yes, 0=no | | | | 1 | 16 454 | | 57 589 | 11 682 |
| | | | | | | | | |
| Saving from Basic kitchen (1=yes, 0=no) | | | | 0 | 0 | | 0 | 0 |
| Saving from omitting stone cladding (1=yes, 0=no) | | | | 1 | 5 857 | | 20 498 | 4 158 |
| Additional down payment (enter amount) | | | | 0 | 0 | | 0 | 0 |
| | | | | Total savings | 22 311 | | 78 087 | 15 841 |
| | | | | Net cost | 52 497 | | 183 740 | 37 273 |
| | | | Less planned | downpayment | -5 000 | | -17 500 | -3 550 |
| | | | | Total | 47 497 | | 166 240 | 33 723 |

| **Result: Apartment/house** | | | |
|---|---|---|---|
| Area (sq m) | **95** | **95** | **95** |
| Capital | 47 497 | 166 240 | 33 723 |
| Monthly payment | **327** | **1 144** | **232** |
| | Dollars | NIS | JOD |

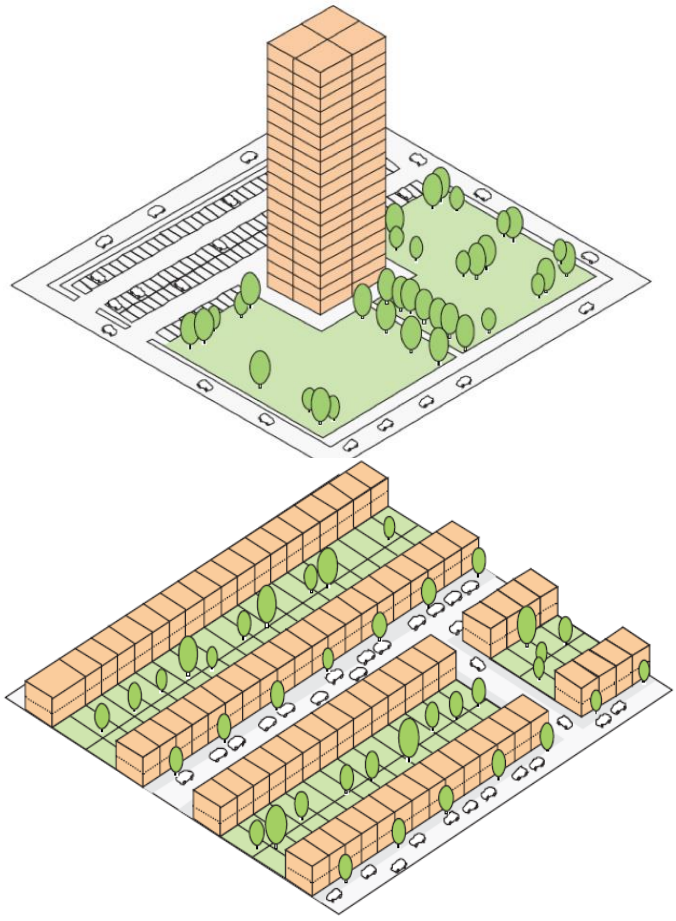
## Annex 5
# Density issues

# Densities

The finding that 63.83% of the respondents prefer houses to apartments, raises the question of the implications for land use. The general assumption is that housing consumes significantly more land than multi-storey apartments. This might lead to a bias in favour of multi-storey construction, simply to save land resources – which in the current political environment of Israeli occupation and control of so much of the West Bank's land.

In this context it is important to note that that the respondents to the survey were conscious of the need to keep plot sizes to modest level: for example in Ramallah 68.18% chose a plot 8m wide and 16m deep; overall 56.35% chose a plot of 10m x 20. Both of these are relatively economical in land use. However, there are impressive examples of fine housing being built on plots of only 6m wide – for example in Barcelona and Holland.

The graphic below shows development at the same density (75 households/Ha) given different built forms to illustrate the choice more vividly.



*Source: UN Habitat*

Built form has many implications in terms of lifestyle. For example having a home with its own open space allows children to play outside in safety; gives space for growing vegetables and even having some small livestock; allows the owner to personalise his environment and to build incrementally. It also gives the public open space – mainly the street – a human scale which gives opportunities for social bonding that somehow is never achieved in apartment blocks.

In order to test the suitability of the solutions proposed in terms of density, the following table has been constructed. The first three plot sizes have a uniform depth of 16m, those below use the formula based on depth being twice the width. From this it can be seen that relatively high densities can be achieved.

**Density calculations for housing development**

| Plot width | Plot depth | Area | Number of dwellings/ Ha |
|---|---|---|---|
| 6 | 16 | 96 | 77 |
| 7 | 16 | 112 | 67 |
| 8 | 16 | 128 | 59 |
| 9 | 18 | 162 | 48 |
| 10 | 20 | 200 | 40 |
| 11 | 22 | 242 | 33 |
| 12 | 24 | 288 | 29 |
| 13 | 26 | 338 | 25 |
| 14 | 28 | 392 | 22 |

*Based on blocks of 20 plots, front street 8m wide; side street 12m wide.*

*Barcelona housing on 6m wide plots*

Reference was made above to plot sizes in Holland and Barcelona, as examples. In those cases densities are substantially higher due to the fact that the buildings, as can be seen in the photo above, are four or five storeys high, and some upper floors are let as separate dwellings.

## Annex 6
# Issues in the definition of affordability

## Issues in the definition of affordability

The term affordable is regularly used in housing policy literature as an indicator of what type of housing is suitable for each section of the population. However, within the Palestinian context “affordable housing” is used as a synonym for low cost.

What then is affordability? Can or should a figure be put onto what is affordable, for example, in terms of the percentage of income that should be committed to housing?

The answer to this question is more complex than might be thought at first glance. This is because the answer differs depending on the view taken about the right to housing, the nature of the economy, and the appetite for risk within the financial community.

### Housing as a basic right

In the majority of European countries housing is viewed as a right. The implication of this is that if people cannot afford the cost of living in a dwelling of adequate size, the state will subsidize them. This view starts from the premise that there are minimum standards which are acceptable and that generally the population is entitled to this as a minimum standard. This standard is based on minimum room sizes, and a ratio of persons per room. Thus a family of five will be entitled to a certain size: a three-person family would be entitled to 57m$^2$, and a five-person family to 81m$^2$ .[12]

Under this approach, the lower the income the higher cost of the unit will be as a share of the family income, and could, in certain circumstances even be equivalent to the total income of the family. Because of this rents are subsidized by the state so as to leave sufficient income for the family for their other needs. Typically subsidies are made available for publicly owned units and rents are based on the subsidized cost of the unit, not the income of the person.

Thus the question of affordability does not matter: citizens will be entitled to at least minimum standard housing no matter what their income. However, in some jurisdictions subsidies are seen as a supplement to the amount that the household should pay which is set at a percentage of income.

In the United States, under Section 8 of the Housing and Community Development Act, 1975 for example, the tenants of public housing had to pay 25% of their income for the rent, and the difference between their contribution and the cost of the unit was to be met from public funds. That figure was revised to 30% about ten years after the Act was first passed. In Ireland[13] the subsidised tenants must pay 30% of their income and the state pays the rest; in Australia that maximum any low income person (bottom 40% of incomes) should have to pay is also 30%, but in some jurisdictions rents are subsidised down to 20% or 25% of income.[14] In Romania low income families (any household whose members earn less than the average income in Romania) are entitled to social housing at a rent of 10% of their income[15].

[12] These figures are taken from Housing Space Standards, A report by HATC Ltd for the Greater London Authority, Mayor of London, 2006
[13] Regulations 17 – 21 (as amended by SI 136 of 2011
[14] Australian Institute of Health and Welfare,*Housing Assistance in Australia,* Canberra, 2013, pp73,74
[15] Housing law No 114-1996.

## Housing and disposable income

At the other end of the development scale are the millions of poor people for whom housing is one component in their daily budget. Housing costs must compete against the demands of food, transport, health, education, energy and water. These are relatively inelastic demands on their income, and though there may be scope for savings (for example walking to work instead of using public transport) the room for manoeuvre is small. In these circumstances housing is considered one of the more elastic needs, to be spent as part of disposable income once basic needs have been addressed. Informal settlements and informal renting arrangements are the tools by which people save on housing costs.

In such cases, housing expenditure is trimmed to a relatively low level, and often is between 10% and 15%. In such cases the solutions adopted have no relation to the so-called minimum space standards referred to above.

## Affordability and borrowing

The third way of approaching the question is to ask what view a prudent lender would take regarding the burden that a loan might impose on a borrower's finances.

Such decisions are based on many variables:

- the income of the borrower and his or her disposable income (e.g. a couple without children will have a much greater disposable income than one with the same income but five children)
- the family's existing commitments and practices (do they already pay rent of a similar amount? Do they save regularly? etc.)
- the borrower's financial prospects (is he or she in stable employment? Is he or she young or old? etc.)
- does he or she have capital to invest as a down payment?

The amount that a bank might be willing to lend will also be influenced by the risks of:

- interest rates going up, and thereby loan repayment becoming too high for the borrower?
- the housing market collapsing, thereby making defaults more risky and the chances of default higher?

Banks use rules of thumb to evaluate what is or is not affordable. These are based on the above factors, but above all on the typical amount of disposable income.

One such rule of thumb used by AMAL, referred to in the HSP, is that housing should not cost more than four annual incomes. Sri Lanka uses a standard of three times annual income, but the typical mortgage term is 15 years.[16] In the US five times the income is common and mortgage loan repayment are often in the 30% - 35% of income level, which may reflect the higher disposable incomes in that country. The average housing cost for the European Union was 22.5% of disposable income in 2012, up from 20.4% in 2000; for households at risk of poverty, housing costs were marked at 41% of disposable income. In 2010, 10.1% of European households and 36.9% of households with income below 60% of median equalized income spent more than 40% of their disposal income on housing.[17]

From the above it may be deduced that there is no single formula. The figure of 25% of income is commonly used but cannot be applied without regard to income levels and

[16] Sadiq Ahmed etc al: Housing Finance in Sri Lanka: Opportunities and challenges, World Bank 2007
[17] Alice Pittini. Housing Affordability in the EU: Current situation and recent trends. CECODHAS, January 2012. 1.

local conditions, especially concerning volatility of interest rates, the risk factors concerning incomes etc.

## What percentage is reasonable?

Only two parties can decide what percentage is reasonable: the borrower and the lender. For the borrower it is a matter of deciding the degree of financial sacrifice he or she wishes to make to achieve the goal of home ownership. For the lender it is a matter of deciding whether the borrower's estimate of disposable income is realistic in light of his income and past financial management record, and his future financial prospects.

In this Effective Housing Demand Survey respondents were invited to set their own spending limits. Without the sobering influence of a lender who would normally set limits on such aspirations it is impossible to say what the actual limit would be.

A valuable indicator lenders often use is existing expenditure levels of housing. It can be seen from the table below that the mean amount spent on housing in the West Bank is 7.30% for the upper income groups, down to 4.30% for the lowest decile. To make a leap from this level of expenditure to something in the 35% - 50% figure that some respondents in the survey thought they could so might work out harder in practice than it sounds.

**Monthly mean expenditure on housing, West Bank, Urban Areas[18] (US$) 2007/2008.**

| Urban West Bank expenditure, deciles | Midpoint of deciles | Percentage spent on housing/month | Mean amount on housing/month |
|---|---|---|---|
| | | | |
| 10 | 358 | 4.30% | 15 |
| 20 | 502 | 4.30% | 22 |
| 30 | 600 | 4.30% | 26 |
| 40 | 730 | 4.30% | 31 |
| 50 | 880 | 5.50% | 48 |
| 60 | 980 | 5.50% | 54 |
| 70 | 1,220 | 5.50% | 67 |
| 80 | 1,400 | 7.30% | 102 |
| 90+ | 1,500 | 7.30% | 110 |

*Source:* PCBS: *Levels of Living in the Palestinian Territory, 2007-2008*, Final Report, July 2008, Tables 2.25 and 2.17

As noted above, small families with two earning adults might well be able to commit more than 30% of their income to housing, while larger families, especially those with young children who will require ever-increasing financial support as they grow, might not.

It is with the second group in mind that the maximum of 30% was used in the calculations as this figure is seen as the upper limit of affordability for lower income families such as these. Indeed, in many economies this figure would be seen as too high. This is particularly important in a society where amounts typically paid for housing are low because so many people live rent free in extended family units, or in low cost accommodation.

[18] These data are for the urban areas of the West Bank.

## Annex 7

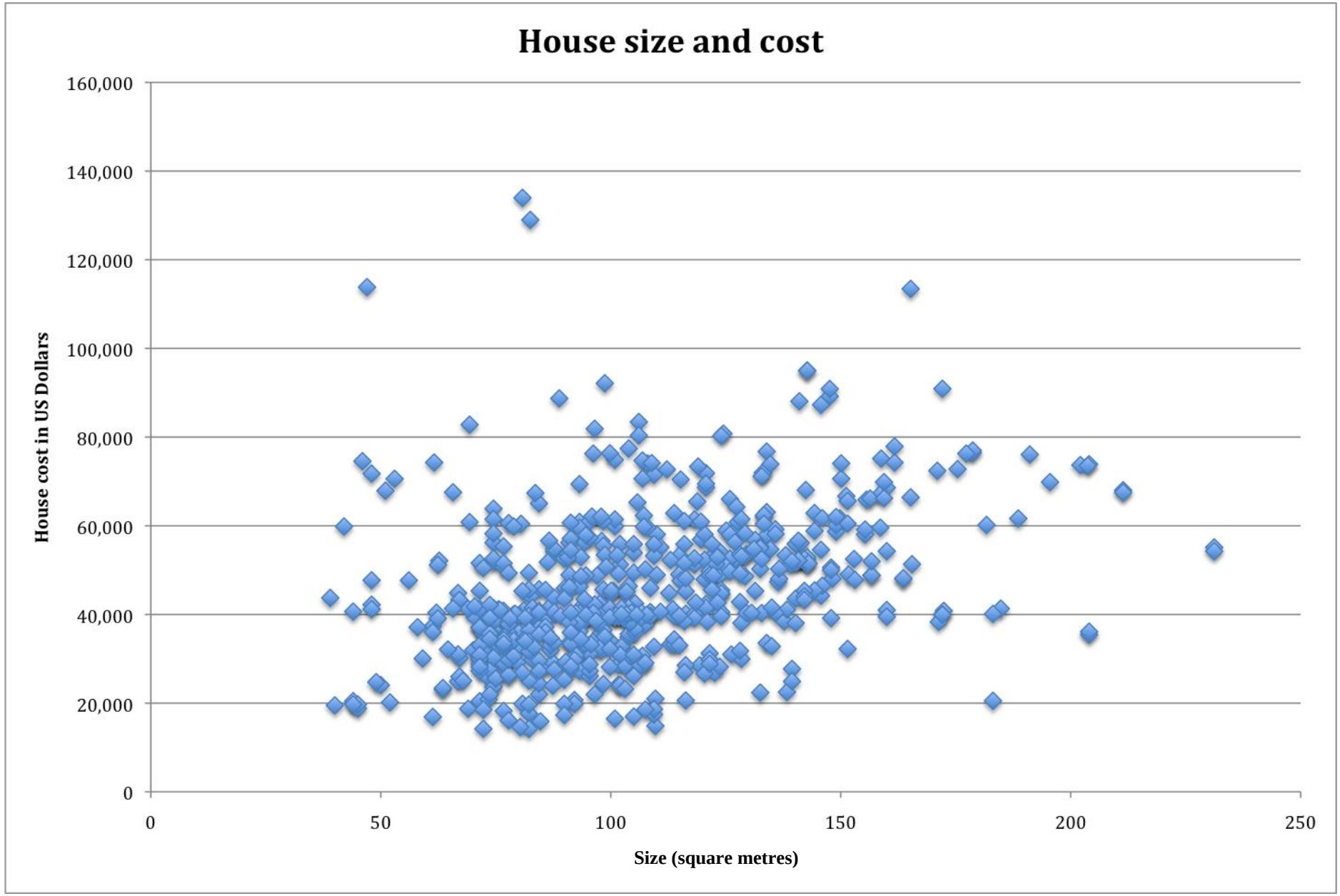
# Correlations: Incomes, house size, family size and housing expenditure

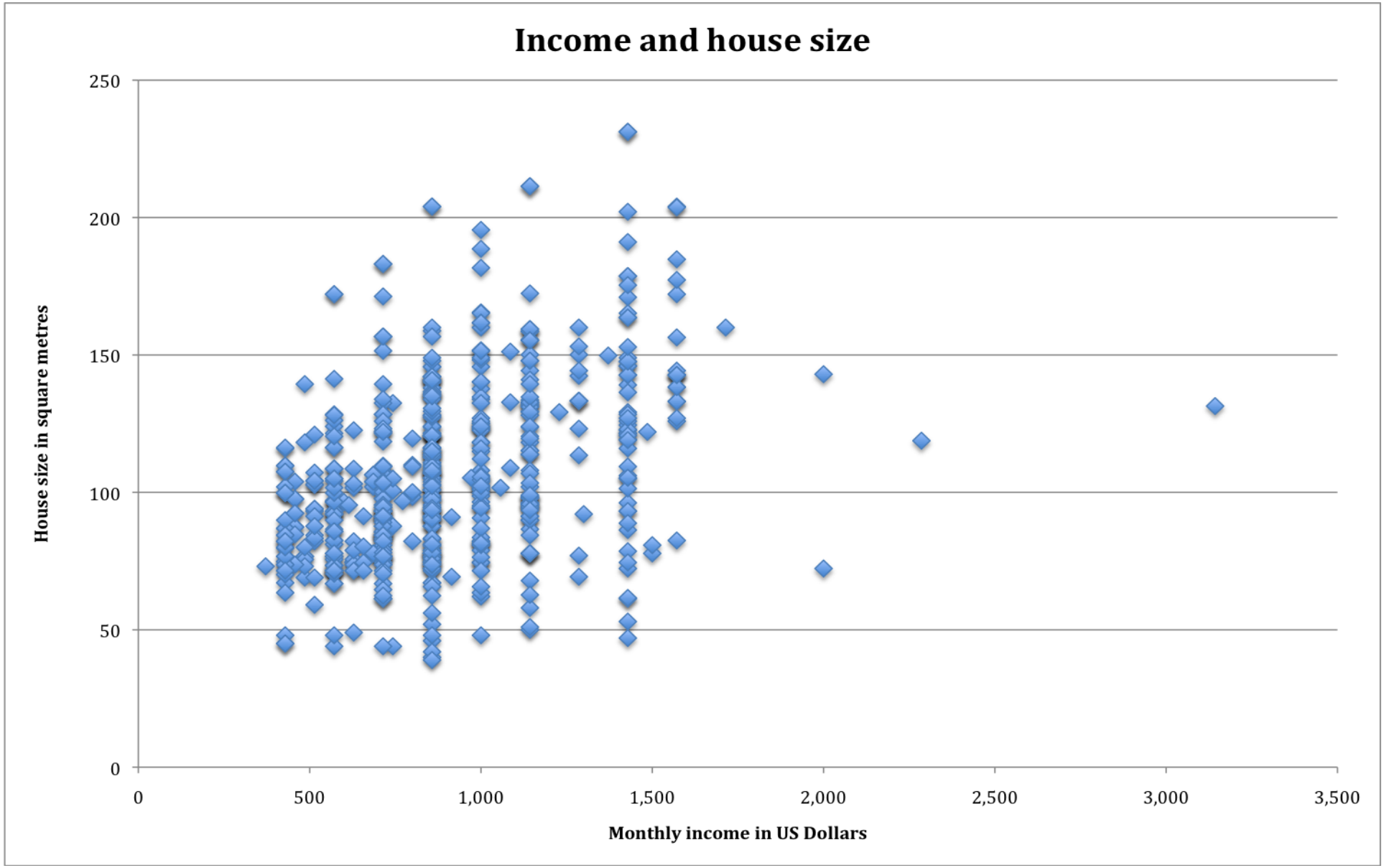
## Correlations: Incomes, house size, family size and housing expenditure

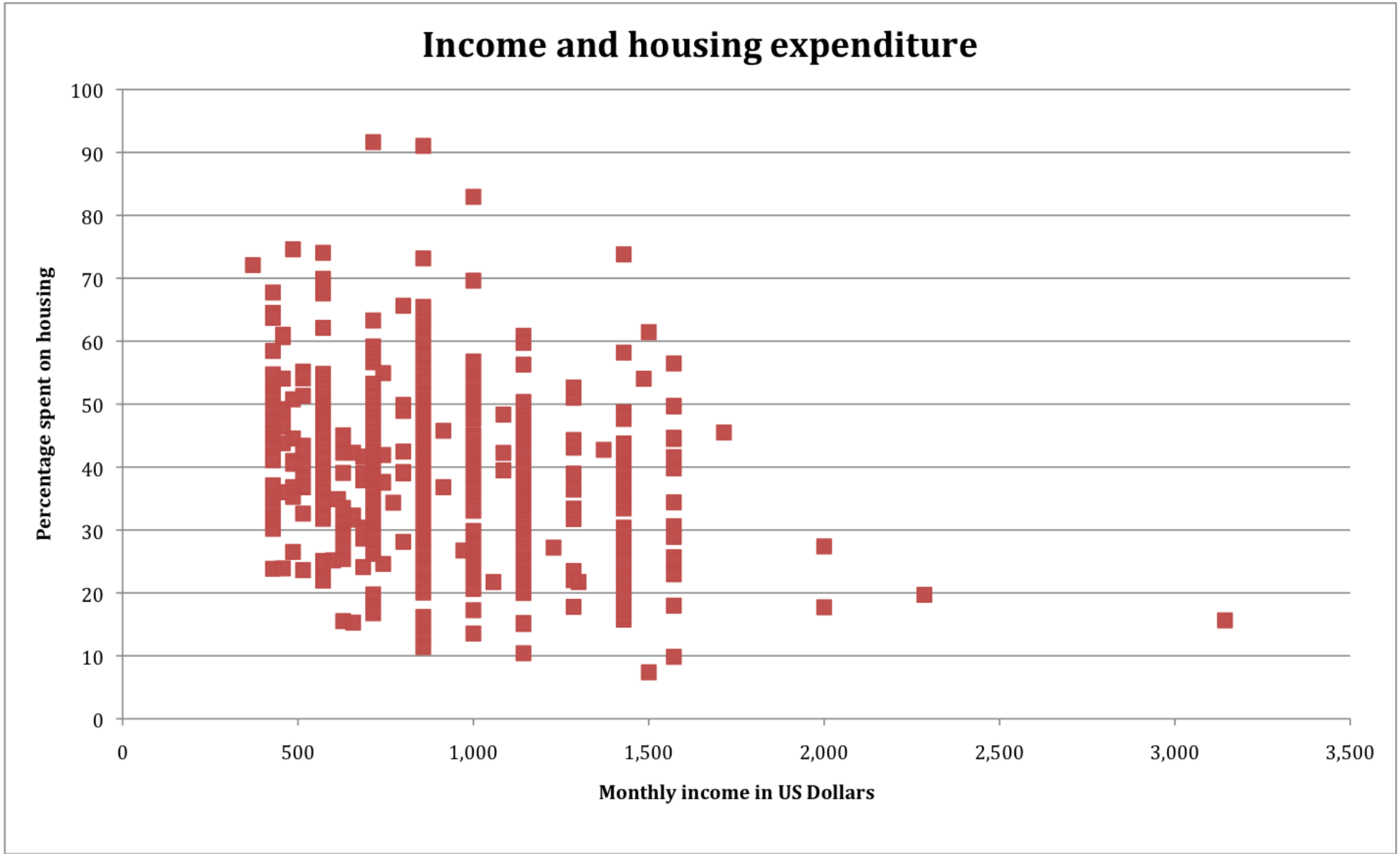
In preparing the analysis, a constant preoccupation has been whether income, family size and housing expenditure correlate with each other. The same question has been raised by reviewers of the work.

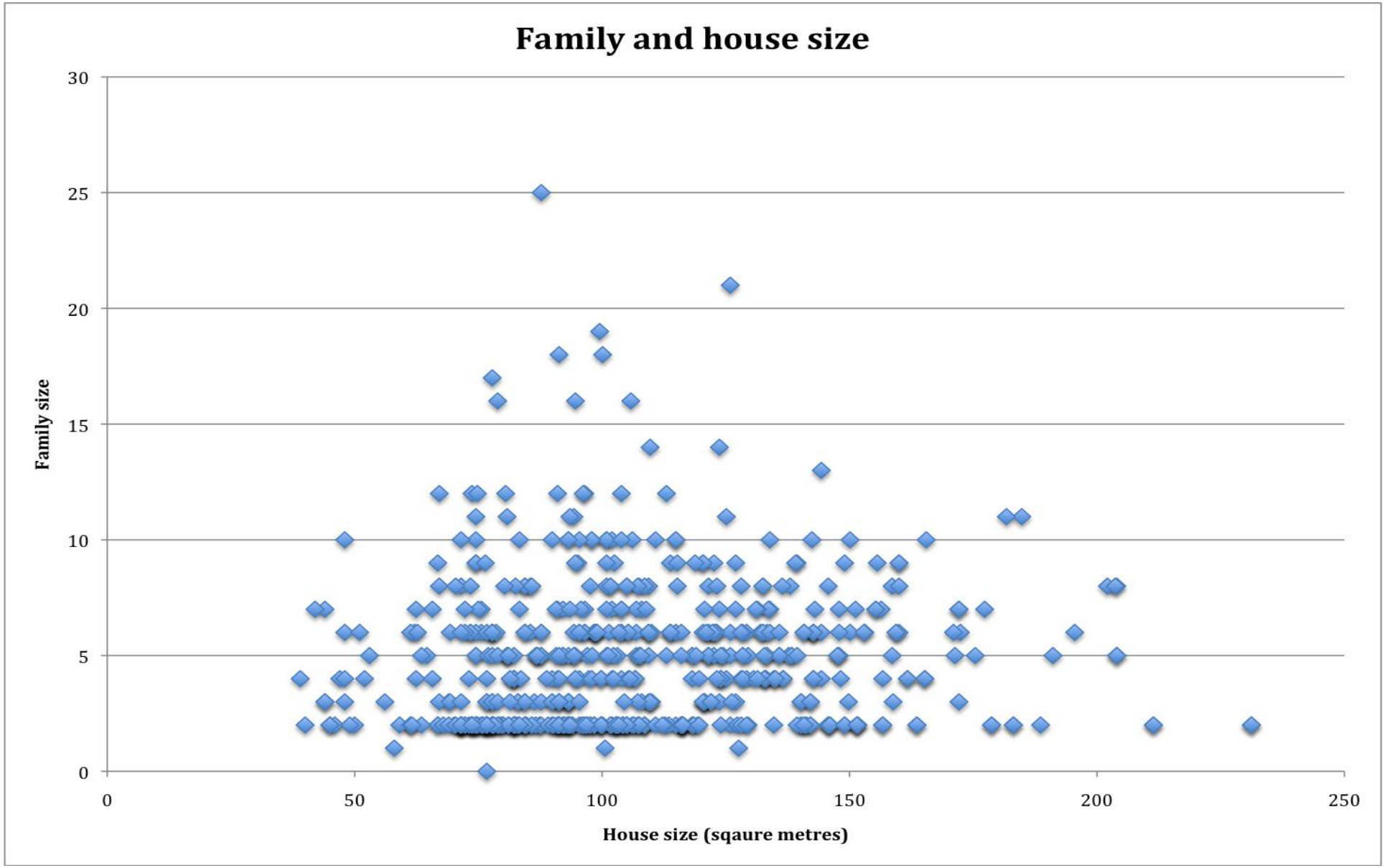
Initial assumptions that, for example, lower incomes would translate into smaller dwellings proved to be too simplistic. There is, in fact, no direct correlation between any of these matters. As explained elsewhere in this report, many respondents defied expectations about their housing expenditure and dwelling size in relation to income. Either because they were so determined to achieve their dream house, or because they were willing to make many sacrifices in terms of finishes and fittings in order to obtain the space that they felt was necessary, they are the exceptions to many international norms.

Because the charts and tables in the body of the report do not fully illustrate the diversity of choices made, it has been decided to reproduce the complete data in the form of scatter diagrams, where each data point represents a single respondent. Graphs illustrating the correlations for house size and cost; income and house size; income and housing expenditure, and family size and house size are on the next four pages.


House size and cost
160,000
140,000
120,000
100,000
80,000
60,000
40,000
20,000
0
House cost in US Dollars
0
50
100
150
200
250
Size (square metres)


Income and house size
House size in square metres
250
200
150
100
50
0
0
500
1,000
1,500
2,000
2,500
3,000
3,500
Monthly income in US Dollars


Income and housing expenditure
Percentage spent on housing
100
90
80
70
60
50
40
30
20
10
0
0
500
1,000
1,500
2,000
2,500
3,000
3,500
Monthly income in US Dollars


Family and house size
Family size
30
25
20
15
10
5
0
0
50
100
150
200
250
House size (sqaure metres)