

Public Private Partnerships for Affordable Housing

Richard Martin

The World Bank



Why are we talking about PPPs?

- Market usually only serves middle and upper income groups
- Public sector often has land, or can make land available by compulsory purchase
- Private sector can build more efficiently
- Public sector lacks the capital to develop housing
- BUT, PPPs only succeed if the private entity has confidence that it will get a satisfactory return

Who does what best in housing?

Public

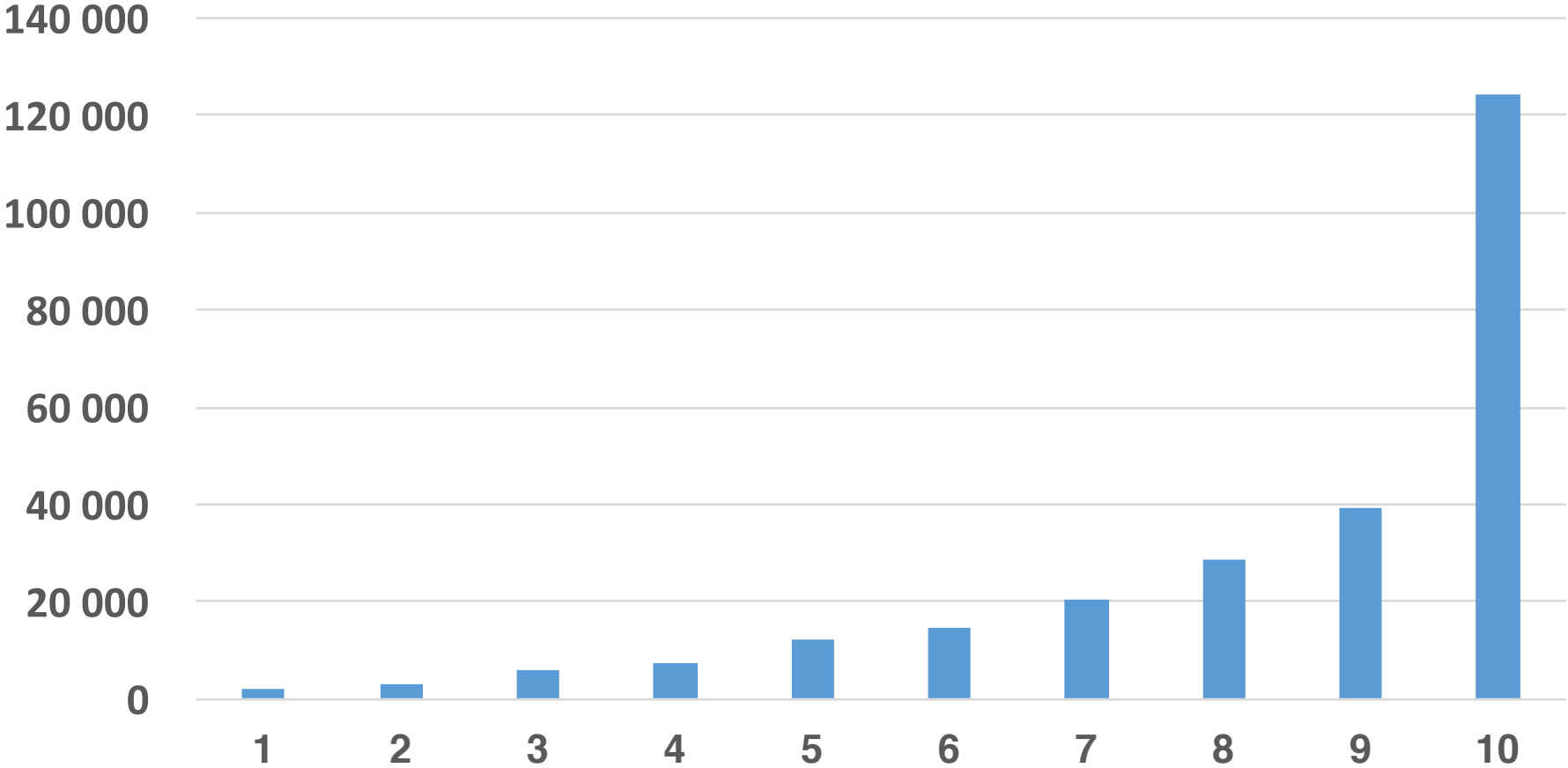
- Off-site infrastructure
- Community facilities
- On-site infrastructure
- Service delivery – water, electricity, sewerage, street lighting, road maintenance

Private

- On-site infrastructure
- House construction
- Housing finance

The challenge

Affordable house costs Kenya (US\$)



Potential for leverage in PPPs

Private

- Funding to enable project to proceed

Public

- Location – is the site well located in terms of work opportunities, infrastructure, housing demand, etc
 - Income groups – what income groups are to be served?
 - Type of development – is it appropriate to the planning etc of the locality
- BUT, PPPs only succeed if the private entity has confidence that it will get a satisfactory rate of return

The Risk

- An unknown market, and the lower the income group the less room there is for error.
- Developers have traditionally learned by doing: testing new ideas in terms of the public's interest to a solution. By the time a built solution is on offer, the formal approval process has been completed.
- Market surveys are usually restricted to responses to advertisement for new projects, or social surveys that lack detail regarding costs and alternative solutions.

Measuring Effective Demand

- It is not possible to establish what people want unless the respondents know how much it will cost
- To get a realistic response the respondents also need to know what the choices are and what they are getting for their money.
- It is therefore essential to give participants in any survey accurate costs so that they can balance the competing aspects of housing cost against each other.

Multiple variables

- The size and number of rooms
- The type of wall, flooring and ceiling finishes
- The services – sanitation and electricity
- The type of construction – single storey, row houses, flats, etc
- The size of plot, cost of land, soils and slope of land.
- Access standards – road widths, finishes etc
- Developer's costs – approvals, project management, interest during construction, profits, sales costs
- Long term finance – interest rate, term of loan, deposit required
- Monthly service charges and taxes
- To make these intelligible to respondents they must be expressed in monthly costs

The model: finances

- It is possible to combine all these variable in a simple spreadsheet based model, provided it has a simple user interface.

SMM Housing Model - Finances

What is your name?	Khumalo	
What is your occupation?	Security Guard	
How much do you earn a month?	R1,050.00	
How much do you spend on housing each month?	R240.00	22.86%
How much do you spend on service charges for water, rubbish removal etc?	R23.00	2.19%
How much can you afford to spend on housing and service charges together, every month?	R250.00	23.81%
Do you want to buy or rent?	<input type="radio"/> Rent <input checked="" type="radio"/> Buy	

The model: house design

SMM Housing Model - House Design

Describe the sort of house you need by listing the rooms that you want and saying how big you want them:

Room (Bathroom, shower and w.c. are selected on the Sanitation screen)	Select	Length m	Width m
Living Room	<input checked="" type="checkbox"/>	4.00	3.00
Bedroom 1	<input type="checkbox"/>	3.00	3.00
Bedroom 2	<input type="checkbox"/>	3.00	3.00
Bedroom 3	<input type="checkbox"/>	3.00	3.00
Bedroom 4	<input type="checkbox"/>	3.00	3.00
Kitchen	<input type="checkbox"/>	3.00	3.00
Dining Room	<input type="checkbox"/>	3.00	3.00
Balcony or Stoep	<input type="checkbox"/>	3.00	1.50

Gross Capital Cost	R18,763	
Nett Monthly Payment	R214	20.34%

The model: sanitation

SMM Housing Model - Sanitation

What sort of sanitation would you like?

Improved, ventilated pit latrine with shared water tap	<input checked="" type="radio"/>	1
Improved, ventilated, pit latrine with own water tap	<input type="radio"/>	
Piped water, with toilet and shower in one room	<input type="radio"/>	
Piped water, with toilet and shower in separate rooms	<input type="radio"/>	
Piped water, with bathroom incl bath, wc and basin	<input type="radio"/>	
Do you want hot water? (must have electricity)	<input type="checkbox"/>	
Do you want a w.c. in separate room? (must have bathroom)	<input type="checkbox"/>	
Do you want a shower in separate room? (must have bathroom)	<input type="checkbox"/>	
Do you want a kitchen sink? (must have piped water)	<input type="checkbox"/>	
Do you want a basin in the bedroom? (must have piped water)	<input type="checkbox"/>	

Gross Capital Cost

R18,763

Nett Monthly Payment

R214

20.34%

The building and plot

SMM Housing Model - Building and Erf Type

In what type of house or flat do you want to live?

Detached house in township or suburb	<input checked="" type="radio"/>	1
Semi - detached house in township or suburb	<input type="radio"/>	
Terrace (Row) house in township or suburb	<input type="radio"/>	
Two storey house in township or suburb	<input type="radio"/>	
What erf (stand) size do you want?	Frontage :	10.00m
(Erf size is calculated automatically for flats)	Depth :	20.00m
Flat in the centre of town (10 storeys)	<input type="radio"/>	
Flat at the edge of town (3 storeys)	<input type="radio"/>	

Number of Units	1,248	
Gross Capital Cost	R18,763	
Nett Monthly Payment	R214	20.34%

The model: roads and lighting

SMM Housing Model - Roads, Layout Type and Lighting

Width of access to front of erf?	Very narrow (3m) (pedestrian way) ▼
How should it be finished?	Nothing ▼
Width of roads serving your area	Normal (16m) ▼
How should they be finished?	Nothing ▼
Which type of block layout do you want?	Super block: 8 even deep ▼
Which lighting option do you want?	Tower lighting ▼

Number of Units	1,248	
Gross Capital Cost	R18,763	
Nett Monthly Payment	R214	20.34%

The model: fencing and walling

SMM Housing Model - Fencing and Walling

Decide the type of fencing/walling around your stand:

Type of fencing/walling?

Nothing

Decide where you want the fencing/walling:

Fencing/Walling at front of stand?

Fencing/Walling at back of stand?

Fencing/Walling down sides of stand?

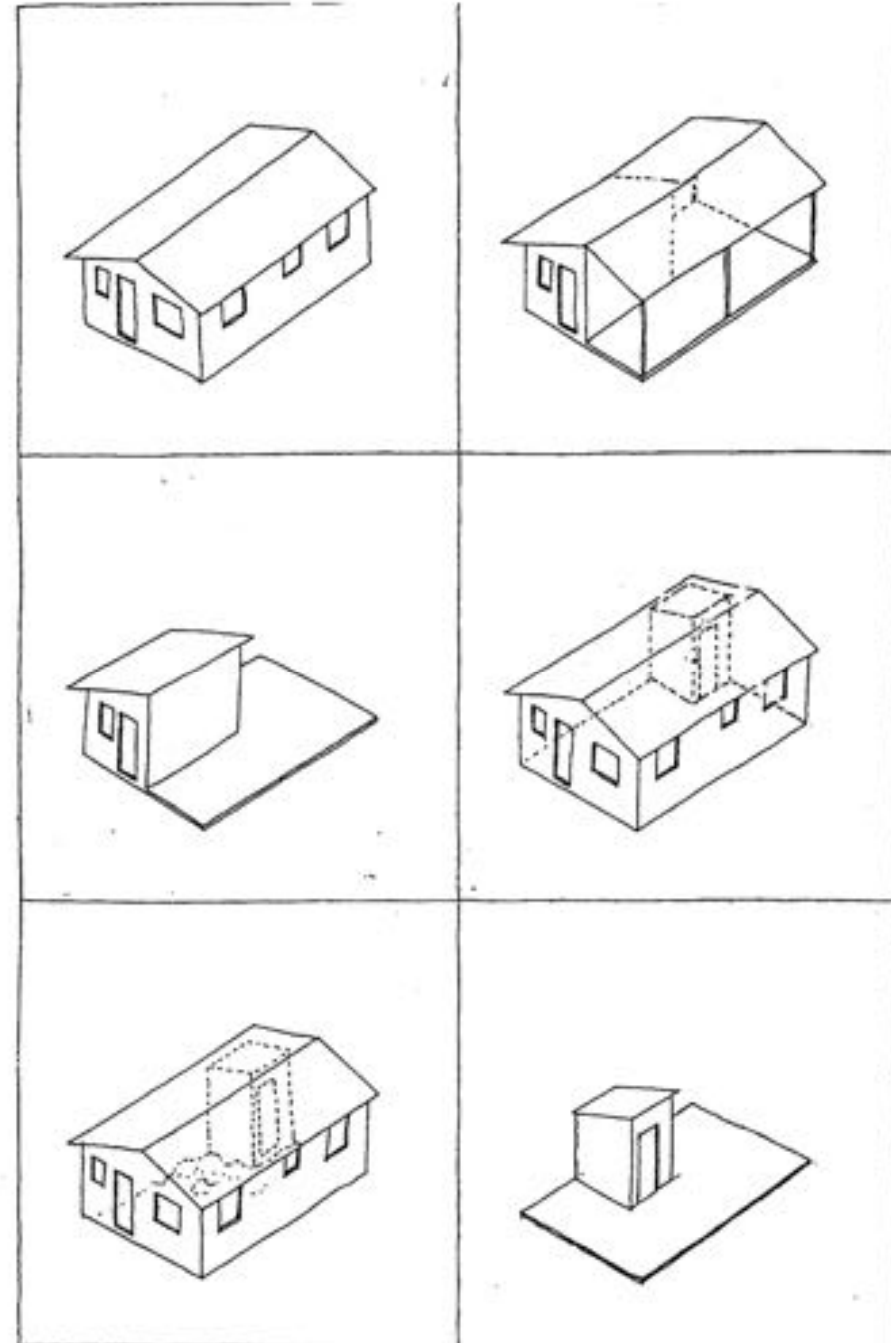
Gross Capital Cost	R18,763	
Nett Monthly Payment	R214	20.34%

The model: savings

SMM Housing Model - Savings

Would you like this to be a normal house, with all walls and roofing - no savings ?	<input checked="" type="radio"/>	1
Would you like this to be a one room house, with slab and roof ?	<input type="radio"/>	0
Would you like this to be a one room house and slab ?	<input type="radio"/>	0
Would you like the external walls, roof and slab only ?	<input type="radio"/>	
Would you like the external walls and roof but no slab ?	<input type="radio"/>	
Would you like this to be a slab and toilet block only ?	<input type="radio"/>	0
There are 1 internal doors. How many do you want?		1

Gross Capital Cost R18,763
 Nett Monthly Payment R214



Making it real

- These variables can be combined in very many different ways, and communicated through different media
- Ideally, for example, room sizes and house designs should be communicated through small models.
- Surveys can be with individuals or groups



A model



Summary

- The program automatically tabulates the options selected by the participant, who can then take a print out as a record.

SMM Housing Model - Summary for Khumalo	
Finances	
Income per month	R1,050
Desired Monthly Payment	R250
Rent or Buy	Buy
House Design	
Living Room	Yes 4m by 3m
Bedroom 1	No
Bedroom 2	No
Bedroom 3	No
Bedroom 4	No
Kitchen	No
Dining Room	No
Balcony or verandah	No
Savings (Omission of Walls/Roof)	Normal House - no omissions
Number of Internal Doors (max = 1)	1
Finishes and Electricity	
Plastered Walls	No
Ceilings	No
Paint on Walls and Ceilings (if any)	No
PVC Floor Tiles	No
Electricity	No
Sanitation	
Basic Sanitation	Improved, ventilated, pit latrine with shared tap
Hot Water	No
Additional w.c. in separate room	No
Additional shower in separate room	No
Kitchen sink	No
Wash hand basin in bedroom	No
Building and Erf Type	
Selected House/Flat type	Detached house
Erf size if House chosen	Frontage: 10m Depth: 20m
Roads, Layout Type and Lighting	
Width of access to front of stand	Very narrow (3m) (pedestrian way)
Finish	Nothing
Width of roads serving the area	Normal (16m)
Finish	Nothing
Layout Type	Super block: 8 erven deep
Lighting	Tower lighting
Fencing/Walling	
Type of Fencing/Walling	Nothing
Fencing/Walling at front of stand?	No
Fencing/Walling at back of stand?	No
Fencing/Walling down sides of stand?	No
Summary of Costs	
Land	R4,979
House	R10,905
Services	R1,810
Capital cost	R16,783
Bond payment without subsidy	R289
Gross Payment	R444
Subsidised payment	R214
% of Income	20.34%
% of target expense	85.42%

The renting/ buying choice

SMM Housing Model - Estimate of Costs - Buying

Estimate of total costs: buying

Inflation rate%	10.00		
Bond rate p.a.	19.00		
No. of years	20		
Maintenance	3.00	(% of gross capital cost p.a.)	
Cost of house	18,763		
Subsidy	14,250		
Subsidised cost	4,513	(less capital subsidy)	
Deposit (%)	5.00	(% of gross capital cost)	
Deposit (R)	938		
Capital to be repaid	3,575		
Total: Bond	13,905		
Gross payment	153,093		
			Services charges
			Water 20
			Sewage 25
			Electricity 40
			Refuse removal 10
			Street lighting 10
			Administration costs (sum)
			Rates
			Annual % 2.00
			Amount pd 31

Schedule

Year	Bond	Service Charge	Maintenance
1	695	1,867	563
2	695	2,054	619
3	695	2,259	681
4	695	2,485	749
5	695	2,734	824
6	695	3,007	907
7	695	3,306	997
8	695	3,639	1,097
9	695	4,003	1,207
10	695	4,403	1,327
11	695	4,843	1,460
12	695	5,328	1,606
13	695	5,860	1,767
14	695	6,446	1,943
15	695	7,091	2,138
16	695	7,800	2,351
17	695	8,580	2,586
18	695	9,438	2,845
19	695	10,382	3,130
20	695	11,420	3,443
21			
22			
23			
24			
25			
26			
27			
28			
29			
30			
Totals	13,905	106,949	32,239
		Gross Cost	153,093

The renting/ buying choice

SMM Housing Model - Estimate of Costs - Renting

Estimate of total costs:

renting: first twenty years

Inflation rate%	10.00		Services charges	
Initial yld (rent)	12.00	(% rate annually on capital)	Water	20
Low rise ops	1.50	(Rand/sm/month)	Sewage	25
High rise ops	3.00	(Rand/sm/month)	Electricity	40
Maintenance	3.00	(% of gross capital cost p.a.)	Refuse removal	10
Cost of house	18,783		Street lighting	10
Subsidy	14,250		Administration costs (sum)	
Subs. cost	4,513	(less capital subsidy)	Rates	
Deposit (%)	5	(% of gross capital cost)	Annual %	2.00
Deposit (R)	938		Amount pd	31
Cap to be repaid	3,575			
Total rent	31,017			
Gross payment	151,256			

Schedule

Year	Rent	Service Charge	Ops Costs
1	542	1,867	232
2	596	2,054	255
3	655	2,259	281
4	721	2,485	309
5	793	2,734	340
6	872	3,007	374
7	959	3,308	411
8	1,055	3,639	452
9	1,161	4,003	497
10	1,277	4,403	547
11	1,405	4,843	602
12	1,545	5,328	662
13	1,700	5,860	728
14	1,870	6,446	801
15	2,057	7,091	881
16	2,262	7,800	969
17	2,488	8,580	1,066
18	2,737	9,438	1,173
19	3,011	10,382	1,290
20	3,312	11,420	1,419
Totals	31,017	106,949	13,290
		Gross Cost	151,256

Results

- Method used throughout Southern Africa and in the West Bank of Palestine
- In spite of very different cultures and attitudes the method has been very popular with users
- It has removed the stigma of some solutions that might be considered sub-standard: a major constraint in some countries
- It has helped policy makers and developers focus on solutions that are acceptable to the public