

# Measuring informal sector employment in Pakistan: Testing a new methodology

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Ever since the “invention” of the concept of the informal sector by K. Hart (1971), and especially the first appearance thereof in an official report (ILO, 1972), ample attention has been given to its employment aspects. Initially, the informal sector was seen as a temporary phenomenon and little need was felt for the collection of statistics at national level. Information was collected mainly on the basis of case-studies that were confined to relatively small areas and one – or a limited number of – industrial sector(s). However, during the 1980s it became clear that the informal sector was not a temporary phenomenon but was developing into an important source of employment and income and contributing considerably to the domestic product of many countries. Consequently, demand increased for comprehensive statistics on the informal sector, collected on a regular basis as part of national statistical programmes.

The measurement of employment and income in the informal sector was one of the subjects discussed at the Thirteenth and Fourteenth International Conferences of Labour Statisticians (ICLS) in 1982 and 1987 respectively (ILO, 1992a). Eventually, the Fifteenth ICLS adopted a resolution on statistics of employment in the informal sector in 1993. In addition to these multilateral attempts to capture the informal sector statistically, efforts have been made by individual countries to develop methodologies to this end; one of these countries is Pakistan.

This article reports on the main findings of a study undertaken by the Pakistan/Netherlands Project on Human Resource Development. The main objective of the study was to determine the extent to which information can be obtained through existing statistical instruments, allowing for a split between employment in the formal sector and the informal sector in

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Pakistan. The study was implemented in two parts. During the first part (Pilot Study 1), undertaken in October 1992, different methodological aspects of the statistical coverage of employment in the informal sector were tested. The second part (Pilot Study 2), undertaken in December 1993, investigated the possibility of implementing the results of the first pilot study on a national scale through Pakistan's Labour Force Survey (LFS), within the conceptual context which had been adopted by the Fifteenth ICLS in the meantime.

The article starts with an overview of certain conceptual issues which arise from the measurement of informal sector employment. The research objectives and data collection strategy are then outlined in the section on survey methodology. The next section presents the findings of the study in Pakistan relevant to the methodological issues discussed here. An operational definition is suggested for the informal sector in Pakistan on the basis of the research findings and conceptual considerations. Finally, the practical implications of the research findings are indicated. In this concluding section, some minor modifications are suggested to Pakistan's LFS that would allow for differentiation between formal sector and informal sector employment.

## Measurement of informal sector employment

The term "informal sector" has been used to mean many different things, so it is essential to state clearly from the outset what it means here. The concept of the informal sector used in this study is taken from the resolution concerning statistics of employment in the informal sector adopted by the Fifteenth ICLS:

- (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 and on a small scale. Labour relations – where they exist – are based mostly on casual employment, kinship or personal and social relations, rather than on contractual arrangements with formal guarantees.
- (2) Production units of the informal sector have the characteristic features of household enterprises. The fixed and other assets do not belong to the production units as such but to their owners ... Expenditure for production is often indistinguishable from household expenditure ...
- (3) Activities ... 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 (ILO, 1993, p. 179).

According to the ICLS resolution, the basic unit for the statistical measurement of employment in the informal sector is the production unit. It should be noted that in this context the word "informal" refers to the type

of enterprise in which a person is employed, not the links between that person and the enterprise employing him/her. For example, someone employed very casually by a formal enterprise is considered to be employed in the formal sector. Similarly, a regular employee of an informal enterprise is said to be employed in the informal sector.<sup>1</sup>

The ILO's conceptual framework links the measurement of employment in the informal sector with the UN's System of National Accounts (SNA) in order to coincide with that system's widely agreed terminology so that the informal sector's statistics will be consistent with employment and other economic statistics for most countries. Accordingly, the informal sector units are defined as belonging to the unincorporated enterprises (or the SNA's "household") sector. This sector comprises all production units that are not corporations, quasi-corporations, government units or non-profit institutions serving households. For statistical purposes, the resolution defines the informal sector as comprising those household enterprises which are either: (i) *enterprises of informal employers*, i.e. small-scale unincorporated enterprises where scale is measured by the number of regular employees – the cut-off point for smallness being dependent on the branch of economic activity; or (ii) *informal, own-account enterprises*, i.e. those unincorporated enterprises that are run without regular employees (but perhaps with unpaid family workers or occasional hired labour).<sup>2</sup>

## Survey methodology

### Objectives

The main objective of the study in Pakistan contains three elements relevant to our purposes here:

- (a) To evaluate the feasibility of combining a household survey and an establishment survey to collect data on employment in – and other characteristics of – informal sector units.
- (b) To test whether a household survey can provide information on enterprises that is sufficiently reliable to differentiate between formal and informal production units.
- (c) To test alternative definitions of the informal sector and to develop a standard that can be used at national level in Pakistan.

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<sup>1</sup> In this framework, a person who has two jobs in different establishments may be in the informal sector with respect to one and in the formal sector with respect to the other – for example, a schoolteacher running a small foodstall/restaurant in the evenings and at weekends.

<sup>2</sup> For more detailed information on the concept and scope of the informal sector, see ILO, 1992b; ILO, 1993; and Pakistan/Netherlands Project on Human Resource Development, 1994b.

## Data collection strategy

As indicated above, the distinction between formal and informal sector employment is based on the characteristics of the production units. It therefore seems appropriate to collect the required information through an enterprise survey. However, it is nearly impossible to obtain a complete sample frame of all production units, because many of them cannot be traced easily. This is obvious for mobile units, but many units that operate from a fixed location (especially household enterprises) are not easily identified as production units because they are indistinguishable from a place of residence.

Since every worker belongs to a household, a household survey rather than an enterprise survey may be the proper instrument to establish a link with all types of production units, whether they are large formal enterprises or household or mobile enterprises. An approach based on households certainly takes care of the coverage, but the question then arises whether households are able to provide reliable information concerning these enterprises.

It may be argued that employees have insufficient knowledge about the capital valuation, financing sources, legal constructions and other features of the enterprises by which they are employed. While this may be true (especially for large enterprises), it has not been proved that the workers have insufficient understanding of the enterprise to provide information from which it can then be determined whether an enterprise is formal or informal. In order to assess the extent to which households can provide the required information, a specific data collection strategy was devised for the two parts of the study.

The point of departure for Pilot Study 1 was a small-scale *household survey*: a survey of 601 households was conducted in three areas in each of two selected cities (Rawalpindi and Lahore). The three areas in each city were selected on the basis of their relative incidence of high-, middle- and low-income households. Interviews were conducted in an equal number of households in each area.

Pilot Study 1 had two particularly distinctive and innovative features. Firstly, at household level, the usual LFS questions (e.g. occupation, status in employment, hours worked) were asked about each worker in the household, followed by several questions about the characteristics of the enterprise in which that worker was employed. The main aim of asking various questions about the enterprise was to establish which questions would elicit replies enabling an adequate classification of the enterprise as formal or informal.

Secondly, if a worker worked for an enterprise employing fewer than ten workers, detailed information about the enterprise was obtained from the owner of the enterprise, whenever possible. The questions put to owners were also designed to elicit information which could be used to determine whether their enterprises belonged to the formal or the informal sector.

The *enterprise enquiry* tied to the Pilot Study 1 household survey was addressed to all traceable own-account workers and employers in non-agricultural enterprises with fewer than ten employees. If the sample household itself included the employee and the employer, the enterprise questionnaire was administered directly (if the person was present) or later at an agreed time (if the person was absent). If the sample household included an employee, but not the employer, the name and address of the enterprise were requested and reported on a central list. If the employer was a member of a household already covered by the household survey, no further action was needed since the enterprise information had already been obtained from that employer. For the other employers, the central enterprise list was checked for overlapping. Each enterprise it was possible to locate was visited later by the enumerators, in order to collect the information from the owner.

This design had several advantages. In the first place, it enabled a comparison of the information about a small enterprise supplied by the household and the information supplied by its owner at the enterprise level. Secondly, it was possible to analyse which of all the questions about the characteristics of an enterprise (whether asked at the enterprise or in the household) were most useful in distinguishing between formal and informal enterprises. Thirdly, an estimate could be made of the proportion of all persons employed by "small" enterprises which is "hidden" in household-based enterprises.<sup>3</sup> Fourthly, it was possible to see which characteristics of workers – as measured through the LFS – were strongly associated with employment in informal sector enterprises.

Pilot Study 1 was successfully implemented and many important questions were answered, but new questions emerged requiring additional research. Accordingly, a second study was designed, the main objectives of which were to test the feasibility of collecting limited information on enterprises during a large-scale survey and to "fine-tune" the small set of questions used to determine whether a given small enterprise is in the formal or the informal sector.

Pilot Study 2 was conducted as part of the national LFS, so the sample design was completely determined by the design of that instrument. For practical reasons, however, it was decided to include the pilot study in a subsample of the large data-collection exercise. To limit disturbance to the main survey, the pilot study was carried out during one replicate of the LFS in every household of the main urban areas of two of the four provinces (Punjab and North-West Frontier Province). This procedure led to nearly

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<sup>3</sup> Many informal sector enterprises are based or located in a household. This is likely to be the case, for instance, for many own-account tradesmen or pedlars. The larger the proportion of all workers in "small" enterprises which works in enterprises based in their households, the better the chances of collecting satisfactory information about enterprises from respondents at the household level.

600 households for the pilot study resulting in 448 households containing at least one worker, and 774 workers in total.<sup>4</sup>

The design of Pilot Study 2 was fairly simple. During one round of the LFS, interviewers asked respondents some questions concerning the status in employment of fellow household members, and some questions about the enterprises for which these fellow household members worked.

In many cases only two questions were needed, namely “what is the name of the enterprise?” and “is the enterprise incorporated?” If the enterprise was incorporated it was in the formal sector and the interview could be concluded. However, if the enterprise was not incorporated or if the respondent did not know the answer to this question, further information was required. No more than 13 further questions were asked.

In order to assess the quality of the information collected, and thus the adequacy of the questions, the respondent's replies had to be compared with those given by somebody who was supposed to know the proper replies, i.e. the owner of the enterprise. Because of the difficulties encountered in this respect during Pilot Study 1 (see below) – and because the Pilot Study 2 activities could not be allowed to delay regular LFS activities too much – a compromise had to be found between time consumption and accuracy. This compromise meant that only in cases when the owner of the enterprise or the own-account worker was a member of the household but the answers were supplied by someone else were the relevant questions repeated for the owner or own-account worker, if he/she could easily be reached.

## Main findings

### Linking of workers and enterprises

The main findings of the study are presented below, with methodological details where relevant. The study also yielded a host of information on the characteristics of informal sector employment. This information is included here only in so far as it is indicative of the differences between the formal sector and the informal sector – and thus for the relevance of the approach being tested.

One of the objectives of Pilot Study 1 was to assess the feasibility of combining a household survey and an enterprise survey. Since we were mainly interested in the informal sector, the linking exercise was confined to enterprises that, in principle, were likely to belong to the informal sector, i.e. the small, non-agricultural enterprises. The results of the linking exercise are presented in table 1.

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<sup>4</sup> These results tally to a very large extent with those of Pilot Study 1. In the first survey, out of 601 households 459 households contained at least one worker and the number of workers totalled 787.

Table 1. Linking of jobs and enterprises by status in employment

Workers' status in employment	Jobs			Linked <sup>1</sup>	Enterprises <sup>1</sup>
	Large and agriculture	Small, non-agriculture	Total		
Regular, paid employee	245	15	260	7	7
Casual worker	38	126	164	24	23
Piece-rate worker	20	39	59	7	7
Apprentice	—	5	5	4	4
Employer	5	49	54	48	48
Own-account worker	—	173	173	171	171
Unpaid family worker with employer in household	—	68	68	67	(46)
Unpaid family worker, other	7	5	12	4	4
Total	315	480	795	332	264

<sup>1</sup> The figures in the penultimate column indicate the number of jobs for which links with an enterprise could be established, and those in the last column the number of enterprises concerned (several jobs could be located in the same enterprise).

The jobs amounted to 795 in total, i.e. the result of 787 workers of whom 8 had a secondary job in addition to their main one. Not all of these jobs were of interest to the study; 315 were in large-scale and/or agricultural enterprises, and so by definition could not be in the informal sector. For the remaining 60 per cent, an attempt was made to locate the enterprises. The link was established in 69 per cent of all relevant cases; the 332 workers for whom links with an enterprise were established were working in 264 enterprises. In all other cases, either the indications given by the respondent were insufficient to locate the enterprise, or the enterprise was located too far away. The enterprises of casual workers and piece-rate workers represented a special group, as is explained below.

Of particular interest is the linking of workers and enterprises by status in employment. It appears that certain types of status in employment are concentrated in one type of enterprise. Fewer than 6 per cent of the regular, paid jobs are in small non-agricultural enterprises, whereas over 90 per cent of employers, all own-account workers, all unpaid family workers with the employer in the household and all apprentices are engaged in this type of enterprise.

It also appears that linking of workers and enterprises is more difficult for some types of status in employment than it is for others. In most cases, locating the enterprises was fairly easy, the main exceptions being enterprises employing casual workers and piece-rate workers. Most of the problems arose in cases where such workers had been employed by more than one enterprise during the reference period. In many cases, however, it was questionable whether these workers were rightly classified as employees. Many of them should in fact have been classified as

own-account workers, in which case the tracing of the enterprise would not have been a problem.<sup>5</sup>

Linking the workers and the enterprises was an objective in itself, but it was also necessary to assess how much workers knew about certain features of the enterprise for which they worked. The results in this respect are presented below.

## Matching of answers from the household and the enterprise questionnaires

An important variable for the identification of formal and informal enterprises is total employment. In principle, total employment can be measured in two different ways:

- one can count all the persons in the household survey who indicate that they are working (480 in small non-agricultural enterprises); or
- one can count the number of persons engaged<sup>6</sup> in the establishment as indicated in the household questionnaires for the employers and own-account workers. In this case, adjustments have to be made if the enterprise is owned by more than one person, since the presence of more than one owner may result in double counting of workers (461 in small non-agricultural enterprises).

The accuracy depends not only on a correct sample, but also (for the second method) on the correct answers in the household survey on the status in employment and the size of the establishment. Pilot Study 2 shows that there is a classification error regarding status in employment in favour of employees. Approximately 20 workers should be recorded as own-account workers. This would increase the second estimate from 461 to 481 and would render consistent the estimates according to both methods. A second check on the accuracy concerning the size of the establishment can be made by comparing the size as obtained through the household survey with the size as obtained through the enterprise survey. For this purpose, it was only possible to use a subsample of the individual workers from the household survey for whom their enterprise could be located.

The answers from the two sources in Pilot Study 1 tally to a very large extent; 87 per cent were exactly the same (table 2). (In Pilot Study 2, where the questions were identically phrased for the respondent in the household and the owner of the enterprise, the correspondence was even higher, 89 per

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<sup>5</sup> Because of the conceptual problems with casual workers/piece-rate workers and own-account workers, Pilot Study 2 also focused on a clear demarcation between these forms of status in employment. The results that are not included in this article may be found in Pakistan/Netherlands Project on Human Resource Development, 1994a.

<sup>6</sup> The concept of *persons engaged in an enterprise* includes the owner or owners of the enterprise, contributing family workers (if any), all employees (whether employed on an occasional or a continuous basis), and apprentices. Casual workers engaged on a temporary basis and persons paid by piece rate or service performed any time during the reference period are also included.



cent). In 8 per cent of the household questionnaires, the registered number of workers was lower than in the enterprise questionnaires. The lower score can be attributed partly to the more detailed questioning in the enterprise questionnaire. In the household questionnaire only a question on the total number of workers was asked, while the enterprise questionnaire registered the number of workers for different types of status in employment. Such an itemization helps to limit the omission of groups of workers (e.g. casual workers).

Table 2. Consistency of the replies to the enterprise and household questionnaires concerning size of establishment by number of people engaged

Size of establishment according to replies to enterprise questionnaire	1	2	3	4	5	6	7	>7	Total
<b>Size of establishment according to replies to household questionnaire</b>									
(No. of respondents linked to an enterprise	107	91	52	33	16	15	10	3	327)
Percentage where size of establishment was stated to be:									
smaller	—	1	8	24	13	7	20	100	8
equal	93	96	90	73	69	67	80	—	87
larger	7	3	2	3	19	27	—	—	5
(Total	100	100	100	100	100	100	100	100	100)

In 5 per cent of cases, the household questionnaire gives a larger size than the enterprise questionnaire. This higher score can be partly explained by the inclination of the respondent to the household survey to state the number of persons working in the whole enterprise rather than in a particular establishment. The number of enterprises in the sample with more than one establishment is small (9), but taking the workers per enterprise instead of the workers per establishment, the number of matched responses increases by 0.6 per cent, while the number of responses with fewer workers in the enterprise questionnaire decreases by 0.9 per cent.

Broken down by workers' status in employment, the best correspondence is found for own-account workers, followed by unpaid family members and employers (94, 93 and 79 per cent full correspondence, respectively). A very low correspondence was noted for the regular, paid employees (29 per cent). The other categories (casual worker, piece-rate worker and paid non-family apprentice) score intermediate rates of correspondence (67, 71 and 50 per cent full correspondence, respectively).

Furthermore, it appears that the answers given by the proxies (to the household questionnaires) differ slightly more from the answers to the enterprise questionnaire than those provided by the workers themselves

(85 per cent versus 90 per cent correspondence). The same pattern emerges even more clearly when the proxy responses are compared with the self-responses for each category of status in employment.

A similar confrontation can be made with the classification of the branch of industrial activity of the enterprise. Although this feature is not immediately important for the formal/informal classification of enterprises, it is an indication of the knowledge household respondents have about enterprises in which the household members are working. Compared at the two-digit level (ISIC), 93 per cent of the answers concerning the branch of the industrial activity are exactly the same for both questionnaires. Of the 7 per cent that are different at the two-digit level, 4 per cent are equal at the single-digit level. This is an even higher correlation than on the size of the establishment. The first explanation for this high correspondence is the relatively simple nature of the question. In addition, there may be less confusion between "the establishment" and "the enterprise"; normally the enterprise is in the same economic activity as the establishment. Moreover, the questions were phrased identically in both questionnaires, without the extra probing, as for workers in the enterprise questionnaire.

The figures thus suggest that respondents in the household of the workers are able to provide sufficiently reliable information about the number of persons engaged in the enterprise and the nature of the activity in which the enterprise was engaged.

Size, however, is only one element determining whether an enterprise belongs in the informal sector. The registration status and bookkeeping practices of the enterprises are other elements to be taken into consideration. Analysis of these characteristics on the basis of the findings of Pilot Study 1 is hampered by the fact that the questions were not formulated identically in the two questionnaires. This was done deliberately in order to avoid the same question being asked twice, should the respondent to the household questionnaire have proved to own the enterprise. However, these differences in phrasing wrong-footed many respondents, as is evident from the fact that, when interviewed during the two parts of the survey, enterprise owners gave different answers to questions that were supposed to be similar.

In Pilot Study 2, strictly duplicate answers were obtained on the registration status and bookkeeping practices of the enterprise. This second study covered 774 workers, 384 of whom completed the questionnaire themselves. For 62 workers, the questionnaire was duplicated because the own-account worker or employer concerned could be contacted easily. These 62 duplicated questionnaires resulted in 806 comparable questions, of which 92 per cent presented identical answers. The questions on registration and account-keeping also scored well in this respect, though less than the other questions. For both questions, different answers were given by the respondent and the own-account worker or employer in only two cases. However, on the question concerning registration, 12 proxies answered "don't know" and on the question relating to account-keeping, 16 proxies did so. In all the cases in which the proxy did not know the answer, either the

enterprise was not registered or no accounts were kept. Therefore in these cases the answer "don't know" can be interpreted as "no", since the worker or proxy knows if the enterprise is registered and if accounts are kept.

The consequences of the findings for the measurement of informal sector employment are discussed in the next section. But first the main findings of the two parts of the pilot study are summarized.

- A household survey is the most appropriate way of obtaining full coverage of employment in the informal sector. In enterprise surveys, the workers with changing workplaces, casual and own-account workers, and those whose workplaces are not clearly identifiable (e.g. mobile or "hidden" in residences) are likely to be missed. The last group is composed very largely of women.
- The combination of a household survey with an enterprise survey, linked through the addresses of the employers given in the household survey, provides an insufficient number of completed enterprise questionnaires as regards employees. If the employer or the own-account worker belongs to the same household, the information can be obtained easily. Provided that the casual workers and piece-rate workers are classified properly, this is sufficient for the demarcation of the informal sector, since almost all regular, paid employees are employed in the formal sector. Moreover the answers to questions about the characteristics of the enterprise as given by the usual respondent to the LFS are sufficiently accurate to classify into formal and informal enterprises, so there is no need to question the owner of the enterprise.

## Demarcation of the informal sector

On the basis of the ICLS resolution on informal sector employment and the findings of the study, the concept of the informal sector can thus be given an operational definition. This starts with three criteria, the first of which must be met – that the informal sector contains household enterprises only; and two others – concerning size and registration – which are options which can be applied alone or in combination.

Allowing for differing local circumstances, therefore, the classification of an enterprise as formal or informal depends on the following criteria (ILO, 1993):

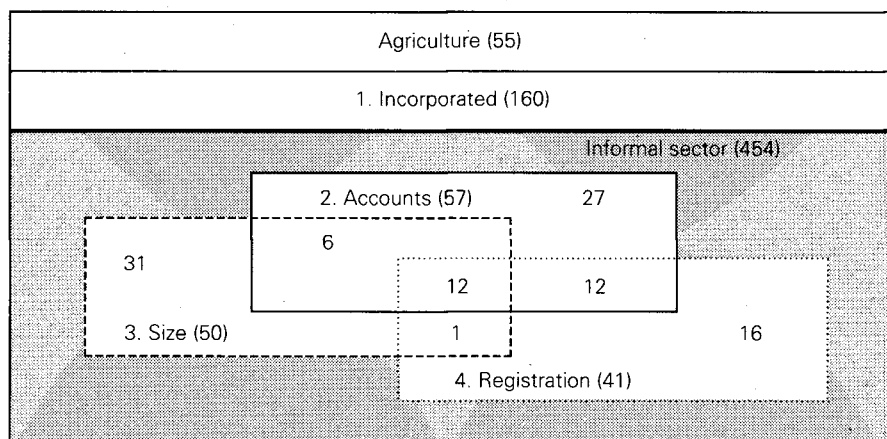
- (1) If the enterprise is a *corporate enterprise*, such as a government office/department, bank, hospital, limited and unlimited companies, it belongs to the formal sector.
- (2) If the enterprise is not incorporated but is run as if it were, *keeping full, written accounts*, it is considered as quasi-incorporated and as belonging to the formal sector.
- (3) If the *size* of the enterprise (measured by the number of persons it employs) is above a certain minimum (more than nine in the case of

Pakistan),<sup>7</sup> a certain degree of organization and some division of tasks and responsibilities become necessary and this creates a formal structure. Such enterprises may therefore be considered as also belonging to the formal sector.

- (4) If an enterprise is *registered* under legislation governing factories, there are regulations to be followed which require a certain measure of organization. This makes the enterprise formal.

In diagram 1 the workers covered by Pilot Study 2 are classified according to the four criteria listed above. The diagram shows clearly how the application of these criteria reveals the informal sector as a residual: it is the grey area (with 454 workers) which remains once all those in the formal sector (according to any of the four criteria) have been subtracted from the total sample. Most workers classified as being in the formal sector meet the first criterion (160), 57 meet the second criterion, 50 meet the third criterion and only 41 meet the fourth criterion. Since some enterprises meet more than one criterion, the total number of workers in formal enterprises becomes 265  $(160+57+(50-18)+(41-25))$ ; 454 workers are in informal sector enterprises.

Diagram 1. Demarcation between the formal and informal sectors on the basis of the four criteria applied to the findings of Pilot Study 2



The figures in brackets indicate the total number of persons engaged in the enterprises meeting the respective criteria. As some enterprises meet more than one criterion, the diagram shows the breakdown of the figures in brackets.

<sup>7</sup> The choice of a size limit of ten workers for this purpose is based on the commonest size stipulated in the laws and regulations regarding the licensing and operation of enterprises in Pakistan. Moreover, it is the value presently used by the Federal Bureau of Statistics in all its statistics to distinguish between small and large industries in this country. By using this cut-off point, the informal sector statistics are compatible with other small-scale industry statistics.

If the enterprise was incorporated, then no more questions were asked. For the other three criteria the correlation can be analysed. Of the workers classified in the formal sector according to the second criterion, 53 per cent would also classify as such according to the third or fourth criterion. For criterion 3 the correlation with criteria 2 and 4 is 38 per cent and for criterion 4 the correlation with the other two criteria is 61 per cent. From the above it can be concluded that criterion 4 (registration) applies to the smallest group of workers in the formal sector (15 per cent) *and* that the net addition – workers classified on the basis of *this criterion only* – amounts to a mere 6 per cent.

According to the ICLS resolution, registration may be used as a criterion in some countries but not in others. It may be used to distinguish corporate enterprises from non-corporate enterprises or to distinguish formal household enterprises from informal household enterprises. As shown above, in Pakistan the addition to the formal sector on the basis of this criterion is small.

Given the ambiguity around the concept of “registration” in Pakistan, given the small number of workers that would classify as formal on the basis of this criterion only and given the relatively low rate of full correspondence in the answers by proxy and self-response, we suggest excluding the criterion of registration from the operational definition of the informal sector.

In the language of international standards, therefore, the informal sector in Pakistan would be defined for statistical purposes as:

- Informal, own-account enterprises: all household enterprises owned and operated by own-account workers, irrespective of the size of the enterprise.
- Enterprises of informal employers: household enterprises owned and operated by employers with fewer than ten persons engaged.

All household enterprises exclusively engaged in agricultural activities or wholly engaged in non-market production are excluded from the scope of the informal sector. On the basis of this definition, the extent of the informal sector would be as presented in diagram 2.

Diagram 2. Alternative demarcation between formal and informal sectors

Total (excluding agriculture) (719)			
Incorporated (160)	Not incorporated (559)		
	Quasi-incorporated (57)	Household enterprises (502)	
		Size $\geq 10$ (29)	Informal (473)

## Revision of Pakistan's labour force survey

The information needed to distinguish between formal sector and informal sector employment is not available in the current questionnaire of Pakistan's Labour Force Survey. Certain changes in the questionnaire are therefore suggested. Analysis of the data of the Pilot Studies indicates that four new questions and a slightly changed routing are sufficient to provide all the required information. The proposed changes are discussed below. The incorporation of the four new questions in this section and the new routing are presented in diagram 3.<sup>8</sup>

Pakistan's LFS consists of nine sections, of which the fifth (concerning current activity) offers a convenient lead to begin the enquiry on the formal or informal nature of the unit. Questions 8, 9 and 10 of section 5 concern, respectively, the main occupation, the branch of economic activity and the status in employment of the worker.

The answer to question 9 (on branch of economic activity) is used to eliminate agricultural workers from consideration. According to the ICLS resolution, workers in the agricultural sector constitute a group on their own, belonging neither to the formal nor to the informal sector. Question 10 (on status in employment) is used to separate the self-employed from the other workers. The self-employed never constitute an incorporated enterprise and consequently do not have to respond to question 10a. The new questions are then inserted after question 10, partly mixed with existing questions, in order to classify workers outside the agricultural sector who are not self-employed ("else" category).

*Q10a: Type of enterprise.* This is a new question to be addressed to employees, unpaid family workers, and other persons not classified as self-employed in the existing question on status in employment.

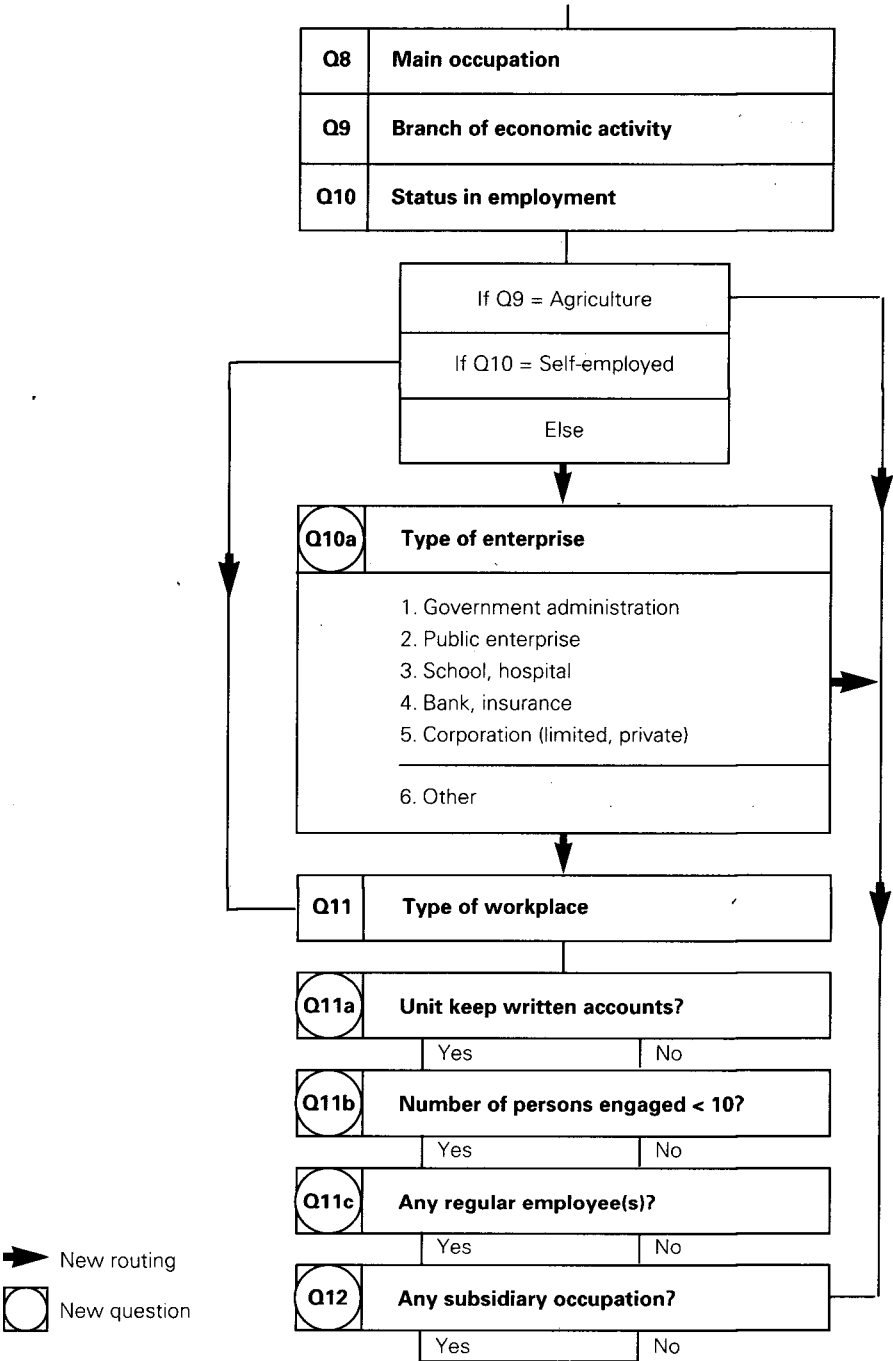
The purpose of this new question is to single out from the outset persons working in enterprises which are clearly not part of the informal sector, for example, in government administration, public enterprises, schools, hospitals, banks, insurance companies and other incorporated enterprises. Workers employed by this type of enterprise are considered to be in the formal sector and are therefore not subject to the question sequence on informal sector employment.

*Q11a: Accounting practice.* This is also a new question and is addressed to all persons whose main job is in non-agricultural activities in enterprises other than government administration, public enterprises, schools, hospitals, banks, insurance companies and other incorporated enterprises. The purpose of this question is to sort out which persons are engaged in enterprises that can be considered quasi-corporations and, thus, to identify

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<sup>8</sup> The positioning and the nature of the questions are illustrated by means of the situation in Pakistan but this does not imply that the approach is relevant for the Pakistani context only. The methodology used and the findings may very well be applied in completely different settings.

Diagram 3. Question sequence on informal sector employment



workers who are engaged in unincorporated or, equivalently, household enterprises.

According to the SNA, the distinguishing feature of quasi-corporations is the existence of a complete set of accounts that would permit a clear distinction to be drawn between the production activities of the enterprise and the other activities of the owner. This feature may be established by asking whether the enterprise keeps written accounts of income and expenditure on its production activities.

Experience gained from the pilot studies shows that it is important to emphasize all three aspects of the question, namely, that there should be *accounts*, that they should be in *written form*, and that they should concern *only the production activities* of the enterprise. Many owners of informal sector enterprises do keep track of their income and expenditure, but mostly in their heads or, if in written form, generally as a register of cash flows on items purchased and incomes received. No distinction is usually made between expenditures incurred for personal use or for the enterprise, or between incomes received from sales of products or services of the enterprise or from other sources.<sup>9</sup>

*Q11b: Number of persons engaged.* This is the third new question and is addressed to the same persons who responded to question 11a.

The purpose of question 11b is to determine the size of the enterprise for which the respondent works. As indicated earlier, the choice of a size limit of ten workers corresponds with the size limit as presently used for legal purposes as well as with data collection practices pertaining to small-scale industries.

Apart from the size limit, there is the issue of the concept of size itself. According to international standards, size should preferably be expressed in the number of employees in the enterprise engaged on a continuous basis. But in practice the standards allow size to be determined in terms of the total number of employees or the total number of persons engaged during the reference period. In this proposal, the size criterion is formulated in terms of the number of persons engaged, as this concept has been shown to be easier to understand and to provide more accurate replies.

It should be noted that question 11b does not elicit an exact response on the actual number of persons engaged in the enterprise, but simply on whether the enterprise engaged fewer than ten persons during the reference period, or a total of ten or more persons. The results of Pilot Study 2 indicate a high degree of consistency in the replies to the question on total number of

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<sup>9</sup> The pilot studies indicate that own-account workers and employers do generally provide consistent responses to the question on the accounting practice of their enterprise. However, the situation is less clear for employees. Thus, if an employee cannot provide a response to Q11a, we suggest inquiring whether any deduction is made on his/her salary with respect to income taxes withheld at source, contributions to social security schemes, and the like. If such deductions are made, it can be assumed that the enterprise keeps written accounts on its income and expenditure and the answer to Q11a would be "yes"; if no deductions are made, the answer to Q11a could be marked "no".



persons engaged in the enterprise. Over 90 per cent of the responses of the employees or unpaid family workers exactly matched with the replies of the employer or the own-account worker living in the same household. The percentage was even higher (close to 100 per cent) when only two relevant categories were applied, namely those with fewer than ten and those with ten or more employees.

*Q11c: Any regular employee(s).* This question on the existence of any regular employee working in the enterprise during the reference period is the last one on informal sector employment. It is addressed to all persons responding to questions 11a and 11b on the accounting practice and the size of the enterprise. The aim of this question is to divide household enterprises into two categories: those without any regular employee and those with at least one regular employee during the reference period. The results of the pilot studies indicate that the rate of non-response to this question is insignificant regardless of whether the respondent is self-employed or an employee, or whether the response is by proxy or a self-response.<sup>10</sup>

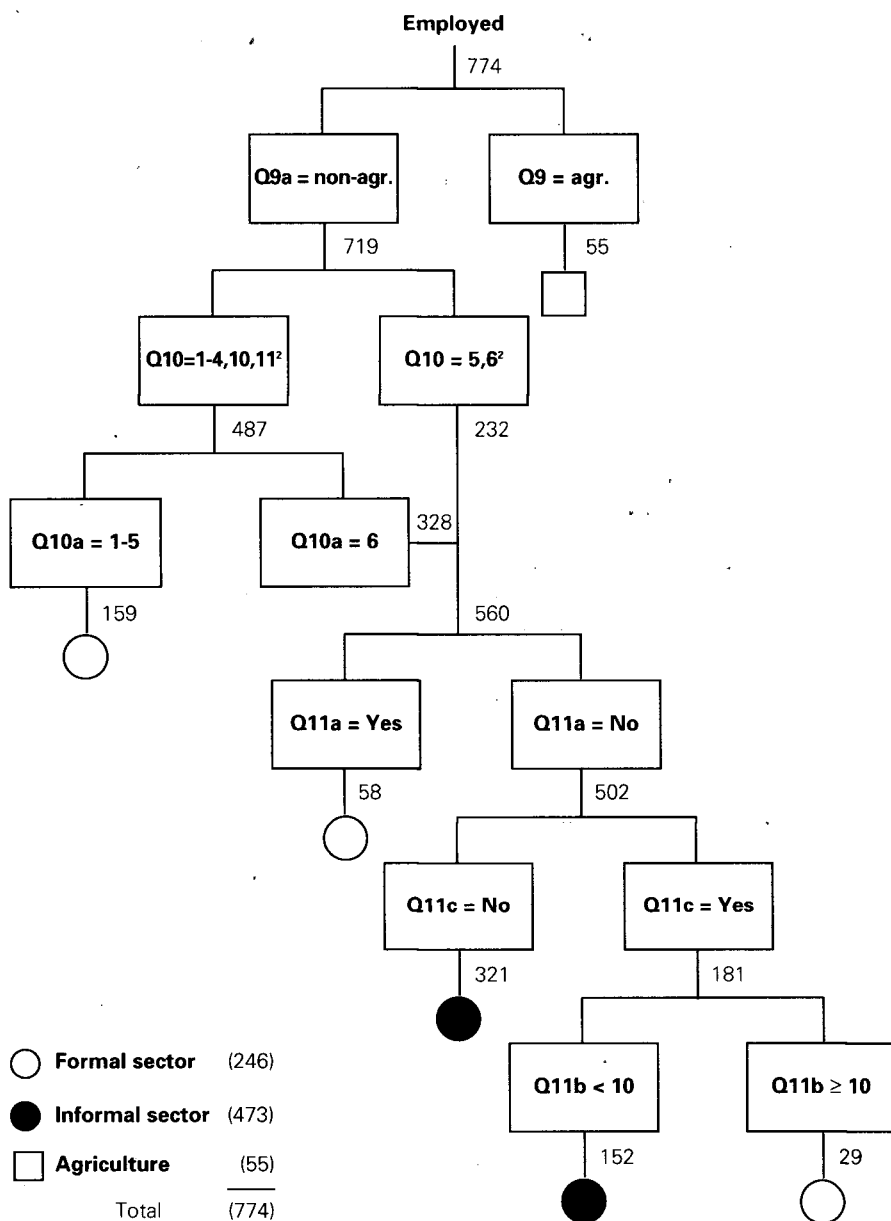
According to international standards, there is a basic distinction between household enterprises owned and operated by own-account workers and those owned and operated by employers. Enterprises in the first category do not, by definition, employ anyone on a continuous basis and their classification in the informal sector does not depend on the size of the enterprise. Enterprises in the second category, however, do employ people on a continuous basis and their classification in the informal sector does depend on the size of the enterprise.

The reasoning behind this distinction is that an enterprise employing someone on a continuous basis must have a degree of formality in its operations: it has to receive the employee every day and provide a workplace; it has to pay a regular salary and, possibly, paid leave and holidays. By contrast, an enterprise not employing anyone on a continuous basis can operate much less formally: it does not need a fixed workplace; it can hire workers on a daily or temporary basis as the volume of work requires or do without any hired labour; it does not have to make any commitment to paid leave or holidays.

On the basis of the question sequence presented above, the employed population may be classified into the formal sector, the informal sector or agriculture, as shown in diagram 4. The classification is based on the characteristics of the main job of the workers. A similar procedure may be used for the population with a secondary job. This would be particularly important in case many workers indicate a subsidiary activity. In Pakistan's Labour Force Survey, only 6 per cent of the workers indicated a subsidiary activity and, consequently, the addition to informal sector employment will only be limited in case the questions are repeated for this subsidiary activity.

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<sup>10</sup> If the preceding question on size of the enterprise records the exact number of persons employed by the enterprise by status in employment, this question becomes unnecessary.

Diagram 4. Classification into formal-informal sectors<sup>1</sup><sup>1</sup> The figures indicate the distribution of the workers identified on the basis of the results of Pilot Study 2.<sup>2</sup> The codes indicate status in employment (1-4, 10, 11 = employees; 5, 6 = self-employed (own-account worker or employer); codes 7, 8, 9 concern status in employment in agriculture).

At present, in the Labour Force Survey only the incidence of subsidiary activities is recorded.

Diagram 4 involves answers to six questions: two (on branch of activity and status in employment) are already part of the LFS questionnaire; and four are the new questions formulated above for measuring informal sector employment. To illustrate the procedure, at each node the number of persons identified on the basis of the results of (urban) Pilot Study 2 is recorded in diagram 4. As may be observed, the question on branch of economic activity identifies 55 persons whose main activity is in agriculture, and 719 persons in non-agricultural activities. Among the latter, according to the question on status in employment, 487 are employees (answer categories 1 to 4, 10 and 11) and 232 self-employed (own-account worker or employer – answer categories 5 and 6).

Among employees, question 10a on type of enterprise identifies 159 as employed by incorporated enterprises (government administration, schools, hospitals, banks, etc), and 328 in other types of enterprises. The latter category, together with the 232 persons earlier classified as self-employed, is then tested using question 11a on accounting practice, in order to separate those engaged in quasi-enterprises (58 persons) from those engaged in household or unincorporated enterprises (502 persons). Among those engaged in household enterprises, the replies to question 11c on the existence of any regular employee(s) identify the persons engaged in informal own-account enterprises (321 persons). As regards the remaining persons, replies to question 11b on number of persons engaged sorts out those working in enterprises of informal employers (152 persons) from the other category of workers in the formal sector who are working in household enterprises in which ten or more people are engaged (29 persons).

The data in diagram 4 illustrate how the set of questions proposed for measuring informal sector employment has significant discriminatory power, as each question sorts out a significant number of persons.

The diagram also shows that the main criterion identifying informal sector employment is "working in a household enterprise": 94 per cent of persons working in household enterprises are found to be in the informal sector. The size criterion is actually a secondary variable and discriminates the remaining 6 per cent. The size criterion is, of course, correlated with the criteria concerning the household enterprise, i.e. type of enterprise and accounting practice.

## Conclusion

Over the past 20 years, much attention has been given to the statistical coverage of the informal sector. This attention arose, mainly, from recognition of the importance of the informal sector in generating employment and income for a large part of the labour force, especially in developing countries. However, the concept of "informal sector" has been used to mean many different things and the absence of standards in this

respect has led to a proliferation of case-studies based on differing concepts and methodologies and has resulted in incomparable data on the informal sector.

Since the early 1970s, efforts have been made by national and international organizations to arrive at comprehensive statistics on the informal sector, collected on a regular basis as part of national statistical programmes. These efforts have resulted inter alia in the adoption by the Fifteenth International Conference of Labour Statisticians of a resolution on statistics of employment in the informal sector. The results of the study presented in this article indicate that the ICLS resolution provides good opportunity for the collection of data on employment in the informal sector. On the basis of the ICLS resolution and of the findings of pilot studies, an operational definition has been formulated for the informal sector in Pakistan. Moreover, the results of the studies show the feasibility of data collection on employment in the informal sector on a regular basis by means of slight modifications to an existing statistical instrument, Pakistan's Labour Force Survey. Pakistan's Federal Bureau of Statistics has already committed itself to the incorporation of the suggested modifications and is presently working on the exact phrasing of the questions to be included, so that the revised questionnaire can be used during the next enumeration year, i.e. 1995-96.

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