



**Responsible Land Governance:
Towards an Evidence Based Approach**
ANNUAL WORLD BANK CONFERENCE ON LAND AND POVERTY
WASHINGTON DC, MARCH 20-24, 2017



**PILOT IMPLEMENTATION OF MARKET-BASED VALUATION FOR TAXATION IN
CIRCUMSTANCES OF LIMITED MARKET TRANSPARENCY
NIGERIA CASE STUDY**

AIVAR TOMSON

Land Valuation Consultant

Growth and Employment in States (GEMS3) – Nigeria

Adam Smith International

aivar.tomson@gems3nigeria.com

**Paper prepared for presentation at
2017 WORLD BANK CONFERENCE ON LAND AND POVERTY
World Bank – Washington, D.C., March 20-24, 2017**

Copyright the author 2017. All rights reserved. Readers may make verbatim copies of this document for non-commercial purposes by any means, provided that this copyright notice appears on all such copies.

ABSTRACT

This paper examines the introduction of a mass valuation system in circumstances of limited market transparency. Mass valuation is typically used on markets of sufficient maturity. However, new systems are often introduced in rather a different situation. The paper is based on a pilot project carried out in Tarauni LGA in Kano State in Nigeria. The aims of this study are to provide an overview of the current situation, to describe the features of development and to outline the main obstacles and challenges. The main conclusion is that mass valuation is the most preferred valuation technique even when the status of the property market is opaque. The first steps can be taken with a general understanding of market behaviour and limited market data, but only standardised procedures and precise reporting allow a reliable and sustainable mass valuation system to be built up. The experience and lessons learned in Nigeria may be useful on other markets with low transparency.

KEY WORDS

Mass valuation methodology, market data availability and reliability, market transparency

INTRODUCTION

The Growth & Employment in States program (hereinafter GEMS3) in Nigeria is a partnership between the Federal Government of Nigeria and the Department of International Development (hereinafter the DFID). It aims to reduce poverty in Africa's most populous country by increasing growth, incomes and jobs in selected states by addressing issues relating to land, tax and investment.

Since 2013, GEMS3 has been operating in Kano State, north-western Nigeria, in relation to Systematic Land Title Registration (hereinafter SLTR). With a population exceeding 10 million and an average density of *ca* 500/km², Kano has a relatively active, but opaque, property market. Mass land valuation is not traditionally practiced and is instead based on an individual approach. Most land sales are unregistered and, even in the case of registration, property prices are underdeclared.

Under the Land Use Charge (hereinafter the LUC) introduced in 2016, Kano State Government committed to unifying property fees (ground rent) and taxes (tenement rate and property tax) and expects to introduce annual, value-based property taxation with full coverage. However, implementation of the LUC requires all properties to be valued; the traditional valuation systems used in Kano today would be unable to support the LUC. Mass valuation systems are typically quicker and cheaper. GEMS3 has developed a mass valuation system for Kano which can be implemented with SLTR. Upon completion of SLTR, entire local government areas (hereinafter LGAs) can commence payment of the LUC.

Throughout 2016, GEMS3 tested the mass valuation system in Tarauni LGA, which is comprised of *ca* 10,000 property units in mainly low- and medium-density residential areas.

1. METHODS

The aim of the pilot project in Tarauni was to test the feasibility of market-based mass valuation techniques in circumstances of limited market transparency. The project was led by the author of this paper, meaning that the paper is based on direct observation.

The main features tested were as follows:

- availability and reliability of indicators of value (IOVs) – sales and rents, specification and collection of attribute data;
- implementation of sales comparison and income methods in the context of mass valuation in the current circumstances;
- accuracy issues of ratable values;
- tax rates and potential revenues.

2. MASS VALUATION PILOT IN TARAUNI LGA

Most countries apply taxes on property. The solutions implemented can differ. Kano State has made its choice: the LUC passed in late 2016 stipulates that three different land use charges including ground rent, a tenement rate and property tax will be applied. Ground rent is based on fixed annual payments which are defined for different locations in the law. The tenement rate and property tax are based on ratable values,

which means that there is a need for valuation. According to the LUC the value of ratable units is determined on the basis of open market value¹, which is a well-known concept around the world.

The LUC does not provide any further details regarding valuation. Valuation can be carried out using individual or mass valuation, which are similar in nature but differ in the extent of their generalization. Mass valuation is a rational method of valuation: it has been widely used in recent decades, allowing valuations to be carried out relatively quickly and inexpensively. Computerization and especially CAMA (Computer-Assisted Mass Appraisal) systems have made these changes possible. Traditional valuation approaches remain the most common in the context of many other valuation purposes and specific properties, but mass valuation has a leading role in the context of property taxation.

Quite often the introduction of a mass valuation system takes place in circumstances where the market can be characterized by a low level of transparency and maturity. This situation exists in Kano. The pilot project carried out in Tarauni LGA (Jan 2016-Feb 2017) confirms the technical feasibility of market-based mass valuation. The status of the property market in Kano has been determined and a methodology has been developed which takes the existing shortcomings into consideration.

The Tarauni solution follows the main stages of the mass valuation procedure:

- data specification and collection;
- modelling;
- assessment.

All of the main parts of the procedure were tested in the Tarauni LGA. Data specification was carried out for different types of use. Depending on the market sector, data about sales or rents together with the required attribute data were collected. Market data were provided by local property agency companies. As there was no systematic collection of sales and rent data, it was difficult to determine data reliability. Since the data were collected by different teams, and a remarkable number of agencies were covered, it was possible to identify systematic errors. The primary data needed for modelling were collected. However, this was not enough for assessment, as the same attribute data should be collected for all ratable properties. Only limited sample areas were covered first, to check the technical feasibility of the existing approach. Although sales for the last three years were collected, this still caused problems – especially in the context of older sales. Quite often these sales remained unclear because of a lack of data about the building quality; sometimes there was not even enough certainty about the exact price level. These problems led to the solution to introduce a regular data collection system, which at this point remains an idea. There was even another supporting reason, as it was difficult to find solutions for time-adjusting older sales. Repeated sales remained available, but considering the huge variation it did not provide results with a high degree of accuracy.

The Tarauni solution was based on parameters that represented the most important of these. The price factors used in valuation were:

- type of use;
- location;
- size (land and buildings);

¹ „Open market value“ has been widely used by RICS (Royal Institution of Chartered Surveyors). Nowadays the main part of valuation terminology is harmonized and most often the term „market value“ is used instead of „open market value“. Market value is defined in IVS (International Valuation Standard). The meanings of these two terms in general are the same.

- quality (buildings).

These data were collected using SLTR (land areas), orthophotos (footprint areas of buildings) and field inspections (number of floors and building quality, which can be gauged on site). This way it was not possible to enable a high degree of accuracy, but at the same time the solution was relatively inexpensive, and in the context of the low transparency of the market, higher accuracy of attribute data does not produce more accurate valuation results (or its influence is too limited as to be fiscally efficient).

The process of valuation consisted of the following stages:

- exploratory analysis and data cleaning;
- formation of price zone;
- calculation of average price levels;
- calculation of additional adjustments (thereby taking building quality into consideration);
- calculation of open market values and ratable values;
- banding and assessment.

Multiple Regression Analysis (MRA) was excluded because of the limited number of IOVs and their high rate of variation. This solution was developed following the completion of the collection of sales and rents. The formation of price zones and the calculation of average price levels were used as an alternative solution to the MRA. Differences in building quality were analyzed based on matched pairs. Despite remarkable variation, the required basis for adjustments was estimated. The income approach in the context of commercial properties was tested. An approach based on the gross income multiplier was selected as the approach in transforming annual rental values to capital values.

All of the stages were carefully tested. Exemption situations can still arise in the later stages, as they are difficult to foresee without complete coverage of ratable units. Ratable values were reduced by 20% compared to open market values so as to minimize the risk of overvaluation, as the accuracy level of the initial data was relatively low. The main idea behind the value bands was to use value categories instead of discrete values, which reduce accuracy expectations related to ratable values. This is a good solution in circumstances of limited transparency, and this way it is possible to reduce the number of appeals as only very rarely can there be inaccuracies which lead to changes in the value band.

Mass valuation projects differ case by case. The pilot area consisted of *ca* 10,000 properties, mainly covering low- and medium-density residential areas and a few mixed-use areas with relatively high commercial potential. The first rough estimate was that the task could be done by six staff members within a more or less three-month period, with *ca* 300-400 working days being needed. This was an approximation and included different competence levels, leading to the costs per person being rather different. Successful implementation of mass valuation projects depends quite a lot on administration. There should be a team which is relatively small in terms of personnel but still capable of completing the required task within a relatively limited timeframe. Depending on the size and complexity of the LGA, four staff members could be involved in data collection, allowing the use of specialization up to a certain level. At least two senior valuers would be needed. They should administer data collection and be responsible for valuation. As there is no earlier experience in mass valuation, the staff would need to be trained.

The tax rate for residential properties was probably accidentally set at the level of 0.02% for a tenement rate (revenues collected by the LGA) and another 0.02% for property tax (revenues collected by the State Government), amounting to 0.04%, which is too little to keep costs – compared to revenues – at a reasonable

level. As the tax rates need to be changed, this is a good opportunity to utilize more flexible tax rates, provided that LGAs consider their revenue needs and taxpayers' ability to pay. Minimum and maximum tax rates could be fixed and the annual growth of every tax bill could be limited to avoid too rapid an increase in the tax burden, which could be harmful. Nevertheless, it does not seem reasonable to levy a property tax in high-density areas. In the case of extremely low tax rates this is fiscally inefficient; while in the case of higher rates it is unfair, because of people's ability to pay. The first calculations regarding potential tax revenues have been made and the tax burden on different property-owners/ taxpayers has been tested even more carefully.

CONCLUSIONS

Although the full implementation of mass valuation in the Tarauni pilot project has not yet been completed, certain conclusions can already be drawn.

Data collection is always complicated. The Tarauni experience highlights the need to build up data collection on a regular basis. The collection of historical price data is complicated and does not produce reliable results. It is still possible to trust a limited number of the most important price factors.

Mass valuation is the preferred valuation technique in circumstances of an opaque property market. Whether to use mass valuation or a more individual approach depends on a number of things. However, it does not seem reasonable to argue for the use of an individual approach based on previous experience. The first steps in the context of mass valuation can be made with a general understanding of market behavior and limited market data. It is always possible to cover any gaps by carrying out a revaluation.

Only standardized procedures and precise reporting allow for reliable and sustainable mass valuation systems. This is something which does not work as well in the case of individual valuation.

Low-level fixed tax rates are harmful fiscally as well as in the context of valuation, as they lead to pressure on overvaluation for revenue needs. Tax rates should be fiscally reasonable. Ratable values may have another use, but they are typically marginal and do not produce revenues which justify disproportionate expenditures in the context of property taxation.

It is necessary to project not only revenues but also the tax burden in the context of different taxpayers/ property-owners. The tax should be in line with people's ability to pay.

REFERENCES

IAAO (2014): Guidance on International Mass Appraisal and Related Tax Policy

ACKNOWLEDGEMENTS

I would like to thank my colleagues from GEMS3 (Olivia Kolbe-Booyesen, Andrew Smith, Abdullahi D. Shuaibu, Abdur Rauf Umar and Maikudi Haruna) for their contribution and support. They are not responsible for any errors in the paper or for any of the views expressed herein.