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Owner Occupied Housing

Housing in ICP 2011 : Issues to be Resolved

Derek Blades

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Introduction

1. The purpose of this note is to help decide how the ICP 2005 guidelines on housing should be revised for ICP 2011.

There are two separate issues with regard to housing:

- How should the expenditure weights be estimated so that they are more reliable and more comparable across countries than was the case for ICP 2005?
- What price and/or quantity information should be requested from countries in order to estimate PPPs?

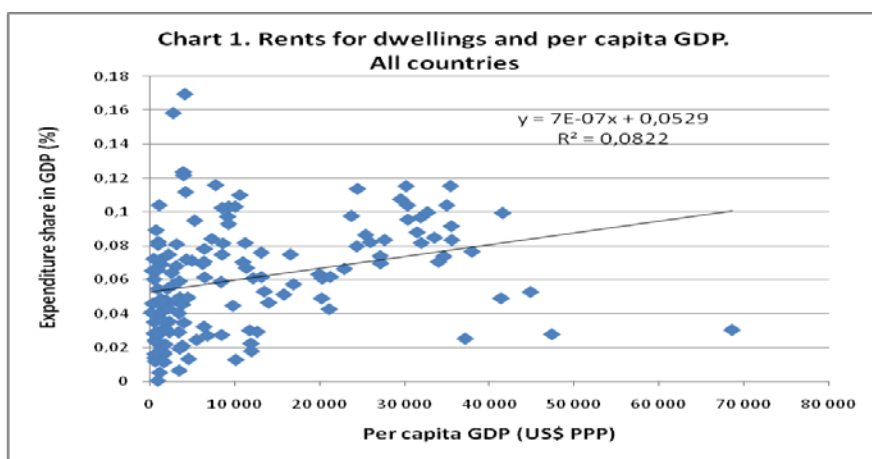
The first issue is considered in Part 1; the second issue in Part 2.

2. There are four annexes: the methodology questionnaire used for ICP 2005; a revised methodology questionnaire that could be used for ICP 2011; a draft questionnaire to collect information for the quantity approach to estimating PPPs, and a note on the information on housing available on the internet.

PART 1 EXPENDITURE WEIGHTS

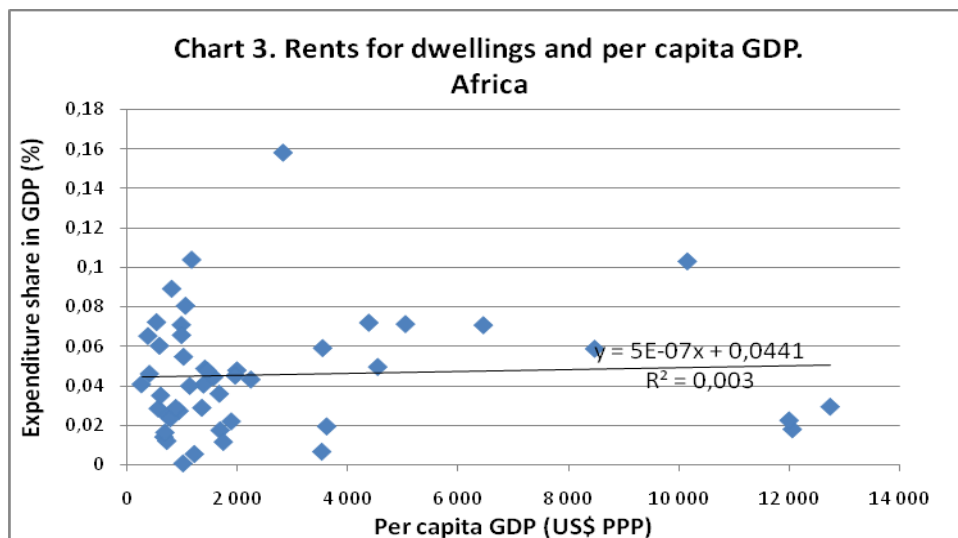
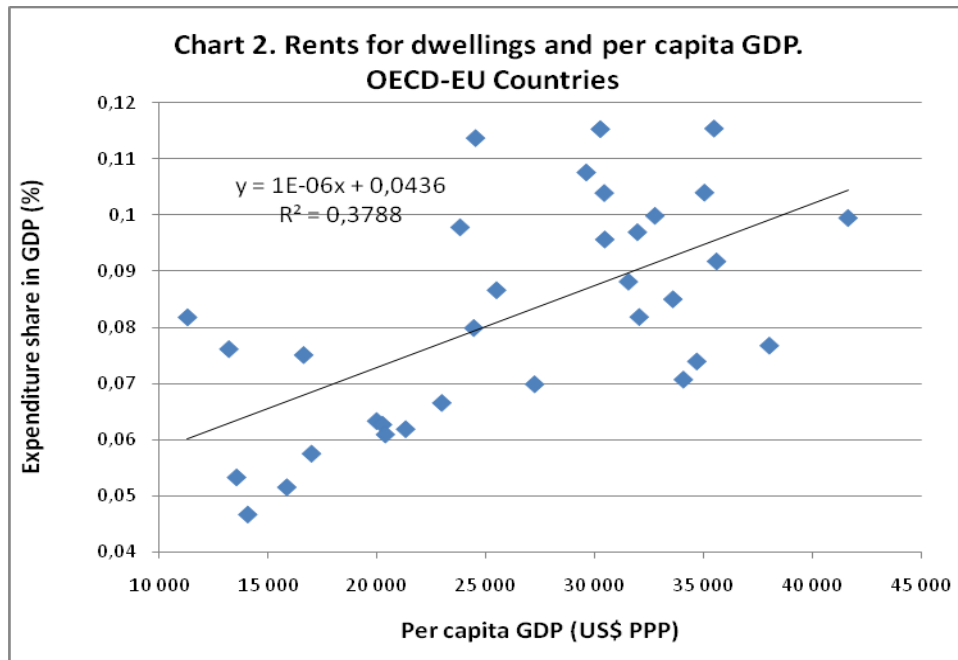
Expenditure weights are poorly estimated

3. Chart 1 shows expenditure weights reported by all countries for ICP 2005 and per capita GDP. I believe it is generally accepted that there is a positive relationship between expenditures on housing and per capita GDP. As people get richer they spend an increasing share of their income on housing. Chart 1 shows no significant relationship of this kind. In particular, countries at the lower end of the income scale reported expenditure shares on housing going from almost zero to 17% of GDP.



4. Charts 2 and 3 refer to the OECD-EU countries and Africa respectively. The OECD-EU chart shows the expected relationship between rents and income and I interpret this to mean that the expenditure weights for this group of countries are relatively well based. For Africa, however, there is

no relationship between income and expenditure shares and similar results are found for the other regions.



5. My conclusion is that expenditure weights For countries other than those included in the OECD-Eurostat comparisons are poorly estimated. There are two possible explanations for this:

- The SNA recommends that rents for owner-occupiers should be imputed by reference to rents actually paid for similar dwellings. This works fairly well for OECD-EU countries because in most of them enough dwellings of different kinds are actually rented to provide a good basis for imputing rents to owner-occupied dwellings. In many developing countries, however, relatively few dwellings are rented so that it is difficult to apply the SNA guidelines.
- In many non OECD-EU countries people build their own houses from locally gathered materials. These dwellings are almost never rented so that in many developin,g countries, particularly in Africa, national accountants have no guidelines for estimating imputed rents

for owner-occupiers. In many countries no imputations are made while in other cases the imputations appear to be based on actual rents paid for dwellings that may be quite unlike most of the owner-occupied dwellings.

6. Whatever the reason, the poor quality of estimates of dwelling rents undermines the credibility of the ICP in two ways. The reliability of the higher level PPPs is affected by bad expenditure weights for dwelling rents and, more important, the comparability of estimates of real GDP and household consumption between countries is called into question.

What do we know about country methodologies for rents?

7. A questionnaire was circulated during ICP 2005 to all regions other than OECD-Eurostat. No replies were received from Latin American countries but 39 countries from other regions replied. The questionnaire is attached as Annex 1 and Tables 1 and 2 below give some of the findings:

- Most countries have information on the number of dwellings that are rented and the number that are owner occupied.
- Nearly a quarter (9 out of 39) do not impute rents for owner occupiers and a further 6 only impute rents for owner-occupiers in urban areas.
- Of those that do impute rents for owner-occupiers almost all reported that they use actual rents paid for similar dwellings – i.e. they try to follow the existing SNA guidelines.
- Most countries distinguish between houses and flats and have some information on facilities such as electricity, water and toilets.
- Eighteen of the 39 countries have information on floor space and 22 on the number of rooms.

| | Question 2. Do you have estimates of the number of dwellings that are rented and the number of dwellings that are occupied by their owners? | | | | Question 8. Do you estimate imputed rents for owner occupiers? | | |
|-------------|--|-------------|-------------|---------|---|------------|---------|
| | Modern & traditional | Modern only | Traditional | Neither | Modern & Traditional | Only urban | Neither |
| ASIA | | | | | | | |
| Bangladesh | X | | | | X | | |
| Bhutan | X | | | | X | | |
| Cambodia | | | | X | X | | |
| China | | X | | | | X | |
| Fiji | X | | | | | X | |
| Hong Kong | X | | | | X | | |
| India | X | | | | X | | |
| Indonesia | X | | | | X | | |
| Iran | X | | | | | X | |
| Macao | X | | | | X | | |
| Malaysia | X | | | | X | | |
| Maldives | X | | | | X | | |
| Mongolia | | | | X | | | X |
| Nepal | X | | | | | X | |

| Table 1 (continued) ; Information on rented and owner-occupied dwellings | | | | | | | |
|---|--|-------------|-------------|---------|---|------------|---------|
| | Question 2. Do you have estimates of the number of dwellings that are rented and the number of dwellings that are occupied by their owners? | | | | Question 8. Do you estimate imputed rents for owner occupiers? | | |
| | Modern & traditional | Modern only | Traditional | Neither | Modern & Traditional | Only urban | Neither |
| Pakistan | X | | | | X | | |
| Philippines | X | | | | X | | |
| Singapore | X | | | | X | | |
| Taiwan | X | | | | X | | |
| Thailand | X | | | | X | | |
| Vietnam | | | | X | | | X |
| | | | | | | | |
| ESCWA | | | | | | | |
| Egypt | | X | | | | X | |
| Jordan | X | | | | X | | |
| Kuwait | X | | | | X | | |
| | | | | | | | |
| CIS | | | | | | | |
| Armenia | | X | | | | X | |
| Azerbaijan | | | | X | | | X |
| Belarus | X | | | | X | | |
| Kazakstan | | X | | | X | | |
| Kyrgystan | | | | X | | | X |
| Turkmenistan | | | | X | X | | |
| Ukraine | X | | | | | | X |
| | | | | | | | |
| AFRICA | | | | | | | |
| Cameroun | X | | | | X | | |
| Comoros Is | X | | | | | | X |
| Kenya | | | | X | | | X |
| Mali | X | | | | X | | |
| Mauritania | | X | | | | | X |
| Senegal | X | | | | X | | |
| Sierra Leone | | | | X | | | X |
| Uganda | X | | | | X | | |
| Tanzania | | | | X | | | |

| Table 2. Information available on dwellings | | | | | | | | | | | | | | | |
|--|--|----------------------------|--------------------------------|--------------------------------|-------------------------|-----------------|--------------------------|---|--------------------------------|--------------------------------|-------------------------|-----------------|----------------------|-------------------------|---|
| | Question 4. Do you have any of the following information about dwellings? | | | | | | | | | | | | | | |
| | Modern dwellings | | | | | | | | Traditional Dwellings | | | | | | |
| | Nu mbe r of hou ses | Nu mbe r of flats | Fl oo r sp ac e | Nu mbe r of roo ms | Ins ide wa ter | Elect ricity | Ins ide toi let | Serv ice life of dwe lling | Fl oo r sp ac e | Nu mbe r of roo ms | Ins ide wa ter | Elect ricity | W C toi let | Ot her toi let | Serv ice life of dwe lling |
| ASIA | | | | | | | | | | | | | | | |
| Bangla desh | X | | X | | | | | | X | | | | | | |
| Bhutan | X | X | | X | X | X | X | | | X | X | X | X | | |
| Cambo dia | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X |
| China | | | X | | | | | X | | | | | | | |
| Fiji | X | X | | X | X | X | X | | | | | | | | |
| Hong Kong | X | X | | | X | X | X | | | | | | | | |
| Indone sia | X | | X | | X | X | X | | X | | X | X | | X | |
| Iran | | X | X | X | X | X | | X | X | X | X | X | | | X |
| Macao | X | X | X | | X | X | X | | | | X | X | | | |
| Malay sia | X | X | | X | X | X | X | | | X | X | X | X | X | |
| Maldiv es | X | X | | X | X | X | | | X | X | X | X | | | |
| Mongo lia | | X | | | X | X | X | | | | | X | | X | |
| Nepal | X | X | X | X | X | X | | | | | | | | | |
| Pakista n | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X |
| Philipp ines | X | X | X | | X | X | X | | X | | X | | X | X | |
| Singap ore | X | X | | | | | | | | | | | | | |
| Taiwa n | | | X | X | X | X | X | X | | | | | | | |
| Vietna m | X | X | X | | X | X | X | | X | X | X | X | X | | |
| | | | | | | | | | | | | | | | |
| ESC WA | | | | | | | | | | | | | | | |
| Egypt | X | X | | | X | X | X | X | | | | | | | |
| Jordan | X | X | | X | X | X | X | | | X | X | X | X | X | |
| Kuwait | X | X | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | |
| CIS | | | | | | | | | | | | | | | |
| Armen ia | X | X | X | X | X | X | X | X | | | | | | | |

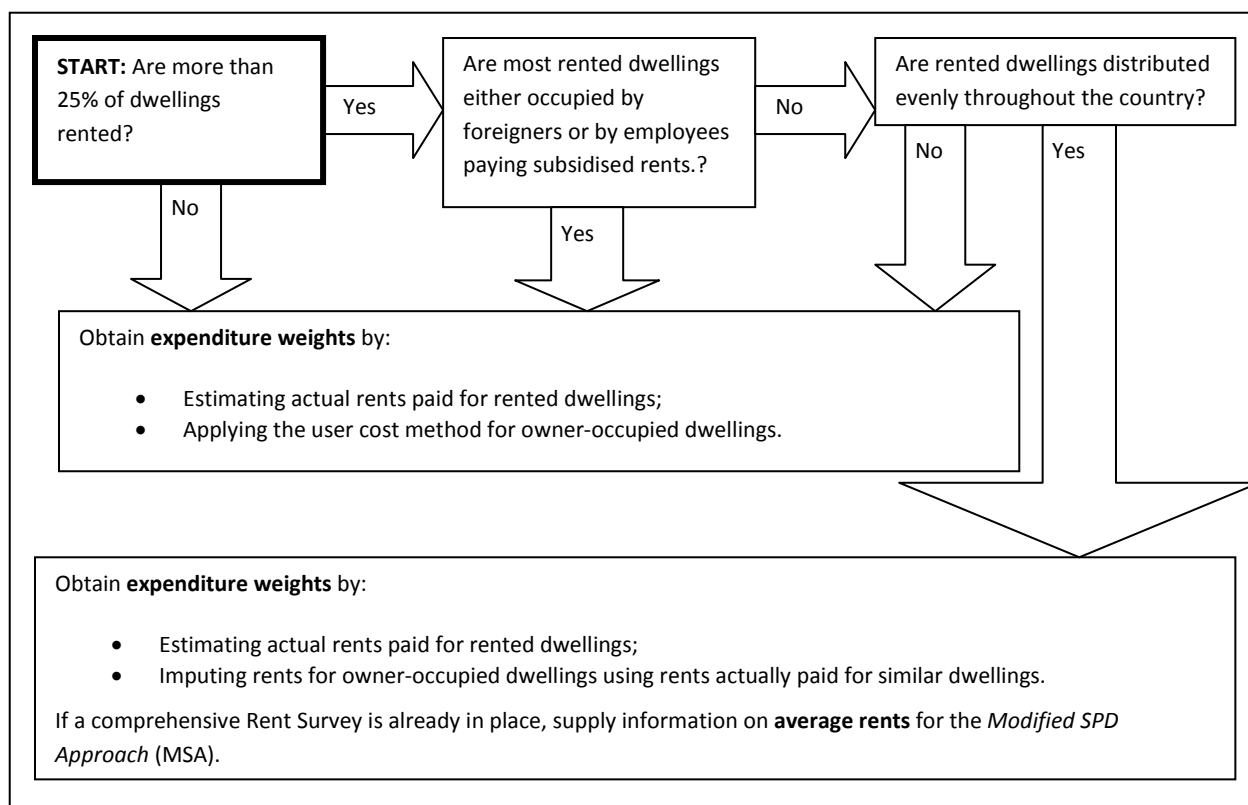
Table 2 (continued). Information available on dwellings

| | Question 4. Do you have any of the following information about dwellings? | | | | | | | | | | | | | | |
|---------------|--|-----------------|-------------|-----------------|--------------|-------------|---------------|--------------------------|------------------------------|-----------------|--------------|-------------|-----------|--------------|--------------------------|
| | Modern dwellings | | | | | | | | Traditional Dwellings | | | | | | |
| | Number of houses | Number of flats | Floor space | Number of rooms | Inside water | Electricity | Inside toilet | Service life of dwelling | Floor space | Number of rooms | Inside water | Electricity | WC toilet | Other toilet | Service life of dwelling |
| Azerbaijan | X | X | X | X | X | X | X | X | | | | | | | |
| Belarus | X | X | X | X | X | X | X | X | X | X | X | X | X | | |
| Kazakhstan | X | X | X | X | X | X | X | X | X | X | X | X | | | |
| Kyrgyzstan | X | X | X | X | X | X | X | X | | | | | | | |
| Turkmenistan | X | X | X | X | X | X | X | | | | | | | | |
| AFRICA | | | | | | | | | | | | | | | |
| Cameroon | X | | | | X | X | X | | | | X | X | X | X | |
| Comoros Is | | | | X | X | X | X | | | X | X | X | | X | |
| Kenya | X | | X | X | X | X | | | | X | X | X | X | X | |
| Mali | X | X | | X | X | X | X | | | X | X | X | X | X | |
| Mauritania | X | X | | | X | X | X | | | | | | | | |
| Senegal | X | X | | X | | | | | | X | | | | | |
| Uganda | X | | | X | X | X | X | | | X | X | X | X | X | |
| Tanzania | X | | | X | X | X | X | | | X | X | X | X | X | |

8. The questionnaire used to collect the above information could be improved in several ways. For example it did not ask countries if they can distinguish between urban and rural location of dwellings and it did not ask whether countries make separate estimates for traditional as opposed to modern dwellings. In preparing for ICP 2011 it may be worthwhile circulating another questionnaire. A possible draft questionnaire is included as Annex 2.

User cost as an alternative to the SNA guidelines for estimating expenditure on dwelling rents

9. In Chapter 10 of the 2005 Handbook the following chart was used to decide when the SNA guidelines for imputing rents for owner occupiers should be followed. When too few dwellings were rented or when those that were rented were only located in a few parts of the country or when they were mainly rented by expatriate workers, it was recommended that rents for owner-occupiers should be estimated by the user-cost method.



10. “User cost” can be used to estimate expenditure on rents by calculating each of the separate components of market rents. These are repair and maintenance costs, property taxes on dwellings, insurance service charges, consumption of fixed capital and net operating surplus. Chapter 10 of the ICP Handbook contains worksheets for user-cost estimates of rents. For most countries the main problem is to estimate consumption of fixed capital and the net operating surplus since they both require estimates of the current market value of the stock of dwellings. Chapter 10 of the ICP Handbook also provides worksheets showing how the value of the stock of dwellings can be estimated in countries where there are no regular capital stock estimates. As regards own-constructed (traditional) dwellings Chapter 10 recommends that houses should be valued as the number of hours taken to construct them times an appropriate wage rate such as the minimum wage for agricultural labour.

11. In the event, no countries are believed to have adopted the user-cost method for ICP 2005. A user-cost method on the lines described in Chapter 10 has been used by some East European countries since they joined the EU and more recently a number of West Balkan countries have applied the user cost approach for estimating dwelling rentals. In both cases workshops were organised to explain the method and compare and adjust the resulting estimates. If it is decided to focus on the user-cost method for improving rent estimates for ICP 2011 it would almost certainly be necessary to organise two workshops in each region – the first one to explain the method and the second to review country estimates.

PART 2. PRICE OR QUANTITY INFORMATION FOR CALCULATING PPPs

Prices or quantities?

12. For calculating PPPs in ICP 2005, two alternatives were proposed.

- In countries which meet the criteria in the decision chart above **and** where there are nationwide rent surveys covering most kinds of properties, the modified SPD approach was recommended. It is described as a “modified” because the Structured Product Descriptions (SPDs) are less detailed than for other goods and services.
- In other countries it was recommended that the “Quantity” method should be used.

Modified SPD

13. In ICP 2005, three Asian countries were identified as possible candidates for the modified SPD approach – Hong Kong, Malaysia and Philippines. They broadly met the three criteria specified in the decision chart above and they had regular surveys of rents covering at least the main population centres. Despite their best efforts and help from the ADB advisors, it proved impossible to apply the modified SPD method in practice and PPPs for these countries were obtained using the same method as for other countries in the region.

User-cost prices?

14. Hitherto the user cost method has been used to make estimates of the expenditures on rents for a stock of dwellings. In principle however it could be used to estimate rents for particular types of dwellings specified by SPDs. Typical SPDs might be for a *2-room flat of 50m², in a large urban area, with inside sanitation and water, and climate control*; or a *single family dwelling of 30m², in a rural area, no inside toilet or water*,

15. If it is decided to encourage the adoption of user cost to estimate total expenditures on rents it seems logical to use the same method to estimate rent prices for specific types of dwellings.

Quantity method

16. The “quantity method” involves calculating **volume relatives** which reflect both the **quantity** and **quality** of the housing stock. PPPs are derived indirectly by dividing the volume relatives into expenditure relatives. The latter are the ratios of each country’s reported expenditures on rents for dwellings. The volume indicators used to obtain the volume indicator relatives were derived as follows:

- The **quantity** of dwellings in each country was measured by the total floor space of dwellings. If floor space is not available, the total number of rooms is used instead and if there is no information on the number of rooms, the total number of dwellings is used as the quantity measure.

- A **quality index** was calculated as the geometric average of the percentage of dwellings with electricity, the percentage of dwellings with inside toilets, and the percentage of dwellings with piped water.
- The quantity index for each country was multiplied by each country's quality index to obtain the **volume index** for each country.

17. The quantity method was used in ICP 2005 for Latin America, CIS countries and for some countries in the OECD-EU group and West Asia. It was not used in Africa or Asia/Pacific because either the quantity index or the quality index (or both) were judged to be unreliable for many countries. The following Bar Charts A through F refer to the Asia Pacific region and illustrate the problems encountered in that region. In these charts countries are arranged in ascending order of per capita GDP(PPP). Here are some of the main findings:

- For the percentages of dwellings with electricity, inside toilets and piped water, there is generally an increase in percentages as countries become richer. However several countries reported implausible percentages such as: Thailand with nearly 100% of dwellings connected to electricity; Indonesia with only 20% of dwellings with piped water but 60% with inside toilets; and Laos where less than 0.5% of dwellings have inside toilets.
- Rooms per dwelling (Chart D) look too high for Nepal, Maldives and Brunei Darussalam and too low for Malatysia.
- Population per room (Chart E) shows the expected decline as per capita GDP rises.
- The quality index, Chart F, calculated as the geometric average of the percentages of dwellings with electricity, inside toilets and piped water generally moves as expected i.e. positively correlated with per capita GDP, but there are several outliers that need to be investigated including Butan, Cambodia and Laos (too low) and Philippines and China (too high). Part of the problem with this index is that for some countries only one or two of the quality indicators were available.

18. On balance it was thought that the quantity method should not be used for Asia and the Pacific and a "reference" method was used instead but the experience with Asia was altogether negative. There was little editing or follow-up mainly because of lack of time.

Chart A. Electricity %

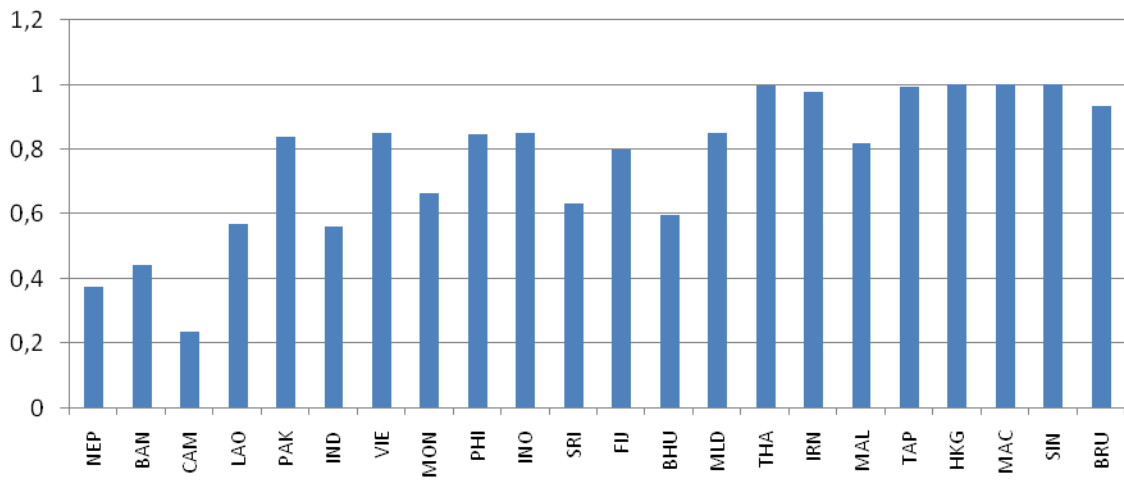
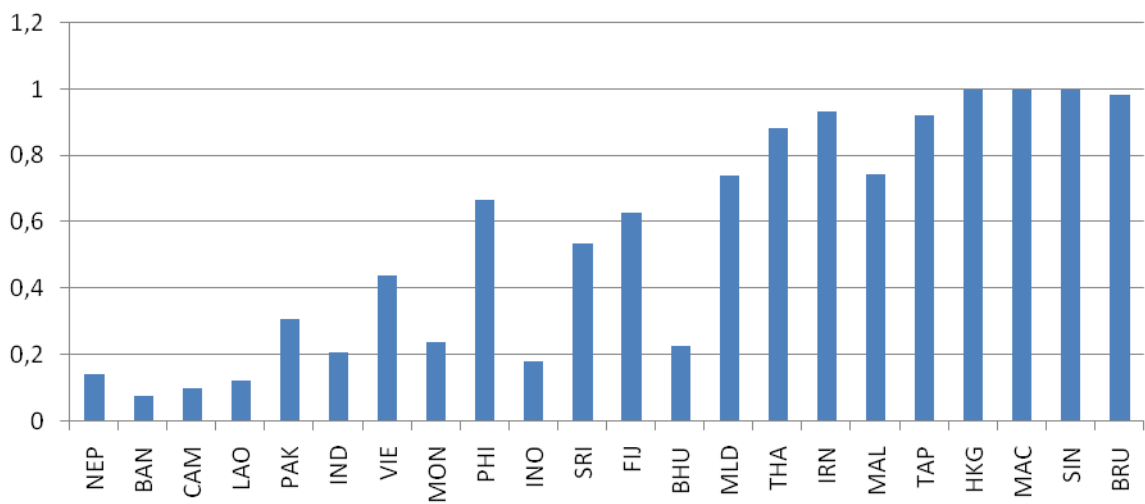
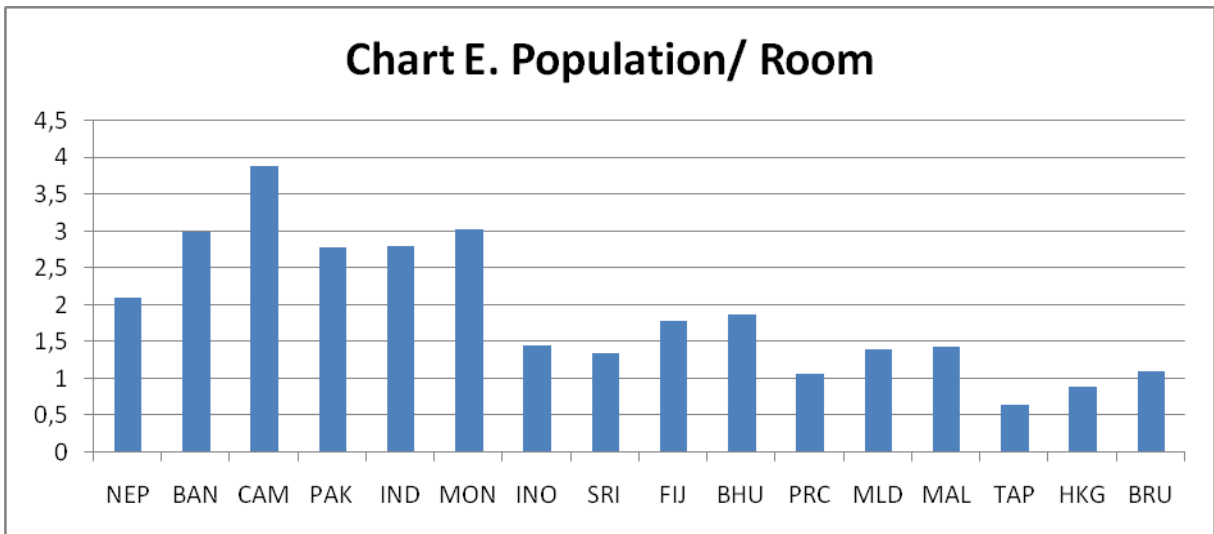
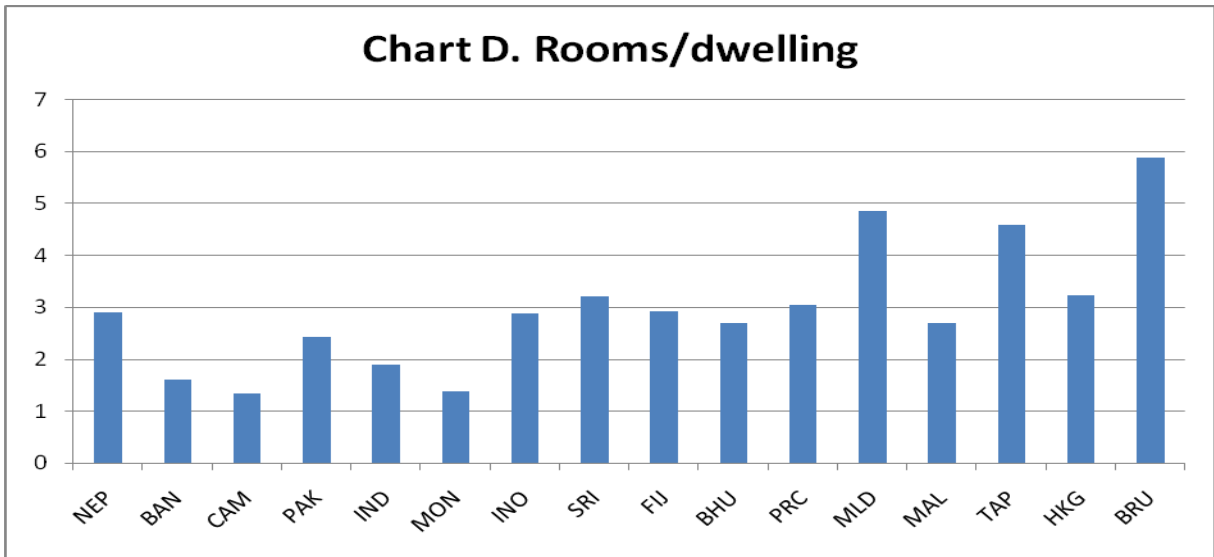
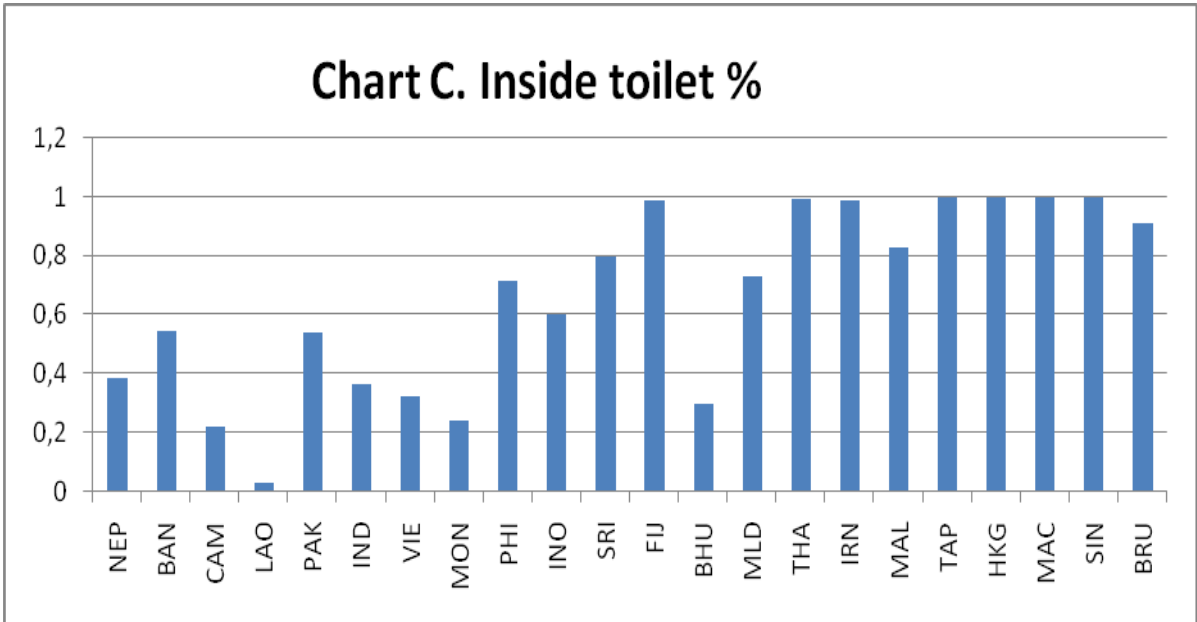
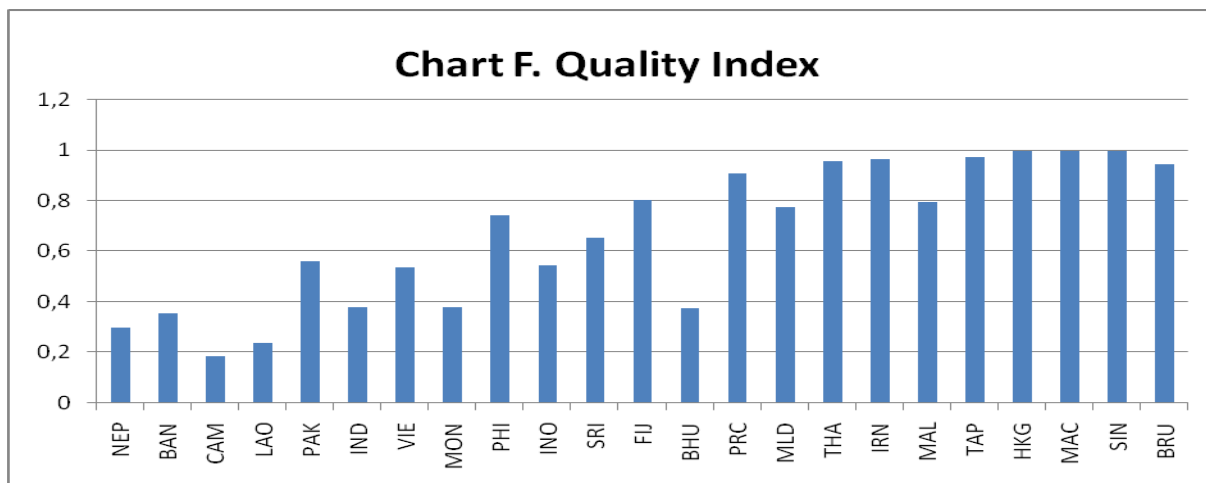


Chart B. inside Water %







An improved quantity method for ICP 2011?

19. Based on the experience with ICP 2005, the quantity method could be improved in several ways.

- A draft questionnaire to collect the quantity and quality information is attached as Annex 3. Editing procedures need to be developed and non- and partial-response should be followed up. Data reported in the questionnaire can be compared with data reported to other international agencies. For example, most countries report the percentages of dwellings with water and sanitation for the *Millennium Development Goals* data base maintained by UNDP.
- The best quantity indicator is probably the total surface area of dwellings. The number of rooms may also be a fairly good indicator but the number of dwellings is almost certainly a poor indicator. Countries should be encouraged to provide information on habitable surface and number of rooms even if this requires new ad hoc surveys.
- In addition to the three quality indicators used in ICP 2005, the number of persons per room could be used as a quality indicator. *UN Habitat* uses persons per room as one of its criteria for defining slums and Chart E above shows reasonable correlation between per capita GDP and numbers of persons per room. There are several ways that this additional indicator could be combined with the other three quality indicators and this would need some further thought.
- The quantity method could also be improved by calculating separate volume indicators for different kinds of dwellings – e.g. flats *versus* houses, urban *versus* rural, own-constructed (or “traditional”) *versus* modern. The questionnaire in Annex 2 will provide information on what breakdowns are feasible. What weights could be used to obtain a national volume indicator?

Questions

1. Is it useful to circulate a questionnaire on country methodologies for rents?
2. If yes, is the questionnaire in Annex 2 suitable? Any additional questions? Are the instructions clear?
3. When is it appropriate to use the existing SNA guidelines for imputing rents for owner-occupiers? Should the rules adopted for ICP 2005 be retained?
4. Should we encourage the user-cost method to estimate total expenditure on rents?
5. Should we also recommend user-cost as a means of estimating rents for specific types of dwellings?
6. If yes to questions 4 and 5, can two workshops be held in each region to explain the method and review results?
7. Improvements to the quantity method would require greater involvement by the regional coordinators in checking and editing replies and following up non- and partial-response. Is this feasible?
8. Is the questionnaire in Annex 3 suitable for applying the quantity method? Any additional questions? Are the instructions clear?
9. Annex 4 describes two web-sites relevant to housing in ICP – *Habitat for Humanity* and *Union des Banques Suisses*. The former gives some information on the costs of constructing houses; the latter gives data on rents in capital cities. What other websites might be useful?

Annex 1. Questionnaire used for ICP 2005

Questionnaire on Dwelling Services and Machinery and Equipment

This questionnaire asks you for information about the sources and methods that you are currently using to estimate **dwelling services** and **gross fixed capital formation in machinery and equipment** in the national accounts. It is being sent to all the countries from the African, Asian and Latin American regions which are participating in the *ICP2004*.

Many countries may find it difficult to provide the necessary information on prices and expenditure weights for dwelling services and gross fixed capital formation in machinery and equipment. Your answers to this questionnaire will help the ICP Global Office, together with the Regional Organisers, to develop standard methods which will make it easier for you to provide the data needed for the *ICP2004*.

The questionnaire has been designed so that it can be completed easily. Some questions ask for estimated percentages but these need not be precise estimates. We need to get an approximate idea of the *orders of magnitude* and the information you supply will not be used in the calculation of PPPs.

Dwellings

*Explanatory note. This part of the questionnaire makes a distinction between “modern” and “traditional” dwellings. **Modern dwellings** have walls in materials such as concrete, ceramic bricks or breeze block, they usually have metal or tiled roofs, and they are usually built by construction companies. **Traditional dwellings** have walls in materials such as dried mud, lattice frames or sun-baked bricks, they usually have roofs of reed, straw and other plant material, and they are usually built by the owners and family members.*

1. Do you have estimates of the **numbers of dwellings** in your country?

Yes, modern and traditional dwellings

Yes, but only for modern dwellings

No estimates for either modern or traditional dwellings

If yes to either of the above, what is the **source**?

Population census

Special housing census

Other statistical survey

Administrative records

Other source (please explain _____)

2. Do you have estimates of the number of dwellings that are **rented** and the number of dwellings that are **occupied by their owners**?

Yes, for both modern and traditional dwellings

Yes, but only for modern dwellings

No estimates for either modern or traditional dwellings

If yes, please give the approximate share: owner-occupied __% rented __%

3. Do you have estimates of the **value** of the **stock of dwellings** in your country?

Yes, modern and traditional dwellings

Yes, but only for modern dwellings

No estimates for either modern or traditional dwellings

If yes to either of the above, what is the source?

Perpetual inventory model (PIM)

Other source (Please explain _____)

4. Do you have any of the following **information about dwellings**? (*Tick items for which you have information*)

| Modern dwellings | <input checked="" type="checkbox"/> | Traditional dwellings | <input checked="" type="checkbox"/> |
|----------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|
| Number of houses | | Average floor space per dwelling | |
| Number of apartments | | Number of rooms per dwelling | |
| Average floor space per dwelling | | Dwellings with running water | |
| Number of rooms per dwelling | | Dwellings with electricity | |
| Dwellings with running water | | Dwellings with flushing toilet | |
| Dwellings with electricity | | Dwellings with other kind of toilet | |
| Dwellings with inside toilet | | Average life of dwellings | |
| Average life of dwellings | | | |

5. Do you estimate **consumption of fixed capital** for dwellings?

Yes No

If yes, what is the source?

Perpetual inventory model (PIM)

Other source (Please explain _____)

6. Do you have information on expenditures on **maintenance and minor repairs** to dwellings?

Yes No

If yes, what is the source?

Household expenditure survey

Other source (Please explain _____)

7. Do you have information on **rents actually paid** for dwellings?

Yes No

If yes, what is the source?

Household expenditure survey

Other source (Please explain _____)

8. Do you estimate **imputed rents** for owner occupiers?

Yes, modern and traditional dwellings

Yes, but only for urban dwellings

No estimates for either modern or traditional dwellings

If yes to either of the above, what is the **method**?

- Modern dwellings

Average rents actually paid for similar dwellings

Other method (please explain _____)

- Traditional dwellings
 - Average rents actually paid for similar dwellings
 - Other method (please explain _____)
 - _____

9. Do you have **price indices** for:
- Gross fixed capital formation in dwellings? Yes No
- Construction costs?* Yes No

Annex 2 Draft Questionnaire on dwellings for ICP 2005

ICP DWELLING SERVICES QUESTIONNAIRE

| | |
|---------|--|
| Country | |
|---------|--|

Introduction

This questionnaire collects information on the estimates in your national accounts for rents actually paid for dwellings and on imputed rents for owner-occupied dwellings.

Part 1 of the questionnaire deals with estimates of rents actually paid for rented dwellings. Part 2 of the questionnaire asks for information about imputed rents for owner occupiers.

Explanation of terms

Modern dwellings are generally built by professional building companies. The walls are made of durable materials such as concrete, ceramic brick, cement blocks or wooden planking, and the roofs are covered in tiles, wooden shingles or metal sheeting. Most dwellings in urban areas will be classified as modern.

Traditional dwellings are generally built by family members. The walls are made of less durable materials such as dried clay, sun dried bricks, bamboo or latticework and the roofs are made from reeds, straw or palm fronds. Traditional dwellings are generally located in rural areas and the families that occupy them are most likely to be engaged in agriculture.

Large urban areas. These will include the capital city and other major cities.

Other urban areas. These are other towns and cities which are defined as urban according to your own classification.

If you do not classify urban areas into “large” and “other” answer only for “all urban areas”.

Houses include villas, detached houses, houses joined to one or more other houses, terrace houses, town houses, etc. What distinguishes a house or villa from a flat or apartment is that the owner of a house is responsible for maintaining and repairing the roof and exterior walls.

Flats or apartments are usually in multi-story buildings and responsibility for maintaining roofs and exterior walls is shared among the owners

User cost is a method of estimating rents as the total of consumption of fixed capital, net operating surplus, property taxes and intermediate expenditures on repairs, regular maintenance and insurance.

PART 1. RENTS ACTUALLY PAID FOR RENTED DWELLINGS

1. Do you have information on rents paid for **traditional** dwellings separately from rents paid for other kinds of dwellings?

| | |
|-----|----|
| Yes | No |
| | |

2. Do you have information on rents for dwellings in urban areas separately from rural areas?

| Large urban areas | | Other urban areas | | All urban areas | | Rural areas | |
|-------------------|--|-------------------|--|-----------------|--|-------------|--|
| Yes | | Yes | | Yes | | Yes | |
| No | | No | | No | | No | |

3. Do you have information on rents for houses separately from flats?

| Yes | No |
|-----|----|
| | |

4. Complete as much of this table as you can, giving actual expenditure on rents for the latest year available

(Year _____ Currency unit _____)

| | Large urban areas | Other urban areas | All urban areas | Rural areas | All areas |
|----------------------|-------------------|-------------------|-----------------|-------------|-----------|
| Traditional houses | | | | | |
| Modern houses | | | | | |
| Modern flats | | | | | |
| All modern dwellings | | | | | |

5. What is the source of your benchmark estimate?

| | Tick whichever applies |
|--|------------------------|
| Population census | (Year _____) |
| Housing census or survey | (Year _____) |
| Household budget or expenditure survey | (Year _____) |
| Living standards measurement survey | (Year _____) |
| Agricultural census or survey | Year _____) |
| Other (Title of survey _____) | (Year _____) |

6. Do you collect annual information on total rents paid?

| Yes | No |
|-----|----|
| | |

7. Do you collect annual information on rents paid for specified types of dwellings (e.g. rents for 3 bedroom apartments in large urban areas, or rents for single family dwellings of 100 m² or more with electricity, water and indoor toilet, etc)

| | |
|-----|----|
| Yes | No |
| | |

8. If Yes: What is the source of your information?

| | |
|---------------------------------|------------------------|
| | Tick whichever applies |
| Household survey | |
| Survey of real estate agents | |
| Other (Please explain _____) | |

9. How do you update the benchmark estimates?

PART 2. IMPUTED RENTS FOR OWNER OCCUPIERS

10. Do you impute rents for owner-occupied **traditional** dwellings?

| | |
|-----|----|
| Yes | No |
| | |

11. Do you impute rents for owner-occupied **modern** dwellings?

| | |
|-----|----|
| Yes | No |
| | |

12. How do you impute rents? (Tick whichever method is used)

| | Modern dwellings | Traditional dwellings |
|---|------------------|-----------------------|
| Rents actually paid for similar dwellings | | |
| User cost method | | |
| Other method, Please explain | _____ | _____ |
| | _____ | _____ |

13. Complete as much of this table as you can, giving imputed expenditure on rents for the latest year available

(Year _____ Currency unit _____)

| | Large urban areas | Other urban areas | All urban areas | Rural areas | All areas |
|----------------------|-------------------|-------------------|-----------------|-------------|-----------|
| Traditional houses | | | | | |
| Modern houses | | | | | |
| Modern flats | | | | | |
| All modern dwellings | | | | | |
| All dwellings | | | | | |

Questionnaire completed by:

Name

Job Title

Email

Telephone

Address

Date

Annex 3. Questionnaire for Quantity Method

| | |
|---------|--|
| Country | |
|---------|--|

The questionnaire is in two parts:

- Part 1 collects background information on the housing market in your country. This information is needed to determine how PPPs for dwelling services can best be calculated for your country.
- Part 2 collects the information needed to apply the *Quantity Approach* for the measurement of dwelling services in the ICP.

Part 1. Background information on the market for dwellings

| | Tick whichever box applies | |
|--|---|---|
| What percentage of dwellings is rented? | less than 25% <input type="checkbox"/> | 25% or more <input type="checkbox"/> |
| What percentage of rented modern dwellings is occupied by foreigners? | less than 50% <input type="checkbox"/> | 50% or more <input type="checkbox"/> |
| Are modern dwellings available for rent in all or most parts of the country? | yes <input type="checkbox"/> | No <input type="checkbox"/> |

Part 2. Information Needed to Apply the Quantity Approach

| | | | |
|--|--------------------|--------------------|----------------------|
| | Urban areas | Rural areas | All dwellings |
|--|--------------------|--------------------|----------------------|

| Quantity Indicators | | | |
|--|--|--|--|
| Number of dwellings (<i>thousands</i>) | | | |
| Number of rooms (<i>thousands</i>) | | | |
| Useable floor space (<i>thousand square metres</i>) (Specify here if a measure other than square metres has been used _____) | | | |
| Quality indicators | | | |
| Number of dwellings with: (<i>thousands</i>) | | | |
| Electricity | | | |
| Inside water | | | |
| Inside toilet | | | |
| Population | | | |
| Year to which data refer: _____ | | | |

Explanatory notes

Urban and Rural areas. Use your own national definition of urban and rural areas

Rooms include bed-rooms, sitting rooms, dining rooms, study rooms, play rooms and kitchens that also serve as dining rooms but exclude halls, utility rooms, shower rooms, bathrooms toilets and kitchens that are only used for cooking,

Useable surface is the floor area of living rooms, kitchens, utility rooms, shower rooms, bathrooms, toilets and halls, *minus* the wall thickness and door and window recesses. Stairs, open balconies and terraces, cellars and lofts (when not equipped as useable premises) are not included. In the case of attics, only the section with a ceiling height of at least 1.7 metres is included. In practice, few countries have housing statistics that use this exact definition but near approximations can be accepted.

You are requested to provide information on useable surface area of dwellings in square meters. You may also report in square feet or other measure but, if so, please specify the units on the questionnaire.

Electricity will usually be *mains electricity* supplied by a generating company. But electricity may also be generated by the household itself from a diesel generator, solar panels or wind power.

Inside water is either running water that is piped into the dwelling itself or water from an underground spring or well that is for the exclusive use of the household. A dwelling that takes water from a communal standpipe or well should not be counted as a dwelling with inside water.

Inside toilets may be either water-flushing WC-type or chemical toilets. They must be located within the exterior walls of the dwelling.

Questionnaire completed by:

Mr/ Mrs/ Ms _____

Job title _____

e-mail _____

Telephone _____

Address _____

Date _____

Annex 4. Information on housing available on the Internet

Habitat for Humanity describes itself as a “non-profit, ecumenical Christian housing organization building simple, decent, affordable housing in partnership with people in need.” It builds houses using locally purchased materials and with the future owners contributing unskilled labour. The houses are regarded as decent accommodation by the standards of each country and range from simple 2-room houses with a ventilated earth latrine in an out-house (Sub-Sahara Africa) to 2-story houses with inside water and toilet (Central Asia). For most countries where it is working, Habitat for Humanity, gives the house sponsorship cost. Table 3 shows these sponsorship costs for houses in 24 countries.

Within each region, the houses appear to be similar so that, assuming a positive relationship between the costs of building a house and rents for occupying it, the sponsorship costs could possibly be used to check the plausibility of estimated rent prices within regions. For example, Table 3 suggests that rents in Nigeria are more than twice as high as in Cameroon and that rents in India and Sri Lanka will be approximately equal.

| | | | |
|--|------|--------------|-------|
| Uganda | 2360 | Nigeria | 8210 |
| Ethiopia | 2660 | Chile | 8320 |
| Zambia | 2790 | Senegal | 8970 |
| Sri Lanka | 3304 | Malaysia | 9940 |
| India | 3390 | Jordan | 10140 |
| Cameroon | 3430 | South Africa | 12600 |
| Vietnam | 4500 | Armenia | 13120 |
| Thailand | 4560 | Kyrgyzstan | 17100 |
| Colombia | 5610 | Romania | 27470 |
| Mexico | 5700 | Macedonia | 41390 |
| China | 5800 | Poland | 56290 |
| Paraguay | 6340 | Korea | 76410 |
| Source: http://www.habitat.org/intl/maps/default.aspx | | | |

Union Banque Suisse (UBS) periodically publish prices of consumer goods and services in more than a hundred cities world wide. (See <http://www.ubs.com/1/e/index.html>) The purpose is to show relative costs of living for expatriates and the UBS publication “Prices and Earnings: A comparison of purchasing power around the globe” is used to adjust salaries of staff posted abroad from Europe and America. Rents are given for six types of accommodation ranging from expensive 4-room furnished dwellings to cheap 3-room unfurnished dwellings. They also publish what they call “normal rents” described as “tentative values for average rent prices (monthly gross rents) for a majority of local households”. In Chart 4 these normal rents have been converted to local currency units and calculated as price relatives with Amsterdam = 100. Chart 4 shows the relationship between these rent price relatives and the rent PPPs from ICP 2005. It covers 11 EU countries which can be assumed to have reasonably accurate and comparable data on rents for their national accounts.

The relationship shown in Chart 4 is not very strong with an R² of 22%. However, it is possible that UBS “normal rents” could be used to check the plausibility of the rents reported for ICP 2011.

Perhaps they could also be used to fill gaps for missing countries? (The same test was carried out for the average of the six rents reported for expatriate accommodation but no correlation was found.)

