

# International Comparison Program

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## Notes on a programme of work on informal construction in Africa

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# Notes on a programme of work on informal construction in Africa

## 1. Overall objectives

The overall aim of this programme is to increase understanding of, and help improve, the estimation of the value, volume and price levels of construction activity in African countries and other developing countries in which household own-account construction is common. Specific objectives are to investigate:

- the value of construction activity included in, and excluded from, national accounts;
- how best to distinguish the forms of small and micro-scale 'informal' construction activities which characterise own-account construction in Africa, and which are usually unregulated and under-enumerated;
- the range and types of such informal construction;
- the resource (input) prices (particularly, labour and material prices) for these activities;
- options to improve the collection of purchase price and rental values for informal housing;
- the production of PPPs for informal construction.

In the longer term, outputs of the research will contribute to improved construction output data, national accounts, construction PPPs and poverty analyses. These will be useful for national and international agencies, development experts and academics and others. The work reported below will demonstrate what is possible, provide preliminary results and indicate what a fuller study would involve and produce.

## 2. Progress to date

Work to date has been undertaken by Jim Meikle, consultant to the African Development Bank, and a team at the University of KwaZulu-Natal led by Professor Julian May supported by the South African National Research Foundation. Three activities have been undertaken: pilot surveys, notes and papers, and preliminary data analysis.

We have implemented three exploratory surveys: a survey of national statistical offices (NSOs), a Price Survey and a Development Process Survey. The purpose of the NSO Survey is to establish what construction activity is included in national accounts and how values are calculated. With the assistance of the AfDB, twelve responses have been received from NSO and the results written up in a note. The Price Survey helps identify the main materials and products used in informal construction and collects current prices for these from a number of sources in a number of locations in each country. A pilot study was undertaken in the Dodoma region of Tanzania and a report has been prepared. The Development Process Survey comprises interviews with home-owners in rural and in urban informal settlements in order to collect information on the informal construction process. This provides information as to how informal buildings are designed, built and financed, over what timescale and at what cost. 113 interviews have been carried out in eleven countries (Burundi, Kenya, Lesotho, Malawi, Mozambique, Rwanda, South Africa, Tanzania, Uganda, Zambia and Zimbabwe). A paper is in progress which will analyse these data, refine the questionnaire, survey design and provide guidelines for enumerators.

Two notes concerning on the 'Informal construction and the International Comparison Program' have been prepared, dated January and April 2011. A note on informal construction

terms and concepts is in preparation and a first draft of a literature review paper on informal construction in Africa has been completed. The purpose of the note on terms and concepts is to help clarify the terminology around informal construction and, ultimately, to recommend an accepted set of terms.

In addition, we plan to collect and analyse existing household (or similar) budget surveys that will provide a sound basis for data on the size and occupancy of dwellings, the materials used, access to utilities and other dwelling and household characteristics, and how these are changing over time. An initial exercise has been undertaken to establish what data are available in Africa. Our focus is now on obtaining these surveys. Once collected we will collate and analyse these data and where possible, normalise and compare the information. Data should include gross construction output and construction value added, employment, dwellings completed, cement consumption, and so forth. These will be calculated as per capita, per unit of GDP, per km<sup>2</sup> land area and other factors. The intention is to develop as many comparable volume indicators of construction activity as possible. Sources of data have been identified and work is starting on collecting and analysing data.

### **3. Next steps**

The future work envisaged includes visits to countries in all five African regions (perhaps twelve countries in total). Countries will be as representative as possible and will include small and large countries, and Anglophone and Francophone countries. In each country, interviews will be undertaken with representatives of national statistical offices and other relevant government agencies and with national construction and development experts.

Contact will need to be made with appropriate international agencies, including UNCHS, ILO and the World Bank, and close liaison will need to be maintained with the AfDB.

### **4. Initial conclusions and emerging issues**

- A good succinct definition for informal construction does not exist. As has been applied to other activities in the informal economy, it is typically taken to be work that, in some way, is unregistered and perhaps not legal. This is not adequate or useful and one aim of the work is to develop appropriate terms. Women in the Informal Employment: Globalising and Organising (WIEGO) is a network of researchers that has made useful contributions in improving definitions and measurement of the informal economy and their work may be a useful point of departure from which to develop a definition;
- The current work has a focus on domestic buildings and we suspect that most informal construction is residential. However we need to consider informal non-residential construction, what it might consist of and how it might be measured (we don't think informal civil engineering construction will be significant);
- We have tested three surveys; all require refinement and to be tested at a larger scale, but all have produced useful material;
- Initial results from the NSO Survey indicate that construction work by registered contractors is generally included in national accounts but that work by unregistered contractors and households is only sometimes included but some work is specifically excluded. Further there is often uncertainty about how the values included are calculated.

It is also apparent that there is little conformity among NSO in terms of definitions and the procedures used when attempting to value informal construction;

- According to data collected, construction value added is between 3 and 6% of GDP and gross construction output can be two to three times that. Estimates of the value of construction are typically based on population or household growth or consumption of building materials and are likely to be variable in reliability. Methods of valuation vary widely and it is likely that the more informal the construction the less reliable the values included will be;
- We are investigating alternative indicators of construction output (per capita, per unit of GNI) and whether, and which, national characteristics influence construction demand (national income, rural/ urban) and how useful materials like cement are. Initial conclusions are that these are helpful as broad estimates and in highlighting anomalies but will probably not replace some kind of direct measurement;
- Both the Price Survey and the Development Process Survey suggest that the range of modern, traditional and other materials used for household own-account construction is relatively small and substantially overlaps with formal construction. However there is a market in some second hand/recycled materials (eg. timber products, ironmongery, glass) and some unconventional materials (eg. plastic sheeting, tarpaulin/sail-cloth);
- There is a general trend from traditional to modern materials although the drivers of this vary. In the particular example of Dodoma region in Tanzania, the lack of or high cost of timber as a result of deforestation impacts on roof construction (more lightweight construction – poor quality corrugated iron instead of mud) and fired bricks (lack of fuel wood). There may also be a general trend from owner-built to contractor-built and the Development Process Survey found that more than half of the dwellings had been constructed by a builder;
- Most materials are local (high volume/ low value) since transport costs are high but manufactured products are increasingly used (cement, reinforcing steel, corrugated iron, ironmongery), some imported (imports from China are particularly noted);
- In remote rural areas, natural or locally produced materials still tend to be used; where modern materials are used, they are usually bought in urban centres and transported by the purchasers. However even in these areas, these materials are being supplemented by modern materials which have been adapted to traditional housing forms;
- Informal material prices are by definition local; it may be difficult to confidently establish national averages. There can be seasonal variations in prices. The Development Process Survey also suggests considerable differences between the cost of houses built of unconventional, traditional and modern materials with a ratio of 1:5:20;
- Care needs to be taken with quantities of materials for which prices are requested (small but not too small) and the units for materials: materials are not necessarily sold in m<sup>2</sup> or kg, they can be in ‘loads’, baskets or 50kg bags or standard lengths. Metric, imperial and purely local units can be used;

- Valuing informal property using household surveys is potentially problematic. This is evident from the self-estimates of housing values reported in the Development Process Survey that have range of almost PPP\$300 000. Nonetheless 80 percent of owners interviewed were able to estimate either the resell value of their dwelling or the rent that could be charged. A similar proportion was able to estimate the cost of construction and these estimates were strongly correlated;
- Incremental development is usual, particularly in rural areas, with dwellings developing over time as households evolve. It is noteworthy that almost 80 percent of respondents in the pilot survey did not know whether building activities had been completed;
- The longevity of buildings varies, depending on materials used, regularity and quality of maintenance and security of tenure (security is typically correlated with permanence). The Development Process Survey indicates that rural buildings of traditional materials are typically ascribed lives of fifteen years, urban buildings of modern materials are ascribed lives of twenty years or more, and urban buildings of unconventional materials, five years only;
- Household budget surveys provide useful snapshots of main building materials and access to utilities and, where two surveys are available, trends over time can be established. However many surveys are out of date and few are in the public domain;
- In the Development Process Survey, we asked for sketches and dimensions of dwellings but this proved difficult for many surveyors who were not always permitted entry into dwellings. Photographs were also often difficult. We may try to devise archetypes (flash cards) or checklists to allow interviewers to capture the key characteristics of dwellings. Devising a definitive taxonomy of informal dwellings is probably unfeasible;
- We have reviewed existing ICP housing characteristics and definitions (for example in the ICP Dwelling services questionnaire) and, where appropriate, are incorporating them in our checklist;
- Training will be needed for price surveyors to ensure that they know enough about construction materials, technology and terminology. A standard NSO enumerator team will probably be unable to adequately complete these surveys.