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How to track property markets in African cities

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1. Introduction

The structure and nature of land markets are shaped by a combination of political, social, cultural and economic forces. Property markets in general are from a financial economist's point of view 'inefficient'. This is so because individual properties are mostly unique (making comparisons difficult), and because of the lack of a central clearinghouse for the dissemination of market data.[1]

Readily available information, based directly or indirectly on transactions, would make property markets more efficient, thereby reducing risk and improving decision taking by developers, investors and government at all levels. *Prima facie*, the lack of market data and information is especially acute in third-world countries.

The dearth of data naturally leads to poor decision taking by the public and private sectors. As a result, local governments typically don't know what is going on in their local land markets[2], as their primary line function does not include the tracking, analysing and reporting on the land market.

So the purpose of this paper — based on a scoping study commissioned by Urban LandMark[3] — is to consider the viability and practicality of

(1) the rapid assessment of sub-Saharan African cities' property markets using descriptive secondary information, and
(2) compiling quantitative indicators with which an analyst can attempt to understand and track these markets over time.

Our paper complements existing initiatives that already report on the state of African cities' land markets. However, in these initiatives the residential indicators tend to cover only the human-rights or social domain, and no attempt has been made to track residential or nonresidential real estate as an *economic* phenomenon. It is primarily this gap that the study attempts to fill.

The researchers selected Polokwane (capital of South Africa's Limpopo province, previously known as Pietersburg), Gaborone (capital of Botswana) and Maputo (capital of Mozambique) as African case studies.

We organised this paper as follows:

Firstly, we superficially describe the land markets in the selected cities using a template that could be applied to cities worldwide.

Secondly, we propose a set of time-series indicators and a survey methodology that are practical and inexpensive to compile. We demonstrate the value of these indicators on the basis of data that Rode & Associates has been generating in Polokwane and elsewhere in South Africa. This approach could also be applied worldwide.

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[1] When a market is described as inefficient, it means that investors do not know enough about the securities (read: properties) in that market to make informed decisions about what to buy or the price to pay. [Financial] markets in emerging nations may be inefficient, since few analysts follow the securities being traded there. Source: , <www.morganstanleyindividual.com/customerservice/dictionary/Default.asp>. Viewed on 5 August 2010

[2] D Dowall, *The Land Market Assessment: A new tool for urban management*, The World Bank, Urban Management Programme, 1995, p. 9.

[3] E G Rode & B Rode, *Scoping report: an essential guideline to develop a reporting framework on urban land markets across sub-Saharan Africa*, unpublished draft report commissioned by Urban LandMarket, July 2010.

2. Descriptive template of the land market

The researchers created a preliminary template to assess an urban land market based on four urban-land-market dimensions, viz.

- Land
- User
- Development, and
- Finance

The dimensions are effectively four quadrants of the land market. We broke them down into 24 components to assist in the development of indicators.

We emphasise that it was not the intention of the research to analyse the property markets of the three case-study cities. This was merely a scoping study, which forms the first link in a proposed series of studies that would eventually track sub-Saharan African cities' property markets. The idea was to create a preliminary template that can be used for describing the nature and structure of – and eventually track – a land market.

2.1 The land dimension

Availability, **tenure** and **price** determine the way people occupy and hold land.

In **Gaborone**, the land tenure system (as a supply-side constraint) complicates future urban development, along with inherent planning, administrative and statutory challenges. Urban developments in Gaborone seem to be curtailed by government policy of attempting to acquire tribal and freehold land at prices below market value (the latter represents "highest and best" use[4]). This type of intervention by government in the market inevitably results in an unresponsive supply side.

Land values in Gaborone have risen dramatically over recent years (note: this information was published in 2007), and unsubsidised land within the other major towns and cities is beyond the reach of the lower income groups.[5] Land sold by the government to developers is not subsidised, and agreements of sale include conditions of re-sale, e.g. 60% of buyers of the end product should be Batswana, without prescribing the retail prices.. As a result, 95% of the (primary) raw-land market is not governed by market forces; in the secondary market, this percentage is only 5%.[6] The market is further distorted in that foreigners are not allowed to purchase land, but there are ways and means to circumvent this situation.[7]

The typical market rental (not asking rental) per month for housing in Gaborone is as follows (in brackets the equivalent rentals for Polokwane in South Africa):

- Low-priced house: P4000 (R3500)
- Middle-priced house: P7500 (R5500)

[4] Highest and best use is defined as: *The most probable use of a property that is physically possible, appropriately justified, legally permissible, financially feasible and which results in the highest value of the property being valued*. Source: International Valuation Standards Committee, London, 2003

[5] L von Rudloff, *Access to Housing Finance in Africa: Exploring the issues, No. 2, Botswana*, FinMark Trust, October 2007, p. 24.

[6] K Jefferis, Econsult, Gaborone, personal communication, 20 May 2010.

[7] *ibid*.

- High-priced house: P12 000 (R8000).[8] [9]

The comparison between the two cities is apt because (a) it is based on exactly the same size/quality description and (b) the pula trades at close to parity with the rand. However, in the case of the heterogeneous and thinly-traded high-priced segment, the variability becomes greater, as a result of which we would not attach much importance to the seemingly great difference in rent. Be that as it may, this superficial comparison offers no *prima facie* evidence that the Gaborone rental market is overpriced, with the possible exception being the upmarket segment (where presumably the expats are the main tenants).

In **Maputo**, the country's 1997 Land Law provides legal protection for two categories of land holding, viz.:

(a) established users of customary land, and
(b) those who have occupied land in good faith, and have used it productively, for a period of at least 10 years.[10]

The latter category regularises the tenure of squatters (in slum areas) such as those that fled to the outskirts of Maputo during the civil war of the 1980s. These unplanned squatter invasions have contained expansion of Maputo Central, thereby also putting a lid on housing supply, other than densification or infill. This slum belt around the central area can only be bridged if government were to purchase the 'land rights' from the occupants at rather high prices (this is necessary to compensate the current occupiers for their structures).

In Maputo Central, house rentals are extremely high and booming. An estimate of the monthly gross rental (in Maputo Central) for a ground-floor residential apartment is between US$3.000 and $5.000. The gross monthly rental for an upper-floor apartment within a high-rise building, with a working lift, can be between $2.000 and $2.500. Prices and rentals are lower in Matola, a decentralised dormitory town (with its own municipality) that is fast becoming the preferred location for middle-class people working in Maputo. Matola is an interesting case in that it leapfrogged the ring of informal settlements to the west of Maputo Central, and it is growing at a furious pace as middle-class people are being displaced from the Maputo Central owing to the sharp rise in property prices and rentals there.

The holding of land is also determined by **registration and recording, developability, land conversion, land invasion and spatial identification of land parcels**.

In **Gaborone**, the registration of freehold, common-law leases and Fixed Period State Grants is governed by the Deeds Registry Act, 1960. However, in practise, only the first formal transaction pertaining to a particular property is registered, after which any further transactions are normally not registered.[11] Transactions at the bottom-end of the housing ladder cannot be tracked as they become more and more incomplete.[12] Furthermore, tribal land records are not managed effectively, and Land Boards have insufficient and incomplete records on parcels of land and ownership. The invasion of land (or squatting on tribal land) is no longer occurring as it was dealt with severely in the past.

[8] The data for Gaborone are ex: M Moremang-Gobe, Pam Golding Properties, email correspondence, 5 August 2010.
[9] The data for Polokwane are unpublished ex Rode & Associates, surveys for *Rode's Report*, second quarter of 2010.
[10] United Nations Human Settlement Programme, *Secure land rights for all*, UN-Habitat, 2008.
[11] Jefferis, *op. cit.,* 20 May 2010.
[12] *ibid.*

The Municipality of Gaborone deals with the applications for building construction and land-use change. Records are kept manually. A Building Plan Register for the Gaborone municipal area does exist but registration is done manually and only contains building plans submitted.[13] According to the Municipality, a relatively low number of land-use applications are considered.[14]

In summary, although Botswana has a sophisticated cadastre and deeds registry, the integrity of statistics on building-construction activity, land use, state land, land allocation and waiting lists are questioned.

In **Maputo**, a dual system of registration for land and buildings is used. However, the two systems are incompatible, and both systems exhibit the following deficiencies:

(i) Difficult to use (there are problems regarding indexing and accessing the records), and
(ii) Less secure in legal terms and prone to mistakes.[15]

None of these registers has been computerised. A recent study indicated that only 30% of the properties in Maputo are registered in the registry system.[16] Registration only occurs after a transaction has been concluded and the infrastructure created.[17] To transfer a previously registered property takes 8 procedures, 42 days and consumes 8,1% of property value.[18] In Maputo, the prevalence of building without a formal building permit is a high 70%. This is because of the war, lack of enforcement and high costs of licensing. This situation demands a suitable methodology to bring these unapproved buildings into the formal system over time.[19]

In Maputo, the ability to trade land and property "on register" is not a cost or time-induced barrier (at this stage at least) but is rather caused by administrative challenges because no proper system exists.

2.2 The user dimension

Considering the user, one invariably thinks of ownership. In addition to this, the researchers also considered accessibility, land allocation, betterment, nominal and effective demand, location, information and gender equality.

Home ownership – as distinct from renting – is the mantra of liberal democracy in, especially, the English-speaking world. The arguments in favour of ownership are:

1. When you own you look better after your place than when you rent (through pride of home ownership).
2. Property is a sound investment and for the man in the street a vehicle to build equity.

[13] K Rogers, Municipality of Gaborone, personal communication, 19 May 2010.
[14] O Baemisi, Municipality of Gaborone, personal communication, 19 May 2010.
[15] L Holstein, *Improving Building Permitting and Immovable Property Registration in Mozambique*, World Bank Doing Business Unit IFC/IBRD and the Ministry of Industry and Commerce, Maputo. Draft Report v2, April 5, 2008, March 2008, p. 6.
[16] C Allen, V Johnsen, *Access to housing finance in Africa, Exploring the issues, No.7, Mozambique*, FinMark Trust, November 2008, p. 12.
[17] A Cumbe, Director, Directorate of Registration and Notaries (Ministry of Justice), Maputo, personal communication, 10 June 2010.
[18] Holstein, *op. cit*., p. 6.
[19] *ibid.,* p. 4.

Let us consider these propositions.

Argument (1) is not disputed. However, a tightly managed rented complex or block of flats can ensure the upholding of behavioural and maintenance standards.

In **Maputo**, typically, the owners of flats in high-rise apartment buildings form a residents committee and these bodies corporate are supposed to impose levies and do maintenance. In truth, a large percentage of these buildings are in a dire state of repair through lack of maintenance, including lifts that no longer work. We believe the reasons for this are twofold, viz.:

- Institutional: The enabling condominium legislation is entitled *The Regulation on the Legal Regime for Condominiums*, and was only adopted by Cabinet in 1999. This Regulation might have been promulgated too late (the damage had already been done), or it might be inadequate or it is not enforced by incompetent bodies corporate.
- Economic: In allocating flats after nationalisation in 1976 to citizens, irrespective of ability to pay and maintain, there now still is a mismatch between the owners' incomes and the property they own.

Argument (2) should be qualified. In the long run, and in most locations, property grows at a rate lower than inflation. This is as a result of the substitution theory (see **§3**). But, because a property ages, the long-term growth of an ungeared property will be below the growth in replacement costs (inflation). However, in practice most houses are funded through a mortgage bond (viz. they are geared). Gearing is a double-edged sword, which at times results in super capital gains for the owner (during boom times) but at times also result in negative gearing (e.g. the sub-prime crisis of 2007). Nevertheless, what counts in home ownership's favour in the long run is the fact that it constitutes a disciplined form of saving (equity building) for the middle classes. Equally so, some scholars argue that equity building is only possible if owners have secure title to their homes, and as we know, this implies a working land-registration system. Again, this might *prima facie* be a market impediment in many a third-world country.

Another important con of argument (2) is that ownership reduces mobility of the work force, which is an important consideration in a fast-changing global economy.

In sum, property ownership is not the unqualified panacea it is generally made out to be; rather, it is more likely that education and training are the primary drivers of wealth.

In **Maputo**, the housing market operates in a cash-based economy (few retail mortgage bonds), and with building activity that is largely cash dependant. This is best illustrated by the high number of half finished houses.

It is evident that the market in Maputo is now normalising, with free-market forces (demand, supply and affordability) sorting out ownership (who owns what where) following the land-nationalisation era.

Housing in **Gaborone** is provided by the private sector, the Botswana Housing Corporation (BHC) and the Self-Help Housing Agency (SHHA). The vast majority (75,5%) of housing units in Gaborone are either self-built for own occupation or built by individuals for rental. The purchase of pre-built housing units, e.g. BHC housing, represents only 1,3% of the total.[20] If people cannot afford to buy housing, accommodation is rented in mainly the tribal areas.[21] Notwithstanding, there is no indication of a down-market movement of property owners, possibly because there is no spatial constraint on the supply side as in Maputo.

[20]Von Rudloff, *op. cit*., p. 27.
[21]J Kube, Municipality of Gaborone, Senior Housing Officer, personal communication, 19 May 2010.

2.3 The development dimension

For the development dimension, we consider building-construction cost, development time frames (land-to-stand-to-house) and services.

Botswana and Mozambique do not have a building-construction-cost index. Botswana uses the South African equivalent, which is probably acceptable most of the time, as an index measures trends and not costs per m² (the latter does differ between South Africa and Botswana). In the absence of a building-construction-cost index, an economist would use consumer inflation (CPI) as a stand-in for the long-term trend in building-cost inflation.

Anecdotally, in Gaborone, it takes only 18 to 24 months to convert land from identification to completion of the top structure, and in Maputo it takes only up to 18 months. These time frames are quite respectable, but note that they represent developer-driven projects, as distinct from government developments.

Government, first and foremost, should provide urban dwellers with services (not houses). The situation in Gaborone, and more so in Maputo, is a lack of adequate municipal services.

2.4 The finance dimension

Under this heading we considered affordability, transaction cost, transactability and legality

The availability of mortgage facilities is a necessary part of ensuring access to owner-occupancy, and where such credit is not adequately available to particular groups, housing ownership will be severely restricted.[22]

In Maputo, few houses are mortgaged, and a major cause of this – apart from grinding poverty – might be the weakness of title. As a result, banks impose procedures, prior to loan approval, to effect the registration of the property. There is, however, no clear regulation about the procedures necessary for *first-time* registration of a property.[23] In Maputo, transaction costs are relatively low, with a minimum of players involved, but transactions occur in a problematic regulatory environment.

The situation in Gaborone is similar to the South African market. Also, in contrast to Maputo, the housing-finance sector in Botswana continues to expand in all income brackets, with high-end mortgage borrowing showing particularly strong growth.

In Maputo it seems that the secondary market (re-sales) is small, partially because owners want to avoid the risk of forfeiting current rights in the process of sale. This is a direct consequence of an inadequate property registration system. In Gaborone, the secondary market operates as a free market. The transferability of freehold land is easy and is governed by a formalised process, viz. the *Deeds Registry Act.* The transfer of state land is somewhat more difficult. Informal legal and illegal transactions occur on tribal land.

[22] United Nations Human Settlement Programme, *Urban Indicators Guidelines: Monitoring the Habitat Agenda and the Millennium Development Goals*, *op. cit.*

[23] Holstein, *op. cit.*, p. 5.

3. Why an economic perspective?

In the shorter term, the price/rental of a good reflects the point of intersection between supply and demand, but in the longer term, replacement costs (read: building costs) must be added as one of the drivers of property values.

But demand and supply are seldom in equilibrium, resulting in a cyclical movement of prices or rentals. By tracking *real*[24] rentals or prices over time, the researcher will be able to deduce in future years whether there is a structural disequilibrium in demand and supply (caused by, say, an inelastic supply) or whether the fluctuations are purely cyclical (no concern). It goes without saying that an inelastic supply should be of concern to, especially, government planners. In a country where supply is normally elastic (reacting to growing demand, albeit with a lag) this tool is of somewhat less use to planners but still of great value to investors and developers because it signals periods of expensiveness or cheapness.

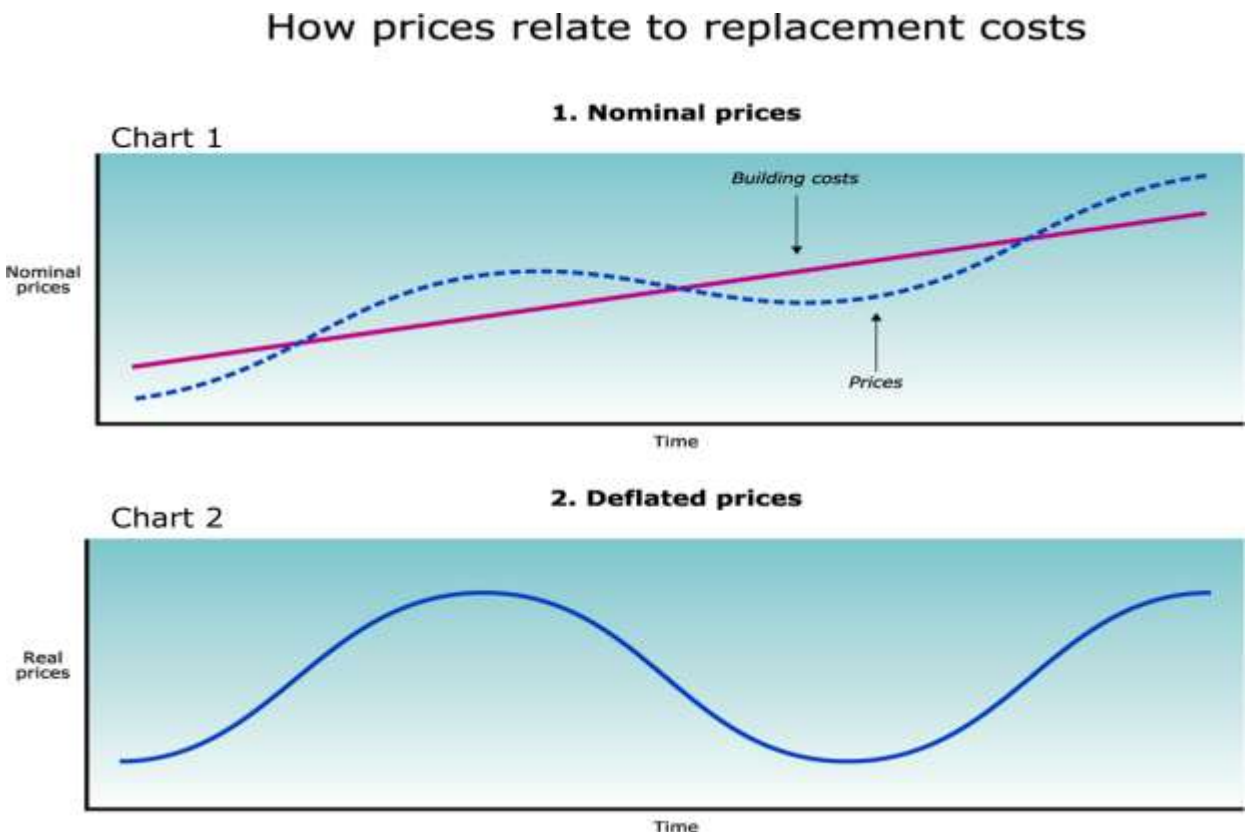
In the case of housing, a practical way to gauge such disequilibrium would be to deflate a nominal house-price index (a time series) using a building-construction-cost index (the latter is a time series that represents replacement costs). In the long run (longer than ten years), real prices or rentals should trend sideways (horizontally), with real prices oscillating around this secular (long-term) trend line, but always reverting to the mean. To use security analysts' terminology, real prices are 'mean-reverting'. Mean-reversion in the real estate market could be explained through the substitution principle. This principle can be illustrated by the following simple question:

- Why would a rational person buy a *newish* house for R110 when that person can have it built (replaced, substituted) at R100?

The same principle applies to nonresidential property. In fact, it applies to any product that is substitutable.

Should *real* prices (nominal prices less inflation) deviate for a sustained period from its secular (long-term) trend line, the implication is a supply side that is not keeping up with demand (it is inelastic) or, alternatively, irrational exuberance on the demand side (which will turn out to be short lived). This principle is illustrated by an idealized relationship between prices/rents and replacement costs (**Chart 1**) and the same relationship expressed in *real* terms (nominal prices/rentals deflated by replacement costs) (**Chart 2**).

[24] Nominal prices or rentals deflated using an index of building-construction costs (or, failing that, consumer prices). Building-construction costs are preferable because they represent replacement costs.



An empirical illustration of the relationship between prices/rentals and replacement costs in a developed economy (where supply is mostly elastic) is illustrated by **Chart 3**, showing real house prices in the USA from 1950, and **Chart 4** (real house prices in South Africa from 1966). Note that in both the USA and South Africa the real trend line shows a compound growth rate of close to zero – as one would expect in terms of the substitution principle.

Chart 3:
Real house prices in the USA from 1950

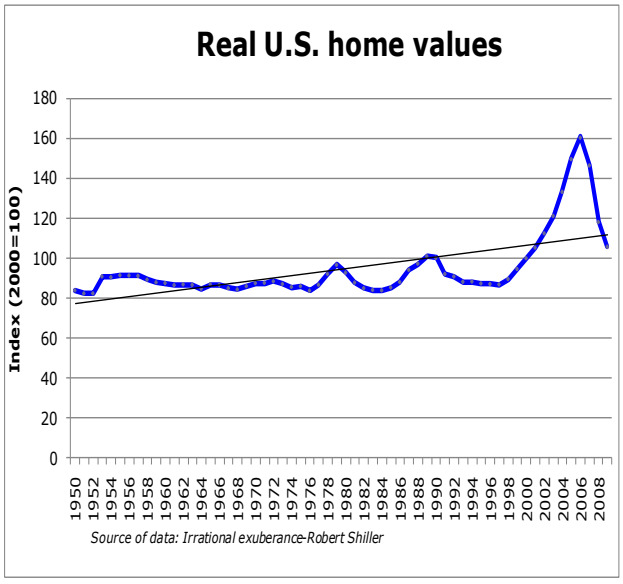
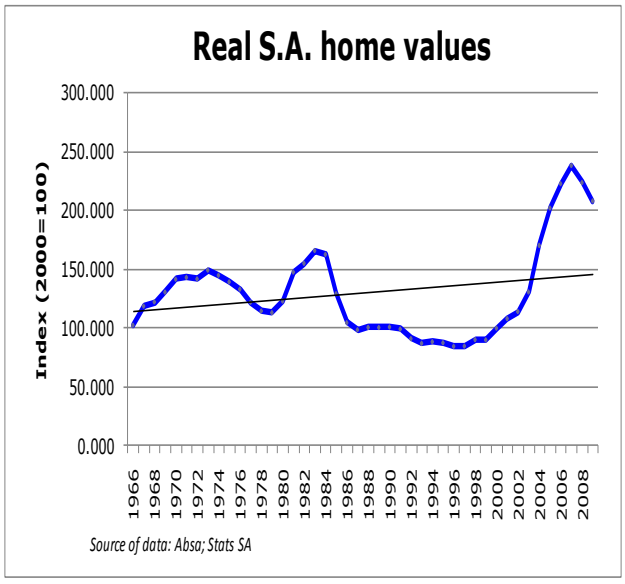


Chart 4:
Real house prices in South Africa from 1966



The demand for and supply of vacant land could, theoretically at least, be tracked in a similar way to the prices/rentals of "improved" properties (land on which a building has been erected).

4. The proposed indicators

We focused our research on identifying indicators — presented in this paper as **proposed indicators** — that are essential and practical and relatively easy to survey.

Throughout the project, we encountered data-starved institutions. This means that little useful statistics can be expected to emanate from government agencies or departments. This lends support to our approach to opt for 'modest' indicators, reliant on 'simple' data from 'easily accessible' and 'reliable' sources. For this, we focused on time series[25] that Rode & Associates has been surveying regularly at quarterly intervals in South Africa (and in Windhoek in Namibia) since 1987. These are:

1. **Capitalization rates:** By type and grade (nonresidential properties only)
2. **Rental levels in formal areas:** Middle-class residential properties by type and price class; non-residential properties by type and grade/size and node
3. **Land values** (serviced stands): By type of property

An additional time series that we haven't compiled in South Africa but which is worth considering is:

4. Market **rentals** for **shacks** in informal (slum) areas

Further time series that we regard as crucial in tracking property markets, but which in South Africa are obtained from secondary sources (as distinct from primary surveys) are:

5. **House-price indices**: only for residential property
6. A **building-construction-cost index** (levels per square metre and trends): only for nonresidential property
7. **Building-construction activity** (by type): for residential and nonresidential property

Additional, rather obviously nice-to-have, time series worth considering are:

8. **Vacancies** by type and grade and node: for rented residential and nonresidential property
9. **Operating costs** per square metre by type: only for nonresidential property

[25] A time series is a variable of which the magnitudes are measured in chronological order (e.g. every quarter).

5. How to compile the indicators

This section briefly describes the two proposed methodologies, namely: expert-panel method and semi-structured interviews.

5.1 Expert-panel method

Broadly speaking, the researcher has two potential approaches available to him when surveying the land market. These are:

- Track actual individual transactions, like the rental levels of lettings or the capitalization rates at which sales are concluded.
- The expert-panel method of surveying, in which the surveyor regularly asks individual members of a panel for their expert *opinion.* In practise, the panel consists mainly of brokers rather than landlords, because of brokers' greater independence. Each quarter, the same question is posed to the same panellist, and the answer of the panellist would of course be informed by deals of which the panellist might be aware.

The cons of tracking actual transactions are:

- A **paucity** of transactions in most nodes, making statistical inferences impossible
- Hence, the danger of relying on **outlier data** (mainly the result of small samples)
- Transactions that are picked up through a land-registration system are inevitably **dated**
- The **cost**
- The **unwillingness** of the parties to report the details of individual deals
- The danger of comparing **incomparables** over time. For instance, reporting in one quarter on a rental transaction on a floor area of 500 m² and the next quarter on 1 000 m².

In contrast, through the expert-panel method, most of the above cons of the actual-transactions approach are addressed. Thus, the expert-panel approach results in cheaper, more accurate and timely information. Sample size (the number of transactions) is still (and will always be) a problem in the smaller cities or less active nodes, *but to a lesser extent*. The reason why outliers are now a lesser problem is that the human brain (remember: we ask for an *opinion*) is quite good at generalizing — at filtering out outliers.

The stability, reliability and cost of statistics that could be extracted from a marketplace are crucial criteria for selecting indicators. In this respect, the size of the various market segments would directly influence the number of transactions and, therefore, the number of estate agencies that can live off these transactions. Thus, a small market tends to produce statistics that are less stable and reliable than in larger cities, which means that the user of such statistics can place less confidence in the data. An important implication is that the size of a land market must exceed a certain threshold in order to produce statistics of an acceptable quality. This is especially a problem with nonresidential properties, as sub-markets in this category are always smaller than the residential function – even in higher-order cities.

Sample size will always be a problem in less active markets, *irrespective of the survey methodology*.

It seems a viable city size is determined by both population size and the wealth of the city. For instance, Maputo is population wise larger than Gaborone, but, because of its poverty, we expect it to be a borderline case with regards to the sustainability of a panel (there are less broker firms in Maputo than Gaborone).

Any African city with a large enough **panel of experts** can be targeted. Once established, there are certain **risks** regarding the continuity and efficiency of the panel, but these will be the same for any city. From experience, there should be two or more property broking firms operational in each of the sub-markets.

Surveys are done through the Web or by e-mail. Quarterly frequency of surveying now becomes cost effective.

Rode & Associates has over the past nearly 23 years applied and refined the expert-panel method in South Africa; thus it has a proven track record. The statistical acceptability of this method is demonstrated by the fact that Statistics South Africa had used Rode & Associates to compile residential-rental indices from 2003 to 2010. The purpose of these surveys was to contribute to the compilation of the Consumer Price Index (CPI). In fact, according to international CPI consultant Jacob Ryten, nine countries have now started to use the Rode panel method of calculating residential-rental indices for the compilation of the CPI.[26]

In both Gaborone and Maputo all the property brokers interviewed expressed the need for market research and a more cohesive approach to their professional activities.

Where there is a large enough mortgage-lending market, we propose to request the largest bank to compile a **house-price index** based on the bank's own lending experience (as some of the major banks do in South Africa). Where there is no active mortgage-lending activity, like in Maputo, the problem might be solved through the expert-panel method.

Building activity will be measured by encouraging the respective municipalities to compile computerised registers of building plans submitted and buildings completed. We rather suspect that this might take many years to get off the ground.

Building-construction cost (levels per m² and trends) will be compiled by using local quantity surveyors (QAs) as panellists.

The rationale for (only) using **time-series** and not cross-sectional data (levels as at a certain date) is to measure trends over time. For this reason it would only be possible to analyse and report on land markets after several measurements. In fact, considering the duration of the property cycle (ten years and longer), it would take several years before such time series become valuable.

5.2 Surveying rental levels in slum areas

The purpose of these surveys would be to determine the rental levels in 'slum areas' and, thereafter, the regular updating of this indicator.

The expert-panel method cannot be considered to survey housing rentals in slum areas because there are no intermediaries (like estate agencies) that broker the deals between user and landlord.

[26] Personal communication in the offices of Statistics South Africa in Pretoria on 1 March 2007

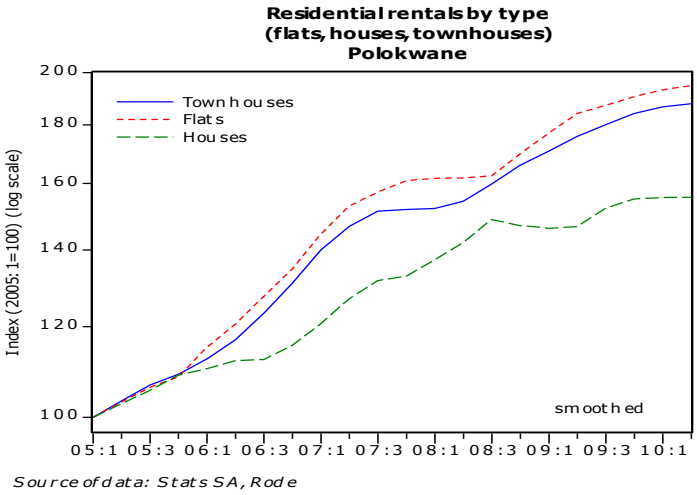
For reasons of cost, time and security of field workers, we also discarded field work in the slum areas as a practical methodology.

Rather, we propose the use of **semi-structured interviews** (or focus groups). The target respondents would be the lowest paid employees of large firms. A convenience sample (panel) of large firms is indicated. Soon the market-research company would build up relationships with such a panel of firms. Depending on the outcome of these initially semi-structured interviews, the method could eventually be switched to structured interviews. As is standard practise in the market-research industry, the survey would be preceded by a pilot survey.

A survey frequency of one year, rather than quarterly, is indicated, as it is costly compared to the expert-panel method.

6. Polokwane as a demonstration model

In Polokwane, Rode & Associates has been surveying the crucial value-forming attributes of nonresidential property for the past 15 years, and middle-class residential rentals since 2003 (when commissioned by Statistics SA to do these surveys for the compilation of the CPI). Thus, the time series are too short to do a long-term analysis. Nevertheless, observing the historic movement over only five years, the accompanying graph shows that townhouse and flat rentals are — amazingly — still growing at 6 to 7 percent. In comparison, we know that in the major cities of South Africa these have levelled off to close to zero. In comparison, the consumer inflation rate stood at about 4 percent in June 2010.

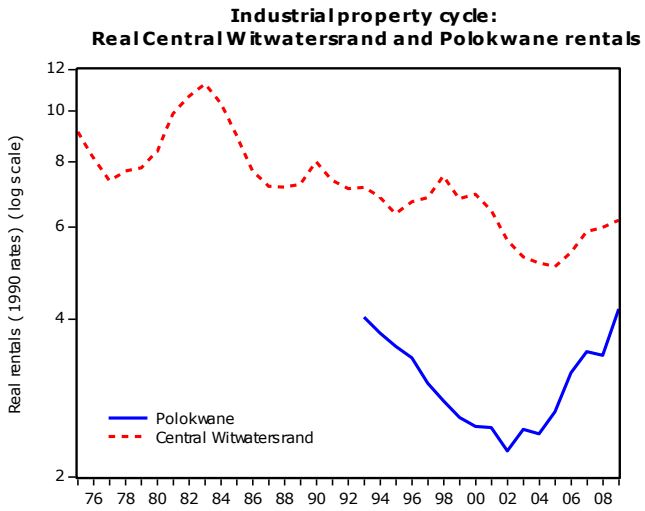


The implication of the trend in residential rentals — read together with what is happening in the industrial sector — is that the Polokwane economy was still performing quite well in June 2010, and that households were not under as much pressure as in the metropolitan areas of South Africa.

To end this section, we depict, and interpet, the results of many years' surveys of industrial rentals.

The accompanying graph shows the previous significant peak in real Witwatersrand industrial rentals was during the early 1980s, largely as a result of a severe shortage of

land created by the economic boom (on the back of the gold boom) and government's self-sufficiency drive (demand) and probably also the South African government's decentralization policy (supply). Since then, *real* industrial rentals have been in a long secular decline (with two less significant peaks in 1990 and 1998). *Real* rentals were only notably able to bottom out in 2005, again in the wake of low vacancies and high replacement costs coupled with strong economic growth. In the case of Polokwane, *real* rentals bottomed out in 2002. The earlier start in its upswing in *real* rentals can most probably be attributed to land scarcity coupled with the high demand for industrial space on the back of robust mining and manufacturing sectors. Note how Polokwane's industrial rentals are catching up with those of the Central Witwatersrand.



Source of data: Rode's Time Series; MFA; JBCC CPAP Haylett Formula

7. Conclusions

The expert-panel methodology that Rode & Associates has been employing in South Africa can most probably be applied directly to the larger cities in the rest of Africa. This is so because of the method's simplicity and elegance. However, additional time series will have to be created in order to track these countries' land markets properly. Important examples are house-price indices and building-construction-cost indices.

However, it is important to note that time series indicators are created by many years' regular surveys during which the principle of comparability over time is adhered to. This is especially true of property time series, because the property cycle is exceedingly long.

We have demonstrated through real-life examples in Polokwane and elsewhere in South Africa that by tracking certain indicators one can get to grips with some of the crucial features of urban land markets. To investors, developers and government, this information is a powerful tool for decision taking.

8. References

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