

**INFORMAL SECTOR, DEFINITION,
CONCEPTS AND WEIGHTING IN
AFRICAN ECONOMIES**

According to the fifteenth international conference of labour statisticians:

CONCEPT

5. 1) The informal sector may be broadly characterized as consisting of units engaged in the production of goods or services with the primary objective of generating employment and incomes to the persons concerned. These units typically operate at a low level of organization, with little or no division between labour and capital as factors of production [...]

2) Production units of the informal sector have the characteristic features of household enterprises. The fixed and other assets used do not belong to the production units as such but to their owners [...] Expenditure for production is often indistinguishable from household expenditure [...] Similarly, capital goods such as buildings or vehicles may be used indistinguishably for business and household purposes.

3) Activities performed by production units of the informal sector are not necessarily performed with the deliberate intention of evading the payment of taxes or social security contributions, or infringing labour or other legislations or administrative provisions. Accordingly, the concept of informal sector activities should be distinguished from the concept of activities of the hidden or underground economy.

OPERATIONAL DEFINITIONS

Informal sector

6 1) For statistical purposes, the informal sector is regarded as a group of production units which, according to the definitions and classifications provided in the United Nations System of National Accounts, form part of the household sector as household enterprises or, equivalently, unincorporated enterprises owned by households as defined in paragraph 7.

2) Within the household sector, the informal sector comprises (i) Informal enterprises owned and operated by own-account workers, either alone or in partnership with members of the same or other households, which may employ contributing family workers and employees on an occasional basis [...] and ii) the additional component of "enterprises of informal employers", consists of enterprises owned and operated by employers, either alone or in partnership with members of the same or other households, which employ one or more employees on a continuous basis [...]

9. 2) For operational purposes, enterprises of informal employers may be defined, depending on national circumstances, in terms of one or more of the following criteria:

- (i) Size of the unit below a specified level of employment;
- (ii) Non-registration of the enterprise or its employees.

3) While the size criterion should preferably refer to the number of employees employed on a continuous basis, in practice, it may also be specified in terms of the total number of employees or the number of persons engaged during the reference period.

4) The upper size limit in the definition of enterprises of informal employers may vary between countries and branches of economic activity [...]. The choice of the upper size limit should take account of the coverage of statistical inquiries of larger units in the corresponding branches of economic activity, where they exist, in order to avoid an overlap [...]

8. 3) Registration may refer to registration under factories or commercial acts, tax or social security laws, professional groups' regulatory acts, or similar acts, laws, or regulations established by national legislative bodies [...].

9. 6) [...]Employees may be considered registered if they are employed on the basis of an employment or apprenticeship contract which commits the employer to pay relevant taxes and social security contributions on behalf of the employee or which makes the employment relationship subject to standard labour legislation [...].

7. According to the United Nations System of National Accounts, household enterprises [...] are distinguished from corporations and quasi-corporations on the basis of the legal organization of the units and the type of accounts kept for them. Household enterprises are units engaged in the production of goods or services which are not constituted as separate legal entities independently of the households or household members that own them, and for which no complete sets of accounts (including balance sheets of assets and liabilities) are available which would permit a clear distinction of the production activities of the enterprises from the other activities of their owners and the identification of any flows of income and capital between the enterprises and the owners [...].

Population employed in the informal sector

11. 1) The population employed in the informal sector comprises all persons who, during a given reference period, were employed [...] in at least one informal sector unit irrespective of their status in employment and whether it is their main or secondary job.

Treatment of particular cases

14. Household enterprises, which are exclusively engaged in non-market production, i.e. the production of goods or services for own final consumption or own fixed capital formation as defined by the United Nations System of National Accounts (Rev.4), should be excluded from the scope of the informal sector for the purpose of statistics of employment in the informal sector [...].

15. [...] The scope of the informal sector should include household enterprises located in urban areas as well as household enterprises located in rural areas. However, countries that start to conduct surveys of the informal sector may initially confine data collection to urban areas. Depending upon the availability of resources and appropriate sampling frames, the coverage of the surveys should gradually be extended to cover the whole national territory.

16. For practical reasons, the scope of the informal sector may be limited to household enterprises engaged in non-agricultural activities (given that there is often a survey specific to the agricultural sector). However, all non-agricultural activities should be included in the scope of the informal sector, irrespective of whether the household enterprises carry them out as main or secondary activities if they meet the conditions of non-registration, size and lack of formal bookkeeping [...].

17. Units engaged in professional or technical activities carried out by self-employed persons such as doctors, lawyers, accountants, architects or engineers, should be included in the informal sector if they fulfill the requirements [...] of non-registration, size and lack of formal bookkeeping [...].

19. Domestic workers are persons exclusively engaged by households to render domestic services for payment in cash or in kind. Domestic workers should be included in or excluded from the informal sector depending upon national circumstances and the intended uses of the statistics [...].

Recommendations of the Delhi Group on the informal sector and the System of National Accounts

The Delhi Group was set up as an international forum to exchange experience data on the measurement of the informal sector, present data-collection practices, including definitions and survey methodologies followed by member countries, and recommend measures for improving the quality and comparability of informal sector statistics. It was initiated by developing countries (where the informal sector represents a significant portion of the economy), to further clarify the concepts and methodologies for measuring the informal sector.

The group is made up of experts from the statistical offices of Armenia, Australia, Bangladesh, Brazil, Colombia, Cuba, Ethiopia, Fiji, France, India, Indonesia, Malaysia, Mexico, Namibia, Nepal, Nigeria, the Philippines, Poland, the Republic of Korea, Sri Lanka, Thailand, Turkey, Venezuela (Bolivarian Republic of) and Zambia; representatives of international bodies, such as the Asian Development Bank, the Economic and Social Commission for Asia and the Pacific, the International Labour Organization, the Statistical Institute for Asia and the Pacific and the United Nations Statistics Division; and other institutions, such as the Centre for Development Alternatives, the Centre for Social Development, the French Scientific Research Institute for Development and Cooperation, the Gujarat Institute for Development Research, the Harvard Institute for International Development, and the National Council for Applied Economic Research.

The recommendations of the Delhi Group in Rev.1 of SNA 1993 on the definition of the informal sector are as follows:

(a) Informal sector enterprises are private unincorporated enterprises (excluding corporations and quasi-corporations), i.e. enterprises owned by individuals or households that are not constituted as separate legal entities independently of their owners, for which no complete accounts are available. Included in private unincorporated enterprises are unincorporated partnerships and co-operatives formed by members of different households, if they lack complete sets of accounts;

(b) All or at least some of the goods or services produced are meant for sale or barter;

(c) Their size in terms of employment is below a certain threshold to be determined according to national circumstances;

(d) They are not registered under specific forms of national legislation as distinct from local regulations for issuing trade licenses or business services;

(e) They are engaged in non-agricultural activities, including secondary non-agricultural activities of enterprises in the agricultural sector.

THE INFORMAL SECTOR IN NATIONAL ACCOUNTS

The importance of the informal sector in the economies of developing countries is highlighted in national accounts. However, it is difficult to find a balance in national accounts, because there is a gap, in respect of an economic aggregate, between resource and employment. The contribution of this sector, which was initially wrongly termed “the informal sector”, is often overlooked

For example, in the results of budget/consumption surveys, household income is often lower than household consumption and the difference is invariably made up with the help of a loan. In addition, from a macroeconomic standpoint, the salary paid by companies to households does not necessarily correspond to what the households earn.

This observation will be the precursor of extensive discussions on both the definition of the informal sector and the methodologies for its measurement. Certain assertions must be admitted as to the cause of the difference in value of the same aggregate, according to its method of calculation, and as to the behaviour of households. This does not exclude any indirect or direct methods of measuring the informal sector and including it in national accounting.

The informal sector is only one of the components of the non-observed economy, which also includes illegal activities (production and trade of narcotics, traditional alcohol or adulterated drinks, etc) and the underground economy, whose principal characteristic is that it is similar to the activities which registered production units seek to hide from the government in order to pay fewer taxes. According to the level of development of a country, the informal sector may have a significant weighting in the non-observed economy. The informal sector is expected to be considerable in developing countries in general, and African countries in particular, especially if the informal sector is defined appropriately.

Methodologies for measuring the informal sector

Indirect measurement methods

Indirect measurement of the informal sector consists in making assumptions about the relationship between economic activity and a few variables in order to make projections. The difference between the projections and the value observed represents an entity (considered wrongly as the informal sector, but which is more specifically the non-observed economy) whose weighting has been omitted from official accounts.

There are different indirect methods for measuring the informal sector, including:

- The differential method, which simply allocates the difference between expenditure and income to the informal sector. It is based on the comparison of aggregates and account balances (by analysing the input-output table);
- The goods influx method, which is based on the same principle but at a disaggregated level;

- The labour input approach, which assumes a stable relationship between the potential labour force (based on age) not incorporated in the informal sector and production by the informal sector;
- The different monetary approaches that assume stable relationships between economic activity and a few monetary variables.

A few remarks should be made with respect to these methods. In the case of Ghana, preliminary studies have established conditions on the structure of national accounts, thereby establishing relationships governing the indirect methods. Given the need to make national accounts available, these relationships have to be reviewed.

The assumptions used in the indirect methods must be explained clearly at any time and incorporated into methodology publications, because they form the basis of economic policies. For example, for the employment-based method, the assumption used is that per capita production in the informal sector is constant in real terms. Hence, total production is obtained by multiplying this coefficient by the number of persons employed by branch. This assumption may be considered strong to the extent that:

- It reflects a possibility of continuous expansion of a branch (possibility of always finding work, even if this means taking away employees from other sectors);
- It does not take into account constraints in branches, such as availability of farmland.

With regard to the differential method based on accounts, account balances often result from estimates of experts belonging to the system of national accounts. The validity of the work may therefore be guaranteed but the method lacks scientific scrutiny, because it is not based on statistical work. In other words, in the absence of direct statistical information on the informal sector, the accuracy of the method is doubtful.

Indirect methods in general are criticized for not distinguishing between the informal sector and the other two components of the non-observed economy.

The labour input method

This is an extension of the indirect method used by national accountants. It was developed by ISTAT, the Italian National Statistics Institute, which has been using it to estimate GDP since 1987.

The thrust of the method is that a country's production should not be estimated solely from classical information sources (measuring production of branches from surveys), but also on the basis of employment data.

Given their diversity, data on employment and population (population census, employment and labour surveys) are considered to be better indicators of economic reality than information on production. Production can be estimated by allocating productivity by branch and sector to these employment data. It is systematically more significant than estimates based on surveys, a difference that is attributable to the non-observed economy.

Direct method of measuring the informal sector

For the direct method based on sample surveys, there are two possibilities: household surveys or establishment surveys.

Many academic researchers have based their observations on establishment surveys. Their utility cannot be disputed especially in the absence of alternative sources. However, it is particularly difficult to find a reliable survey frame for sampling. This difficulty could be overcome if there is a strong and well-organized union association governing the trade. However, this may prove insufficient for the location of the observation (or survey) unit, notably in the case of workers with no fixed location (with movable stalls).

Sampling and the establishment of a survey frame using household surveys are both facilitated. However, it should be borne in mind that the standard approach is designed to measure an activity that is widespread among the population, but it is not necessarily effective in capturing certain activities. It is designed to cover a relatively uniform geographical distribution of households across the country such that activities like gold washing and mine work in general (each concentrated in a particular area) are poorly captured by the standard household survey. This is why it is important to have separate surveys for a few branches of activity.

The household survey itself may be skewed because poor households are more inclined to cooperate than their rich counterparts.

Country experiences

The experience of Niger¹

The magnitude of the informal sector was corroborated by a survey of the informal sector conducted in 1981, which estimated its share of GDP at 30 per cent, as well as by the results of another survey conducted in 1987.

In 1995, the National Informal Sector Survey (ENSI) was conducted primarily to once again determine the size of this sector following the devaluation of the CFA franc. It also allowed the National Accounting Service to have more recent data for the development of informal sector accounts.

The informal sector is defined as all non-agricultural and non-pastoral merchant activities that are not captured in accounting documents.

The ENSI is a sample survey. The weighting (needed for the calculation of totals and averages) by sub-branch of activity takes into account the number of sampling units in the sample by enumeration area, by community and by the increase in population between 1988 (year of the last

¹ (Reference article: « Intégrer le secteur informel dans les comptes nationaux : cas du Niger », by Tassiou ALMADJIR, Direction de la Statistique et des Comptes Nationaux, Niamey – Niger)

census before the survey) and 1995. The aggregates were calculated according to ISIC classification².

The results showing the total number of establishments were compared with information from other sources and that had been the subject of estimates (budget-consumption survey, projection of the number of persons employed in the modern and informal sectors from the census, patent data sheets, lists of craftsmen and merchants with a registration number, results of 1996 urban enterprise survey).

The accounts of branches of the informal sector were obtained by aggregating the data of informal establishments, in addition to the activities that were not sufficiently captured during the survey (e.g., housing rental, production of domestic services, production of own-use housing).

All informal activities are classified in the household sector. The establishment of accounts in this sector is limited to the operating account.

From the results of this survey, employment/ resources balances could be established. The ENSI provided the necessary details on intermediary production and consumption. A consumption table by activity was drawn up for many products and was reconciled with the results of the consumption/budget survey, leading to the establishment of an employment/resources balance and hence the intermediate consumption matrix for informal branches with technical coefficients.

The Niger experience shows the key role of the direct method of measuring the informal sector by survey; otherwise it would have been impossible to know the exact structure of the TES of the informal sector. The employment/resources balance and especially production for final household consumption also require information from the consumption/budget survey for reconciliation and consolidation of data.

The Burkinabe experience with including the informal sector in national accounts³

The reference article explains the need for simplified surveys on informal activities to find out the structure of their operating accounts and to consequently establish better accounts for the informal sector.

Based on this experience, all economic activities that are not registered permanently in the Commercial and Industrial Enterprises Register are considered to be part of the informal sector. However, this definition does not cover the primary sector, which is considered to be part of the registered economy.

In the absence of quantitative data on informal activities, the contribution to GDP of the informal sector is measured using the indirect method based on knowledge of the structure of the labour force for a given year. But this method is arduous not just because it is based on

² United Nations International Standard Industrial Classification of All Economic Activities (ISIC), Third Revision.

³ Reference: «Les enquêtes légères sur le secteur informel au Burkina Faso pour une intégration des activités informelles aux comptes nationaux», by Ezana BAYALA of the Institut National de la Statistique et de la Démographie, Ouagadougou – Burkina Faso

approximations and even assumptions, but also because of the problem of comparability over time of production and employment using uncertain methods.

This calls for the collection of specific information on the activities of the informal sector using a survey. Yet (at time of writing the reference article) separate surveys on informal activities in Burkina Faso had many shortcomings:

- Their field was limited to urban areas;
- They did not cover home-based work, street activities, informal activities performed in rural areas by women,

Yet, according to the 1985 population census in Burkina Faso, informal non-agricultural employment was largely in the manufacturing sector, in rural areas and performed by women.

These surveys also failed to properly capture income, production, added value and intermediate consumption. Hence, the methods of national accounting consisted in allocating to craftsmen income and production structures derived from various sources of information or obtained from uncertain technical coefficient assumptions.

To overcome this difficulty, a simplified survey of the informal sector was conducted based on judgmental sampling. The sampling units were chosen based on relationships (family, friends, neighbours or customers), or references (a craftsman who has just been interviewed may refer the interviewer to a colleague). The empirical survey covered some 15 trades, as a principal occupation or a secondary occupation, full time or part time, and in urban or rural areas.

Based on this simplified survey, standard accounts for various branches of the informal sector were established; the technical coefficients obtained were applied to production values estimated by other methods, notably the results of large-scale surveys with commensurate coverage.

The principal role of the simplified survey in relation to others with commensurate coverage (large-scale surveys) is to complement the latter in the calculation of technical coefficients, which explains the interest of having a methodology and a questionnaire that are sufficiently elaborate to capture the structure of accounts for the informal sector.

However, this method is subject to criticism with regard to representation and margin of error, which, in any event, cannot be measured.

*The Ghanaian experience*⁴

Both authors of the reference articles allow us to share the Ghanaian experience in including the informal sector in national accounts. The first presents the sectoral methodology for developing

⁴ See: “The measurement of informal sector services in the Ghanaian national accounts” by K. ADDOMAH – GYABAAH, Ghana Statistical Service

and

“Notes on the measurement of the informal sector within the context of the 1993 SNA with special reference to Ghana”, by Matthew POWELL, Overseas Development Administration Accra- Ghana

national accounts. He indicates that informal activity, which seemingly exists in almost all sectors, is not accounted for separately or is simply omitted. However, reforms were under way (at the time of the presentation of the study) to incorporate the results of the Ghanaian Living Standard Survey (GLSS).

Until that happens, production by sector is obtained from administrative statistics (case of extractive industries), from sales tax records (manufacturing industries), from estimates based on price, and by applying optimal output derived from a reference survey (case of freshwater fishing) and from administrative records (case of production and distribution of water and electricity). Otherwise, production, as in the case of agriculture, is estimated on the basis of an annual survey of surface area of cultivated land, which also provides information about the rate of return and production prices.

With the exception of agriculture, production in terms of added value, intermediate consumption or the added value of other items such as compensation of employees and depreciation are estimated using ratios derived from separate surveys conducted by the Statistical Service.

Improvement reforms may therefore take different shapes based on the conduct of new reference surveys to improve the accuracy of ratios used, the conduct of separate surveys to measure the weighting of informal activities (such as “chop bars”, in the restaurants and hotels sector, on informal interest-bearing lending, which is widespread but not captured by the GLSS. This activity was not covered in the methodology applied at the time on national accounting). Also expected is the GLSS for the direct measurement of the informal sector.

The second author proposes a theoretical framework for a better measurement and consideration of the informal sector. This framework is valid for both Ghana and any other country and can serve as a model. The author gives a pragmatic justification for the International Labour Office (ILO) classification of the informal sector as a sub-sector of the household sector rather than as a sub-sector of enterprises: researchers interested solely in production may well treat the informal sector as a classification of enterprises. Conversely, those interested in social issues such as income distribution must opt for the classification of the institutional sector as a sub-sector of households.

For the author, to the extent that the informal sector plays a major role in African countries from an economic and social point of view, the State must have time-based information on the sector, to be able to compare it with information on the formal sector to which it is more accustomed.

This requires the regular conduct of surveys for the direct measurement of the informal sector. While this approach has been followed so far (at least in the case of Ghana), it is often incomplete in terms of the information collected; does not cover all the sectors; is not representative of the national picture; or simply uses a definition of the informal sector that does not correspond to that of ILO. The regular conduct of surveys will be complementary to the methods of indirect measurement of the informal sector.

The author then provides a detailed description of the indirect methods that the national accountant may use for the indirect measurement of the informal sector. He also relates the different methodologies for the direct measurement of the informal sector (establishment surveys, household surveys, specific surveys), with their strengths and weaknesses, then the complementary relationship between the household survey and the specific survey.

*The Cameroonian experience*⁵

The reference article provides some details on the inclusion of the informal sector in national accounting and the conceptual evolution necessitated by the review of the System of National Accounts (SNA).

Situation before 1993

In the 1968 version of the SNA, no technical guidelines had been established for the treatment of the informal sector in national accounts. However, based on the subdivision of the commercial branch into two sub-branches (modern sector and traditional sector), production accounts could be established for each activity of the informal sector.

The operating surplus of all “informal activities” was transferred as a resource of the income and expenditure account of the “households and individual entrepreneurs” sector. In the capital and financing account, an estimate for capital goods and transport was added to the buildings estimate.

Generally speaking, the estimates were based on the results of a survey for a given year. This gave rise to the weighting of the informal sector by branch of activity that was then carried over into accounts, with groupings established from time to time in the light of sectoral studies.

Current situation

Cameroon’s current national accounts comply with revision 4 of the SNA: the informal sector is classified as a sub-sector of the household sector. Using the ERETES system developed by French experts, it was possible to establish an employment/resource balance by product and to switch to the production account. Production captured in employment/resources balances is automatically reported in the production account. This makes it possible to establish production accounts by institutional sector, and to obtain information derived from a survey of the informal sector and the employment matrix.

Hence, from “phase 2” (specific survey of informal production units) of the 1-2-3 survey, the following ratios were derived:

- Production per capita;
- Value added per capita;
- Gross operating surplus per capita;
- Technical coefficients;

⁵ Read: « L’expérience camerounaise sur l’intégration des données of the informal sector dans les comptes nationaux », par Guy SHE ETOUNDI, Direction de le Statistique et de la Comptabilité Nationale, Yaoundé – Cameroun.

- Salary rate;
- Investment rate.

Phase 2 of the 1-2-3 survey provides details by CITI classification of intermediate consumption by proportion. Cameroon's national accounts have had to make assumptions to apply the results of the survey for the city of Yaounde to the rest of the country and to maintain the structure for national accounting data referring to the 1989-1990 period, whereas the 1-2-3 survey was conducted in 1993.

The usefulness of phase 2 of the 1-2-3 survey is indisputable in the direct measurement of informal non-agricultural or non-pastoral activities. Agricultural or pastoral activities, which are not considered by the SNA (since the 1993 revision) as being part of the informal sector, require the results of agricultural surveys in order to be included in national accounting.

This Cameroon experience shows the interest for phase 2 of the 1-2-3 survey in the direct measurement of the informal sector so that the sector could be incorporated into national accounts as a sub-sector of the household sector. The regular conduct of such a survey is profitable for national accounts, at least in order to verify whether the structure of accounts, as indicated by the ratios, remains unchanged.

It should be noted, however, that the article makes no mention of the non-observed economy, notably of the underground economy, which is one of its components.

METHODOLOGIES FOR MEASURING THE INFORMAL SECTOR IN AFRICA

The objective of this chapter is to review some of the African methodologies for measuring the informal sector in Africa. These methodologies are those that are available over the Internet. Some of them have been applied for over twenty years, including the 1-2-3 survey developed by the French research group GIS-DIAL and applied in Africa by the economics and statistics observatory called AFRISTAT, and the household survey that is part of the Living Standards Measurement Study of the World Bank. These surveys have been used:

- In the case of the 1-2-3 survey, in Benin, Burkina Faso, Cameroon, Côte d'Ivoire, Democratic Republic of Congo, Mali, Madagascar, Morocco, Senegal and Togo, but also in Guatemala, Peru, Mexico, Bangladesh and China;
- In the case of the household survey, in Côte d'Ivoire, Ghana, Malawi, Madagascar, Morocco and Tanzania, but also in more than 40 countries around the world, including Bosnia Herzegovina, Kosovo, Viet-Nam and Jamaica.

However, other methods have been developed for each of the countries applying them, but there is not as much experience with these methods as with the first two. They have been applied in Botswana, Namibia, Zambia, South Africa and Tanzania.

Fundamental differences exist between these surveys. First with regard to the definition of the informal sector; for French-speaking countries using the 1-2-3 survey, it is limited to the criterion of

administrative registration and formal accounting records; while for English-speaking countries, there is the additional criterion of size of the enterprise and other criteria such as technology and absence of modern premises, as in the case of Tanzania.

While the sampling frame for the survey of informal production units of the 1-2-3 survey is provided by the employment survey, the sampling frame for the survey of the informal sector in Namibia, Botswana and Tanzania is constituted right from the household counting phase in primary sampling units. But it excludes formal enterprises in the Tanzanian case. Finally, in the case of the World Bank household survey, the survey of non-agricultural family enterprises is conducted on all households that have such enterprises, which means that it is exhaustive and makes no distinction between a formal family enterprise and an informal family enterprise.

The examples given are limited to random sampling surveys, examples of empirical surveys with their advantages and disadvantages having already been discussed in the previous chapter on the informal sector and national accounting.

At this stage, these methodologies cannot be recommended for all African countries to adopt for measuring the informal sector; however, the 1-2-3 survey and the World Bank household survey stand out from all the experiences mentioned above due to their strong experimentation.

It should also be noted that most of the criticisms of the methodologies presented in this chapter come mostly from their designers and users. Our criticisms stem from what has already been reported by other experts on surveys of the informal sector, and from the methodology applied for other surveys, or from our own analysis.

Most of the examples given are from so-called “mixed” surveys, which means that they are carried out in two phases: the first is to establish the sampling frame of informal production units, and the second is the survey itself.

Survey of the informal sector in Botswana⁶

The survey of the informal sector in Botswana is a mixed household-production unit (enterprise) survey. It was conducted for the first time in 1999/2000 with national coverage and is expected to be repeated in 2007. The survey was designed by the CSO or Central Statistics Office of Botswana in order to answer certain questions about the existence of the informal sector in Botswana. There has been noticeable expansion of the informal sector across the country, but no accurate measure of the phenomenon has been taken.

The only sources of information on the subject are: the 1991 population census, the 1994 consumption/budget survey and the 1995/1996 labour force survey. However, these instruments were not designed specifically to ascertain the weighting of the informal sector.

The definition used in the case of Botswana to determine activities that are in the informal sector applies to any enterprise that is not registered as a corporation; that has more than five employees; that has informal accounting or does not keep formal records; whose operating expenses

⁶ Reference article: <http://www.cso.gov.bw/html/info-sector99.html>

are indistinguishable from household expenses; and that does not have a fixed location (or whose location is part of the household), or whose activities are temporary.

The purpose of the informal sector survey in Botswana is to obtain information on:

- The contribution of the informal sector to total production;
- The most widespread activities in the informal sector;
- The weighting of the informal sector in the labour force;
- The share of household income generated by informal activities;
- The size of investment in the informal sector.

This is a multi-level random survey. First, 447 enumeration areas, which were ex officio primary sampling units, were selected randomly out of 1,738 with proportional probability as to size (number of houses as per the last population census) and according to stratification by community (five large urban centres, 19 “urban villages” and one global rural community).

Next, the number of households was counted prior to the selection of the sample of secondary sampling units. This took six months, from May to October 1999. Out of 84,833 households counted (in the 447 enumeration areas), 13,400 (15.8 per cent) were identified as having a member who was the head of a production unit or an enterprise. Hence, 9,916 of them (74 per cent) were selected for the survey, but only 8,420 (84.7 per cent) of the households with a member who was the head of a production unit responded favourably to the survey. The households/production units did not have the same response rate. This rate was higher in the “urban villages”, compared to rural communities or large urban centres.

For households used in the survey and recognized as production units (enterprise), two types of questionnaires were used: a household questionnaire and an individual questionnaire. The household questionnaire is divided into four segments:

- Socio-demographic characteristics;
- Education and social characteristics;
- Employment status and a few economic characteristics;
- Criterion of classification in the informal sector of the production unit or the enterprise.

The individual questionnaire is meant for any person considered a potential member of the labour force. It is divided into six specific segments. The household/production unit survey covers the principal and secondary activities. It estimates the number of households/production units at 28,726, including 23,454 informal individual households/production units.

Lessons learned from the first informal sector survey in Botswana.

- Upon further review, the technicians of the National Statistics Office found the breakdown into 25 strata to be somewhat excessive;
- The fact that there were few informal individual production units begged the question whether it was not necessary to review the sampling methodology, even if that meant increasing the size of the sample;
- There were redundancies in the household and individual questionnaires. The questions must be classified hierarchically in order to reserve key questions for the individual in the individual questionnaire;
- Need to conduct an operation test from pilot surveys;
- Need to introduce filter questions in the individual questionnaire;
- Delays in releasing results;
- Coding errors, too much information missing in the individual questionnaire;
- Need to provide information (for the future) about capital, cost of production, sales figures, profit and productivity.

The informal sector in South Africa based on the October Household Survey⁷

Before the October Household Survey was scheduled in South Africa in 1993, there had never been information covering the entire territory of South Africa on the informal sector, despite some research that had been undertaken in limited geographical areas. This gap was closed with the October Household Survey, which establishes the dependency between factors such as race, gender and education, on the one hand, and participation in informal activities, on the other.

There have been many editions of the October Household Survey: 1994, 1995, 1996, 1997, 1998 and 1999. The first five were independent surveys with different samples designed for each year. However, the 1998 survey was drawn from a master sample of primary sampling units (enumeration areas). As a result, households selected for the survey were visited for other operations such as the twice-yearly labour force survey.

The sampling procedure for the master sample involved stratification by province, and within each stratum, by community (urban versus non-urban) and based on the separation of residences (at the time of racial segregation), such that the final sample was representative of the provinces, the communities and the races.

⁷ Reference: Joyce LESTRADE JEFFERIS, An analysis of the informal sector in South Africa based on the October Household Survey (OHS), 1995, Central Statistical Service, Pretoria.

<http://www.statssa.gov.za>

Altogether, 3,000 enumeration areas were drawn by means of probability proportional to size principles in each stratum. These made up the primary sampling units. Ten households were then drawn for each enumeration area. This means that a total of 30,000 households were visited as secondary sampling units for the survey.

The October Household Survey is not specific to employment or the informal sector. Nevertheless, it represents the best tool in South Africa to provide information on informal employment and informal activities. It collects the following types of information: demographics (marital status, gender, age), level of education, migration, economic activity and employment in health services. It also covers a few major issues: employment, unemployment, the informal sector, internal migration, characteristics of the habitat, access to social services (including health), security and welfare of households and quality of life.

The definition of the informal sector used by the Central Statistical Service refers to the legality of the production unit, such that it covers any employed person 15 years of age and above, whose activity is not registered for the payment of value-added tax. This group includes own-account workers, employees of informal production units and domestic workers.

Highlights of the 1995 October Household Survey

In 1995, the added value of informal activities represented 7 per cent of South Africa's GDP. But while 78 per cent of persons employed in the informal sector were Black South Africans, their contribution to the added value of the informal sector was only 54 per cent. This shows the relatively low level of income of this segment of the population. Conversely, the contribution of White South Africans in terms of added value of the sector represented three and a half times their weighting in employment in the informal sector.

Women represented 70 per cent of persons employed in the informal sector in South Africa; they were also highly represented in sectors with the lowest wages. More than three quarters of self-employed women worked in the service industry. By contrast, two fifths of men worked the business, food service and lodging sectors. These last three activities contributed a great deal (45 per cent) to the total added value of the informal sector (16 per cent for individual services including domestic services, agricultural work, cleaning).

The lack of access to formal employment by South Africans is at the root of the development of the informal sector, which accounts for 12 per cent of the labour force. In other words, along with the structural crisis and decline in economic growth of the 1970s, the economic model based on racial segregation exacerbated the country's internal economic crisis and the expansion of the informal sector.

The October Household Survey provides crucial information for the measurement of the informal sector. However, it is insufficient for a better understanding of how the sector works, because the survey is designed to cover several subjects at the same time, such as migration, mortality and fertility. A specific survey of informal production units is necessary.

The Tanzanian experience⁸

The Tanzanian experience here refers to two surveys of the informal sector conducted in Tanzania. The first was conducted in 1991 and had national coverage while the second was conducted in 1995 was limited to Dar-es-Salaam. Both surveys used different definitions of the informal sector. In the second survey, the definition used was much more in line with that developed by the 15th International Conference of Labour Statisticians. There were a few minor differences in the codification of activities between the two surveys. For the 1991 survey, namely the national survey of the informal sector, there were nine types of activities, while the Dar-es-Salaam Informal Sector Survey had 11.

It should be noted that the type of activity served as a stratification criterion in establishing the sampling units. In 1995, for the Dar-es-Salaam Informal Sector Survey, the definition of the informal sector included agriculture, animal husbandry and fishing.

One fundamental difference between the two surveys was the number of standard questionnaires. For the national survey of the informal sector, there were two questionnaires, the “household” questionnaire and the “enterprise”(or production unit) questionnaire. For the Dar-es-Salaam Informal Sector Survey, a third type of questionnaire was used geared to employees (a sub-sample of employees was established to answer the questionnaire).

In the two surveys, the principal informer was the head of the household (for the “household” survey), and the head of the production unit (for the “enterprise” survey). For a household selected for the survey, the number of “enterprise” questionnaires used was based on the number of enterprises identified.

Sampling methodology

The “household” approach was favoured over the “establishment” approach. The constitution of an “establishment” sampling frame is not possible for two reasons. First of all, the task is enormous even for a sample of cities and villages. Second, it had been decided to use a broad definition of activities of the informal sector, which does not include any restriction as to the concept of establishment (it indicates the existence of a fixed location).

From the population census, a sample of enumeration areas was taken. This sample represented approximately 30 per cent of the enumeration areas identified in Tanzania.

The first level included the city of Dar-es-Salaam, three municipalities out of nine (stratified according to their level of industrialization), three regional capitals out of ten, three district

⁸ References: - Gideon K. NGOI, Survey of the informal sector in Tanzania: method, results and problems of data collection, Labour Statistics Unit, Ministry of Labour and Youth Development, Dar-es-Salaam.

- P.B. MKAI, The sample design for the 1991 National Informal Sector Survey (NISS) and 1995 Dar es Salaam Informal Sector Survey (DISS), Central Bureau of Statistics/Planning Commission, Dar es Salaam.

headquarters out of 50, and three commercial centres out of 12 in urban areas. Of these localities, 120 enumeration areas were drawn from the urban areas.

However, the enumeration areas selected in the urban areas were those that had a high level of informal activities in manufacturing, construction and transport. Finally, 50 per cent of the enumeration area sample had a high level of informal activity, 30 per cent had an average level and 20 per cent a low level. This principle was maintained for the Dar-es-Salaam Informal Sector Survey.

With regards to the rural communities, the 1991 national survey of the informal sector used the sample of clusters from other surveys and covered more than 100 villages. In each enumeration area and village selected, 30 households with a head of an informal production unit were chosen. The number was lower for the national survey of the informal sector or for villages with less than 30 households.

In each primary survey unit, all households were identified according to the absence of a head of an informal production unit (nine types for the 1991 national survey of the informal sector and 11 types for the 1995 Dar-es-Salaam Informal Sector Survey).

More specifically, the process involved first collecting specific information to identify each household, the head of the household and the household members (name, gender, age), and then identifying all members of the household five years of age and above who were engaged in an economic activity as an independent worker or as a boss (for their principal and secondary activities) from which they earned income throughout the year (past 12 months), since the production unit could not be included in the final sample.

For each member of the household identified as an entrepreneur, information was collected on the number of employees (0; 1-5; 6-10; 11 or more), excluding himself, and his partners in the activity and unpaid family workers.

For activities with fewer than 11 employees (six in 1991), the type of activity was registered using a list of 11 (nine for 1991) activity codes (combined with the presence or absence of employees in the case of the 1995 Dar-es-Salaam Informal Sector Survey). The information on the number of employees and the type of activity was then used for stratification and for the establishment of a final survey sample. To that end, up to three activities per head of a production unit were registered.

The Dar-es-Salaam Informal Sector Survey was conducted among employees. During the survey of heads of informal production units, all employees were divided into six categories:

- Paid permanent employees;
- Paid temporary employees;
- Paid casual employees;
- Paid apprentices;

- Unpaid apprentices;
- Family helper/subcontractor.

The sub-sample of employees was obtained by taking an employee from each category (except that of family helper/subcontractor) with the instruction to survey statisticians to respect the balance as to the gender and age group of the employees.

For the employee survey, information was collected about their marital status, size of their household, place of birth, reason for participating in the informal sector, membership in a trade union, etc.

Definition of the informal sector in Tanzania

For the case of Tanzania, the working definition of the informal sector was as follows:

- The informal sector is limited to the private sector. It excludes quasi-State enterprises and registered cooperatives;
- For the Dar-es-Salaam Informal Sector Survey, agriculture could be an informal activity if it is for barter;
- If it is not for commercial purposes, fishing could be considered an informal activity in the national survey of the informal sector,
- The production unit must have no more than five employees in the case of the national survey of the informal sector. This criterion was maintained for the Dar-es-Salaam Informal Sector Survey, except for manufacturing, where the maximum number of employees needed for the production unit to be considered informal was ten;
- The location of the production unit is in a market, in a temporary structure, in the street or outdoors.

But for the production unit to be considered informal:

- It should not use high technology on a continuous basis;
- It should not be a large shop located on a main street or specialized shop or one belonging to a formal organization;
- It should not be a restaurant located in modern premises, having furniture and cooking facilities.

Liberal professions such as medicine, accounting, legal services are considered formal and, along with domestic jobs, are excluded from these two surveys.

Criticisms of the method

The first criticism concerns the definition of informal activities. The existence of changes in definition between the national survey of the informal sector and the Dar-es-Salaam Informal Sector Survey makes it difficult to compare the total number of jobs created by the informal sector over time.

These two surveys give an estimate of the number of jobs created by the informal sector, but require other sources of information to measure the weighting of the informal sector in total employment (22 per cent of urban employment according to the national survey of the informal sector and 60 per cent of urban employment according to the Dar-es-Salaam Informal Sector Survey). The weighting of the informal sector in total employment for Antananarivo, the capital city of Madagascar, for phase 1 of the 1-2-3 survey, is similar to the weighting given for Dar-es-Salaam.

According to the authors of the reference articles, the employee component of the Dar-es-Salaam Informal Sector Survey may have been distorted by data collection agents who may have deliberately reduced the number of employees for each informal production unit, in order to lessen their work burden.

This example shows the advantage of the 1-2-3 survey. Estimating formal employment and its weighting in total employment from phase 1 (or employment survey) of the 1-2-3 survey cannot be affected by a lack of scientific scrutiny on the part of survey statisticians for phase 2 or the survey of informal production units.

The Namibian experience⁹

The 2001 Namibia Informal Sector Survey is a survey of production units (or enterprises) and does not collect information on households, even if it adopts a household approach.

The target population of the survey is that of ordinary households (which means that prisons, barracks, hotels and hospitals are excluded in the house count), where at least one member is the head of an informal production unit.

Sampling method

This is a sample survey stratified at two levels. First, primary units made up of enumeration areas were selected with probability proportional to size (according to information from the population census). Households making up the secondary units were drawn with equal probability in each primary unit selected. Within each household selected for the survey, all heads of informal production units were interviewed.

⁹ Reference: Panduleni KALI, Improving the quality of informal sector statistics: Namibia, Discussion paper presented during the 7th Meeting of the Expert Group on Informal Sector Statistics (Delhi Group), New-Delhi, 2-4 February 2004.

At the outset, the objective was to conduct a survey of a large sample. But this was not possible due to a shortage of experienced personnel. Finally, the sample of secondary units selected for the Namibia Informal Sector Survey was that used for the 1999 Namibia Child Activity Survey.

This means that 281 primary sampling units were involved in the Namibia Informal Sector Survey. Within each of the 281 primary units, 30 households were selected, for a total of 8,430 households (281 x 30).

The 8,430 households were divided into two groups: group 1 included households with at least one head of an informal production unit, and group 2 comprised households with none.

Out of the 281 primary sampling units, five did not contain any household with a member who headed an informal production unit, thus excluding them from the survey. Moreover, 7,080 households were eligible for the survey because they had at least one member who headed an informal production unit.

Nevertheless, only 5,491 households were selected for the sample, because certain primary sampling units did not even have the 30 households required for the survey. But out of the 5,491 households selected, 4,427 ultimately participated in the survey, with the remaining 19 per cent not responding.

Definition of the informal sector

The following characteristics define informal activities or the informal sector in Namibia:

- The informal sector is limited to activities in the private sector, excluding cooperatives;
- Agriculture is excluded if the activity is for barter and not for own consumption;
- The production unit includes no more than five employees;
- Enterprises using high technology or having formal characteristics are excluded;
- Domestic helpers and professionals (doctors, accountants, notaries, lawyers, dentists, etc) are excluded.

Problems faced and criticisms

Due to poor understanding of the definition of the informal sector, survey statisticians were misled into investigating formal enterprises and into considering households not containing a head of an informal production unit. But as with the Tanzanian case, other sources of information are required to gauge the weighting of the informal sector in total employment.

The Zambian experience¹⁰

Going by the reference document, the informal sector survey in Zambia was conducted as a sequel to a national budget/consumption survey. Initially, the Zambian Government, recognizing the need to review the household consumption basket with a view to updating the consumer price index, decided to carry out a household budget/consumption survey. Indeed, the last large-scale statistical survey was conducted in 1974/75.

The budget/consumption survey which was to feed into the formal sector survey began with a field data collection exercise in July 1993. The survey had national coverage in order to produce weightings for the new consumer price index for three categories of households, namely:

- High-income urban households (20 per cent of incomes);
- Low-income urban households (80 per cent of incomes); and
- Rural households.

The main objectives of the survey were:

- To determine out the weighting for the new consumer price index;
- To estimate total household expenditure for national accounting purposes;
- To estimate the annual distribution of yearly household expenditure in order to determine the poverty line; and
- To come out with a typical household consumption basket.

During the design of the survey, however, the Zambian Government, donors and users expressed their interest in using the exercise to also measure the weight of the informal sector in the national economy.

Sampling methodology

The informal sector survey was accordingly conducted using a stratified approach whereby the country was initially divided into two parts, the first being called “metropolitan” (or the equivalent of major urban centres including the 10 major towns such as Lusaka, Livingstone and some Copperbelt townships). Next, the metropolitan group was divided into the high-income households and the low-income households¹¹. The second group named “non-metropolitan” covered secondary towns and rural areas.

¹⁰ Reference: Oliver J.M. CHINGANYA, “Experience of data collection on informal sector, from household budget survey”, Central Statistical Office, Lusaka.

¹¹ In order to determine low or high income, a preliminary stage of the household enumeration in the primary survey units collected key information on the weekly meat intake. As shown in the 1991 priority survey, this enabled the high-income households to be separated from the low-income households.

The survey was stratified at two levels. For level one, 180 standard enumeration areas were selected including 120 metropolitan and 60 non-metropolitan areas. For this first level, the enumeration areas being the primary sampling units were drawn by probability proportional to their sizes using the results of the mapping exercise for the 1990 population census.

For the second level, 10 households were to be selected in each of the first-level enumeration areas. These 10 households were selected by equal probability for the non-metropolitan segment, while for the metropolitan segment a probability four times the magnitude of the ratio of high-income households to low-income households was used. In the final analysis, 1,800 households were surveyed comprising 600 high-income metropolitan households, 600 low-income metropolitan households, and 600 non-metropolitan households.

Data collected during the budget/consumption survey

Data for the budget/consumption survey were collected under the following headings:

- Daily expenses (on food and other items) by filling out an expenditure workbook;
- Major expenses over the last 12 months;
- Current expenses and money transfers received;
- Farming, fishing and hunting activities;
- Household goods and property;
- Expenditure for rent and utilities;
- In-kind benefits for wage earners who are members of the household;
- Work income and other sources of revenue of each member of the household; and
- Economic activity exercised by each household member aged seven and above.

This last heading distinguishes household members in gainful employment from those who are not and from full-time students, housewives and retired people. For those who have a job, details about the branch of economic activity, employment status and income earned were collected, as was information on small farming concerns managed by a member of the household.

Several visits were planned for the budget/consumption survey and the exercise as a whole was conducted over several months. It was on the basis of the preliminary results of the economic aspect of the survey that the Central Statistical Office decided to conduct a specific survey on the informal sector. The sampling frame was determined on the basis of the principal activity exercised by those who considered themselves employed. Indeed, unlike the principal activity, the households budget/consumption survey gave no details about the secondary activity, which would have made it possible to know whether such activity belonged to the informal sector or not.

For the households selected in the informal sector survey, two types of survey were conducted. The first made it possible to identify principal as well as secondary activities and to determine whether they belong to the informal sector. The second covered production units and gave information on the type of production unit, branch of economic activity, viability of the business, credit access and so on.

Definition of employment in the informal sector

In this survey, people employed in the informal sector were:

- Those working for a business of less than five employees not covered by social security;
- The self-employed; and
- Family help.

Small farming concerns were included in the informal sector.

Comments and analysis

These have to do with defining the informal sector, which has been discussed by those who produce and those who use the information generated on the informal sector. For many people, the informal sector should not include agriculture. They argue that not only could other resources be mobilized to analyze the agricultural sector, but that also taking small agricultural concerns into account might conceal the weight of non-farming activities.

Generally speaking, the survey did not provide details on production units. Certain variables could not be gender-disaggregated. The survey itself collected no information on the training and professional experience of household members.

The main advantage of the budget/consumption survey lies in providing a sampling frame for a genuine survey of the informal sector.

About the 1-2-3 survey

The 1-2-3 survey is actually a set of three interconnected surveys which have the advantage of giving a precise measurement of the weight of the informal sector on the following economic aggregates: total employment, total production, value added, intermediate consumption, household income and final household consumption.

Phase 1 or the employment component of the 1-2-3 survey

As indicated in its numbering, phase of 1 of the 1-2-3 survey gives pride of place to employment and is conducted on households. It comprises two questionnaires, the first of which collects socio-economic and demographic data on household members and the characteristics of their dwelling. The second questionnaire is specific to employment and is used to situate people relative to employment (employed, unemployed in the ILO sense, discouraged worker and people who are

retired). This questionnaire covers any potential member of the labour force (aged 10 or more in the case of Madagascar).

This survey has many advantages, similar to those resulting from the filter question of the individual questionnaire. First, it identifies as employed all persons who declare themselves jobless (because the work activity is not considered as a job by the respondent or because he/she is not paid).

It manages to classify employed people by institutional sector (public, private or informal sector). To this effect, a definition of the informal sector has been adopted based on the official registration of the employing production unit (possession of a statistical number), keeping of proper accounts (for self-employed bosses and workers), but for purposes of international comparison this definition may be nuanced by the branch of activity (excluding agriculture for example) and the staffing strength.

The employment survey notes the number of hours worked, whether a person has a written job contract or not and has social security. It should be noted that the number of hours worked and the use of productivity indicators enable the non-observed economy to be measured indirectly. The weekly number of hours worked makes it possible to measure visible underemployment, while the last two characteristics are considered as informal employment indicators.

Arguably, these advantages make the first phase of the 1-2-3 survey a serious, if not the best instrument in Africa for measuring informal employment, including when such informal jobs are held in a formal business (and are therefore precarious jobs). This explains why the 1-2-3 survey has also been adopted to measure the non-observed economy in Europe.

Phase 2 or survey of informal production units of the 1-2-3 survey

Phase 2 of the 1-2-3 survey focuses on informal production units. The sample for this survey is obtained by stratification of the exhaustive list of the head of an informal production unit (for the principal or secondary activity) derived from phase 1 of the 1-2-3 survey. The stratification criteria are as follows: branch of non-agricultural activity (according to the ISIC classification), status of the head of a production unit (if he is a self-employed worker, which means that the unit does not have any employees, or a boss, in which case the production unit has at least one employee).

Phase 2 of the 1-2-3 survey provides information on the characteristics of the informal production unit, his premises, his detailed production account up to the gross operating surplus, the number of employees belonging to the informal production unit, the relationship between these employees and the head of the informal production unit, the socio-demographic characteristics of the employees, their category in the production unit (employee, apprentice, partner, family helper), the method of financing the informal production unit and its access to formal financing (banks, microfinance, informal loans). The strength of this instrument is undoubtedly the existence of his production account, which can present technical coefficients (intermediate consumption/added value), the ratio of salary over production and gross operating earnings on production.

Phase 3 or consumption survey of the 1-2-3 survey

Phase 3 of the 1-2-3 survey is a survey of household expenditure. The sample of households is established based on a list of heads of households derived from phase 1 of the 1-2-3 survey

(sampling frame). The sample is first stratified according to the gender of the head of the household, his institutional sector (employee of the public sector, the private sector or the informal sector) or his status in employment (retired, inactive or unemployed under the ILO definition). This stratification is effected to better understand the difference in the consumption behaviours of households. In this regard, it should be noted that the institutional sector of the head of the household is already an indicator of the living standards of households. The results of phase 3 of the 1-2-3 survey also show that, over time, there are many more households whose head is employed in the informal sector and that wind up in the poor category than any other type of household.

Phase 3 of the 1-2-3 survey may be conducted simultaneously with phase 2, since they are independent of each other. Like any expenditure survey, it requires many visits to the households surveyed. The household is provided with a daily expenditures notebook (for 15 days) to keep a record of its expenditures. If necessary, several notebooks may be given to the household, one for each member who may incur expenses that are different from the common expenses of the household.

The samples of households and each of the different samples are divided into two based on their stratum of origin. The first group is surveyed for the first 15 days while the second group is investigated for the next 15 days. This division is useful because it better reflects seasonal variations caused by the different times of payment of salaries (public sector employees are paid around the 20th of the month while formal private sector employees are generally paid at the end of the month).

Expenditures incurred are divided into a dozen categories according to the nature of the good purchased, the service leased or the durability of the good purchased. The expenditure items are: food, clothing, health and body care, education, house maintenance, rent, electricity, transport and communication, recreation and vacation, durable goods, celebrations and ceremonies, housing construction and money transfers.

Purchases are classified according to the place of purchase and according to whether the supplier is in the formal sector or an informal production unit. This characterization is one of the strengths of the survey. It is used to measure the weight of the informal sector in the final consumption of households. This is appreciable, for example, in housing construction (hiring of a bricklayer, an independent contractor rather than a formal BTP construction company), in the purchase of a second-hand vehicle (from an informal reseller rather than a vehicle dealer).

Genesis and prestige of the 1-2-3 survey

The 1-2-3 survey developed by a researcher from the institutional development and long-term analysis group called DIAL was designed by the Institut de recherche pour le développement en France, which promotes the tool. Several African countries have already tested it successfully, including seven countries in West Africa (Benin, Burkina Faso, Côte d'Ivoire, Mali, Niger, Senegal, Togo), but also Cameroon, Madagascar, Morocco, the Democratic Republic of Congo. But the tool has already been adopted by Mexico (phase 1, 2) with unparalleled national coverage and a sizeable sample (of more than 10,000 informal production units). The success of the Mexican experience led to the application of the tool in El Salvador (1992) and Peru (1993).

Peru applied the tool once again in 2001-2004, followed by Guatemala. Pilot surveys have been conducted in Bangladesh and China. Finally, the Statistical Office of the European Community

(EUROSTAT) has adopted the tool to measure the non-observed economy (through five European projects) in Europe. It can therefore be said clearly that, all things being equal, in terms of the financial means available, this tool compares favourably with the World Bank Living Standards Measurement Studies (LSMS), in terms of both the geographic distribution of its application and the length of the experience. Like with household surveys, the 1-2-3 survey was first experimented in the 1980s.

African experience

Two types of experiences may be identified for the 1-2-3 survey in Africa: temporal and spatial. For the temporal experience, the first case is that of Cameroon, the first African country that conducted the 1-2-3 survey in 1993 and repeated the experience in 2005 (phases 1 and 2). Based on the Cameroon experience, the tool was applied in Madagascar with a much longer temporal experience. Phase 1 or the employment survey was carried out nine times, once every year from 1995 to 2002, and the last one in 2004 in the agglomeration of Antananarivo, the country's capital, and two extensions in the six other large urban centres of the country in 2000 and 2001.

Phases 2 and 3 were conducted every three years from 1995 to 2004, i.e. in 1995, 1998, 2001 and 2004 in the agglomeration of Antananarivo. Despite its obvious success, its capacity to properly determine household expenditure (according to the nature of expenses), the details it provides in terms of both employment and organization of the informal production unit, the 1-2-3 survey would never have then same national coverage as in the case of Mexico. The main explanation is that conducting a statistical survey in a poor country is often dependent on external financing. It is in direct competition with the LSMS programme of the World Bank, which without being able to allow for an in-depth analysis of the labour market or the organization of the informal sector, covers many themes at the same time.

With regard to the spatial experience, without returning to the extension to other large cities of Madagascar and the possibility of comparison between Antananarivo in 1995 and Yaoundé in 1993, it is important to review the West African experience. As part of the PARSTAT programme and with the coordination of AFRISTAT, between 2001 and 2003, phases 1, 2 and 3 of the survey were conducted in seven cities in West Africa (including six for phases 3, namely Abidjan, the only one of the group that could not carry out phase 3 because of a major political event), Bamako, Cotonou, Dakar, Lomé, Niamey and Ouagadougou. The same sampling methods, questionnaires, definition and concept were used to allow for a perfect spatial comparison. While the Cameroon and Madagascar experiences ensured the consolidation of the method, the West African experience justified the extension of the tool to other African countries.

Sampling methodology

As stipulated earlier, both the sample of informal production units for phase 2 of the survey and the household sample for phase 3 or the consumption survey are obtained by stratification based on a list derived from phase 1 of the survey (employment).

For phase 2, the sampling frame used is the list of the heads of informal production units derived from the employment survey. In that regard, the individual is the head of an informal production unit for his principal and secondary activities. The first stratification criterion is the category of the head of an informal production unit, either as the boss, which means that thee is at

least one employee among the members of the informal production unit, or as an independent worker (with no employees). The second stratification criterion is the branch of activity (ISIC) classification, with the exception of the agricultural sector. The head of the informal production unit is therefore selected for the survey according to his address and identification from the preliminary phase of enumeration and confirmed by phase 1 of the survey.

For phase 3, the sampling frame is the list of heads of households derived from the employment survey. It is stratified according to the institutional sector of the head of the household, whether he is employed or inactive or unemployed as defined by ILO. The other criterion is the gender of the head of the household.

As with phase 2, the household may be selected with its identification number in the employment survey, its official address and using the house count established in the preceding employment survey.

In the case of Madagascar, the employment survey is stratified at two levels. At the second level, the households are selected with equal probability in each primary unit. The same survey rate is used for each primary unit selected at the first level. This survey rate is the ratio between the total number of households to be surveyed and the total number of households counted in all the primary units during the enumeration phase.

As for the selection of primary sampling units, called segments in the case of Madagascar (the equivalent of the smallest division of the territory), they comprise the master sample of the large urban centre in which the survey is conducted. The master sample is established from the last general population and housing census (RGPH93). It is obtained by stratification and is made up of four different strata according to type of dwelling (construction materials) and the average level of education of the heads of the households. They are then drawn randomly in proportion to the size of the population.

Household survey¹²

The LSMS programme is one of three components of a living standards measurement programme undertaken by the World Bank. The two other components are the community survey and the consumer price survey. The goal of the LSMS is to establish better methods for collecting and analyzing data on the living conditions of households and communities and to contribute to the optimization of development policies by providing empirical support to political dialogue.

As with the other two components of the LSMS programme, the methodology and questionnaire of the household survey were first tested in the mid-1980s in Cote d'Ivoire and Peru. In the case of Cote d'Ivoire, the survey was conducted each year from 1985 to 1988 on a sample of 1,600 households, half of which were renewed annually. A successful experimentation of the methodology and questionnaire was at the root of the extension of the LSMS programme to more than 40 countries over the past 20 years. In all, more than 60 surveys have been conducted as part of the LSMS programme around the world. Examples include Eastern Europe, but especially Africa, as in the case of Cote d'Ivoire, Ghana, Madagascar, Morocco, Malawi and Tanzania.

¹² Reference: <http://www.worldbank.org/LSMS/>

The results of the survey were instrumental in evaluating the scope of poverty alleviation strategies, but also in setting objectives for these strategies.

Sampling methodology

The example that will be used is that of the household survey in Madagascar, but any such survey is based on a similar principle whether it is in Pakistan or in any other country. This a multi-level survey. At the first level, the primary unit is a territorial division that includes houses based on their common characteristics. In the case of Madagascar, the sampling of primary units (also called enumeration areas) is the master sample. It is established by stratification according to provinces, communities (urban versus rural) characteristics of dwelling (construction material) and average level of education of heads of households, but the sampling probability is proportional to size (number of households as per data of the last population and housing census).

At the second level, households were selected with equal probability in each enumeration area (16 households in each urban enumeration area and 12 in villages or rural enumeration areas).

The results of the household survey in each country where it is conducted are first presented for the country as a whole, then by community (rural versus urban) and by province or any other administrative division of the territory. In the case of Madagascar, beginning with the 2005 survey, since the country was moving from a territorial division of six provinces to one of 22 regions, the results had also to be presented for these 22 regions.

Each time that the household survey is conducted, households are first counted in the enumeration areas established by the master sample, then the number of houses is established to determine the households selected for the survey.

Questionnaire for the household survey

Unlike the other surveys mentioned previously, the household survey uses only one questionnaire. It is subdivided into some 20 sections, because it collects information on different themes. For example, it provides information on demographics, fertility, anthropometrics, migration, credit and savings, food expenditures and own-consumption and agro-pastoral activities. However, we are most interested in two of these areas: the section on economic activities and the section on independent non-agricultural employment.

The section on economic activity

This section divides the labour force (seven years and above) into inactive, unemployed and employed people. It comprises seven parts classified alphabetically from A to G. Part A serves as a filter for the classification of individuals in relation to the labour market; parts B, C, D, E, F, G are reserved for individuals engaged in an economic activity. Hence:

- B deals with principal work over the past seven days;
- C concerns secondary work over the past seven days;

- D relates to the search for additional work and is geared to individuals engaged as an employee over the past seven days and seeking to change jobs;
- E concerns principal work over the past 12 months. The questions asked here are similar to those concerning principal work over the past seven days asked in part B;
- F deals with employment history; and
- G describes secondary jobs over the past 12 months.

The fundamental interest in differentiating between work over the past 12 months and work over the past seven days is that it offers an alternative to the highly restrictive reference period of seven days for considering whether an individual is employed, unemployed or inactive. Moreover, the measurement of the weight of the informal sector in employment must be given according to the reference period of seven days, but also for the period of the past 12 months.

The section on non-agricultural independent employment

This section collects information on no more than three non-agricultural enterprises of the household. At this stage, formal households have not yet been excluded and the survey approach is similar to that of the survey of the informal sector in Botswana. It is divided into three sections, A, B, C, as follows:

- A contains information on the characteristics of enterprises such as the number of employees, presence of trade unions and employee benefits;
- B collects information on the costs supported by each enterprise according to the source (expenditure of the household or the enterprise), on the breakdown of costs per item, labour, raw materials, transport, electricity, etc.;
- C evaluates the costs of replacing the goods and production equipment of the enterprise (including vehicles), the value of unsold merchandise, production and real estate.

This section therefore analyses the characteristics and operation of informal enterprises. From a methodological standpoint, it should be noted that while the survey of informal production units for the three types of surveys mentioned above (1-2-3 survey, survey of the informal sector in Tanzania, Botswana and Namibia) was conducted on a sample drawn from a list of production units, the sample for the household survey is exhaustive in relation to the sampling frame.

Criticisms and comments on the household survey

Subject to a clear definition of the informal sector, the household survey can be used to determine such items as technical coefficients, ratios that are useful for the establishment of informal sector accounts in national accounting.

In conducting the survey, any country may decide to make changes to the standard questionnaire. In the case of Malawi, changes were made to section V on family enterprises to allow

for the number of jobs created by the informal sector to be estimated. The key questions for determining whether an enterprise is informal are as follows:

- V.10 Is the enterprise officially registered?
- V.11 How many members of the household work for the enterprise?
- V.12 How many employees of the enterprise are not members of the household?

Unfortunately, the questionnaire does not tell us whether the enterprise keeps official records or not. The case of Malawi shows that the household survey does not provide sufficient details on the added value created by the enterprise. Yet, like the average weekly schedule of the employees (which the survey collects), this information is useful to calculate the productivity of work in the informal sector. This assessment of work productivity is particularly valuable in calculating the weight of the informal sector using the indirect method.

Moreover, Malawi's household survey is open to other criticisms. It provides information on the destinations of products of the enterprise but does not give a weighting for each destination. It also does not provide any details about the nature of the inputs or on their weighting in the raw materials column.

The household consumer spending component is established under the following headings: own-consumption, gifts received in kind and other sources, without distinction as to place of purchase. However, distinction as to place of purchase, which is taken into account in phase 3 of the 1-2-3 survey (on consumption), gives an indication of the household supplies obtained from the informal sector. This information makes it possible to compare with the data on the production of informal production units destined for final household consumption.

SYNTHESIS AND RECOMMENDATION

The ultimate goal of the analysis is to propose an integrated methodology for measuring the informal sector in Africa. This methodology will draw on the best practices in Africa. It must comply with the international resolutions of:

- The most recent international conference of labour statisticians;
- The Delhi Group on the informal sector and the system of national accounts;
- The expert advisory group on national accounts of the United Nations Statistics Division;
- The March 1997 seminar in Bamako on the informal sector in Africa.

But before proposing the integrated methodology, current practices in Africa should be analyzed in relation to international recommendations. The analysis will focus on:

- Definitions and concepts used;
- The methodological approach selected;

- The survey technique adopted.

The analysis itself will be based on the African experiences mentioned in the previous chapter, but which, if necessary, will be compared against the recommendations of international experts on the technique of surveying the informal sector.

Definitions and concepts used

Methodological approach selected

First of all, the weighting of the informal sector may be estimated using the indirect method or the direct method. In the first case, the classical approach is to allocate the gap in the resources/employment balance of a macroeconomic aggregate to the so-called “informal” sector. This approach is the preferred choice of national accountants. It depends largely on the definition of the informal sector, but the most appropriate concept is that of the non-observed economy.

Another more refined method is the Labour Input Method. Its goal is to estimate the total added value in the economy from the volume of work and based on work productivity assumptions. For this, the volume of work is derived from the employment survey. The added value so estimated generally exceeds the figures obtained from data of formal enterprises. The difference is attributed to activities of the informal sector and the underground economy. But to distinguish between the underground economy (stemming from formal enterprises) and activities of the informal sector, it is important to properly determine the contribution of the informal sector.

Of all the examples given in the previous chapters, only phase 1 (or the employment survey) of the 1-2-3 survey seems to us capable of making such a determination. We also recommend the use of this survey (or any other employment survey whose questionnaire is sufficiently detailed to consider as employed any person who, feeling underemployed, tends to consider himself unemployed), as a tool for measuring the weighting of the informal sector using the indirect labour input method.

In conclusion, it should be noted that the use of the labour input method is predicated on the existence of an appropriate employment survey. This method will be used even more in the future depending on the regularity of the employment survey itself and the survey of informal production units, which is indispensable for measuring labour productivity in the informal sector.

Direct approach to measuring the informal sector

Three types of surveys use the direct method to measure the informal sector: establishment surveys, mixed surveys and household surveys.

The establishment survey requires a field census of all establishments from which a sample would be selected, where applicable. The method faces one major difficulty: the absence of a fixed location for the conduct of certain activities (case of roving sales people), which makes it difficult to establish a sample frame. Often, the establishment survey does not capture the full range of activities. When examples of this type of survey exist in a country, the surveys often do not have national coverage. They do not always use the same questionnaire, or even the same definition of the informal

sector, making comparisons difficult. With a few exceptions, such as the need to have more precision on a specific activity (example of gold washing), the mixed survey and the household survey are both preferred to the establishment survey.

The mixed survey takes place in two steps. The first is to identify the persons in a household who are responsible for an informal production unit. The literature recommends this household-based approach¹³ for many reasons: importance of the micro-production unit, difficulty of distinguishing the accounts of the production unit from those of the household, and non-existence of an updated list that could serve as a sample frame.

There are three possibilities for the first step:

- An employment survey, as is the case with the 1-2-3 survey developed by DIAL and implemented by AFRISTAT in West Africa, but which has also long been implemented in Madagascar; or the segment on employment and economic activities of the World Bank household survey;
- A budget/consumption survey as is the case with the Zambian experience;
- Limitation to a listing of the members of the household heading an informal production unit (cases of Botswana and Tanzania).

We prefer the “employment” survey for the first step, for one obvious reason. The 15th International Conference of Labour Statisticians stipulated that the measurement of the informal sector must cover production units (individual informal enterprises or enterprises of informal employers) that are related to a secondary activity of the person managing them. At the first step, information collected on the household would have to be sufficiently detailed to identify informal production units managed by a member of the household as a secondary activity. Unfortunately, only an employment survey (or the employment segment of a household survey) could help with such identification.

The second step surveys all or a sample of the informal production units. This is the overarching purpose of the survey. Its principal objective is to analyze the characteristics and operation of the informal production unit, but it also gives the number of jobs created by informal production units.

Most of the African experiences in the previous chapter fall into this category, including the surveys on the informal sector in Botswana, Namibia, Tanzania, Zambia, and above all, phase 2 of the 1-2-3 survey. The latter survey seems to have a clear advantage over the others in many respects:

- It is proven from a methodological standpoint, having been applied in different countries over the past 20 years (international reputation);

¹³ See: Vijay VERMA, Sample design considerations for informal sector surveys, <http://www.gdrc.org/informal/verm0798.pdf>, University of Essex Colchester CO4 3SQ, U.K. vjverma@compuserve.com

- It has also been used for spatial comparison (between seven large cities in West Africa) and temporal comparison (three cases in Madagascar with the same definition and concept of the informal sector);
- It provides very detailed information on the characteristics of the informal production unit and its operating account, and is used to estimate the mixed income of the household, but also the ratios and other technical coefficients that are useful for national accounts.

Considering that its methodology has already been proven, if a mixed survey has to be applied across Africa, phase 2 of the 1-2-3 survey is the best candidate for such a challenge and may also be the one with the most support.

While phase 1 of the 1-2-3 survey automatically falls into this category, the same is true of the World Bank household survey, especially its employment and activities segment, except that this segment should also include key questions that would allow for the job to be classified as informal (for example the possession of a work contract for the purposes of paying social benefits). The main advantage of this type of survey is that it measures the weighting of the informal sector in job creation. Indeed, according to the definition of the informal sector, mixed surveys on informal production units may estimate more or less accurately the number of jobs to be included in the account of the informal sector.

If the definition of the informal sector were limited to that of the 15th International Conference of Labour Statisticians, which does not insist on the incorporation of domestic jobs, then mixed surveys would be quite sufficient for the measurement of employment. But this would not be the case with an expanded definition of the informal sector.

However, the number of jobs created by informal production units may be wrong in the Tanzanian case, because survey statisticians may take liberties to reduce the number of people to be surveyed subsequently in the employment survey¹⁴.

But even if the number of jobs created by informal production units is not wrong, the accuracy of the estimate is not better than that established in the previous level of phase 1 of the 1-2-3 survey.

Finally, it should be noted that, in the case of Tanzania, other sources of information should be used to assess the share of the informal sector in total employment. Yet this weighting is measurable directly in phase 1 of the 1-2-3 survey.

However, the series of questions to be asked must be sufficiently detailed to capture informal activity as secondary employment. This aspect was overlooked in the Zambian experience with measuring the informal sector.

¹⁴ As part of the “Dar es Salaam Informal Sector Survey” of 1995, the employment survey is downstream from the survey of informal production units. It only collects information on the employment of members of informal production units.

If it provides details on the place of purchase like phase 3 of the 1-2-3 survey, the consumption survey would also fit into this mould. Indeed, this phase measures the share of the informal sector in household supplies.

Technical survey

This section summarizes the techniques used in Africa to measure the informal sector and conduct surveys. It presents the types of survey selected and its comparison with international recommendations.

All the techniques of measuring the informal sector mentioned in the previous chapter on African experiences are all surveys stratified at various levels. The primary units, created by territorial divisions comprising households with similar characteristics, are selected with unequal probabilities: proportional to size (number of households as provided in the last population census) and by stratification. The secondary unit or the household (household/informal production unit) is over-represented in urban areas, especially in large urban centres.

Furthermore, certain countries such as Namibia, Botswana and Tanzania have already conducted a national survey of informal production units.

In the case of a mixed survey, an effort was made to limit delays between the first step of identification of informal production units or the constitution of sampling frames, and the second step of the actual survey of informal production units.

In addition, the case of Madagascar reveals the following:

- The highest frequency (annual) of phase 1 of the 1-2-3 survey in relation to that of the survey of informal production units or phase 2 of the 1-2-3 survey or that of phase 3 or the consumption survey of the same statistical device, which occur every three years;
- The regularity of the conduct of these surveys.

Based on the points mentioned with regard to the method of selecting primary or secondary sampling units, the limitation of delays between the two steps for mixed surveys, the regularity of the surveys, but also the challenge of having national coverage, it can be said that African experiences are in line with international recommendations (including those of the Fifteenth International Conference of Labour Statisticians).

However, some methodological choices seem inappropriate, as in the case of the employment survey downstream of the survey of informal production units in Dar-es-Salaam in 1995, thus calling into question the reliability of information collected.