

Informal Employment in Bangladesh

Dalisay S. Maligalig, Sining Cuevas and Aleli Rosario¹

Introduction

Even though there has been significant poverty reduction in Asia, the 2008 International Labour Organization (ILO) Employment Trends indirectly estimated by using modeling techniques and available survey data from countries, that there are still 487 million workers of which 300 million live in Asia who do not earn enough to lift themselves and their families above the US\$1 per person, per day poverty line. This ILO report also determined that five out of 10 people in the world are in vulnerable employment, either contributing family workers or own-account workers with a higher risk of being unprotected. These statistics presented a compelling reason for the inclusion of another target in the MDGs just seven years before the target year – achieving full and productive employment and decent work for all, including women and young people. To achieve this target countries have to consider a shift to a worker-centered approach to poverty reduction and economic development.

Employment is still considered the most reliable vehicle to take the poor out of poverty. However, the very little available evidence from surveys across the world suggests that most of the working poor are engaged in informal employment which does not usually offer adequate wages, good working conditions and social protection. Available evidence suggests that only the informal employers who hire others can rise above the poverty threshold. (Chen, 2006) It is therefore necessary that efforts to alleviate poverty must be focused to the needs and constraints faced by the poor who are engaged in informal employment.

How can governments and the development community help the working poor in the informal sector to move out of poverty? Decent work for the working poor should be promoted as a mechanism to reduce poverty. More and better employment opportunities must be created and efforts to influence the informal enterprises to register and extend benefits to their workers must be amplified.

Such reorientation of economic policies may not be possible, however, unless data on those engaged in the informal sector and in informal employment outside the informal sector are available for economic analysis. More information on wage differentials, working conditions, social protection and other issues are needed by policy makers and the development community to make well-informed decisions.

At present, very few countries in Asia regularly collect data on informal employment and the informal sector, which ironically is perceived to be prevalent in many developing countries in

¹ Senior Statistician, Consultant, and Statistics Officer, respectively, of the Asian Development Bank (ADB). The views presented here are entirely of the authors and do not represent the views of the Asian Development Bank. The authors are indebted to the valuable inputs of Dr. Joanne Vanek, Ms. Debbie Budlender and Prof. Martha Chen of the Women in Informal Economy: Globalizing and Organizing (WIEGO) for their careful and in-depth review of the paper; Ms. Marissa Barcenas, Statistics Officer, ADB for her contribution in developing the methodology for classifying the employed to informal and formal employment; and Mr. Christian Mina for data processing support. The first draft of this paper was presented to the Bangladesh Bureau of Statistics during the inception mission for RETA 6430: Measuring the Informal Sector on 17 September 2008 at the Bangladesh Resident Mission, ADB.

Asia. In Bangladesh, for example, the informal sector is roughly estimated to contribute about 64% of the total GDP. This rough approximation was arrived at by applying many assumptions on the composition of various national accounts sectors on existing survey data. The surveys that were used, however, were not really conducted for purposes of studying the informal sector and hence, the difficulty of making the standard definitions of informal sector and informal employment operational.

This paper attempts to analyze informal employment in Bangladesh by utilizing the most recent Labor Force Survey (LFS) that was conducted in 2005. This survey included questions that can be used to determine whether workers are engaged in formal or informal employment. However, for those own account workers and self employed that can be considered household unincorporated enterprises with at least some market production (HUEMs), there are no questions in LFS that would provide more insights on the HUEM's expenditure, production, capital, and other infrastructure characteristics. Hence, the study was limited only to the comparative analysis of wages, working conditions and benefits between workers engaged in formal and informal employment. In so doing, the study also explored possible ways in which the LFS questionnaire can be improved and expanded for future survey rounds so that it could be effectively utilized in analyzing the links between employment and poverty and also in the construction of a sampling frame for household unincorporated enterprises with some market production (HUEM) survey².

Analytical Framework

In studying informal employment, it is important to understand the official international standard definition first. In 1993, the International Conference of Labour Statisticians (ICLS) adopted an international statistical definition of the "informal sector" to refer to employment and production that takes place in small and/or unregistered enterprises. In 2003, the 17th International Conference of Labour Statisticians (ICLS) broadened the definition to include certain types of informal wage employment, employment outside informal enterprises. This larger concept is referred to as informal employment. According to the 17th ICLS, "employees are considered to have informal jobs if their employment relationship is, in law or in practice, not subject to labour legislation, income taxation, social protection or entitlement to certain employment benefits (advance notice of dismissal, severances of pay, paid annual or sick leave, etc.)". Note that this definition is made on the job level and not at the individual level because a person can simultaneously have two or more jobs.

Informal employment can be classified into two: informal self employment and informal wage employment. Under informal self employment are employers in informal enterprises; own account workers in informal enterprises; unpaid family workers and members of informal producers' cooperatives (Chen, 2006). Informal wage employment includes employees without formal contracts, worker benefits or social protection who are employed either in formal or informal enterprises³.

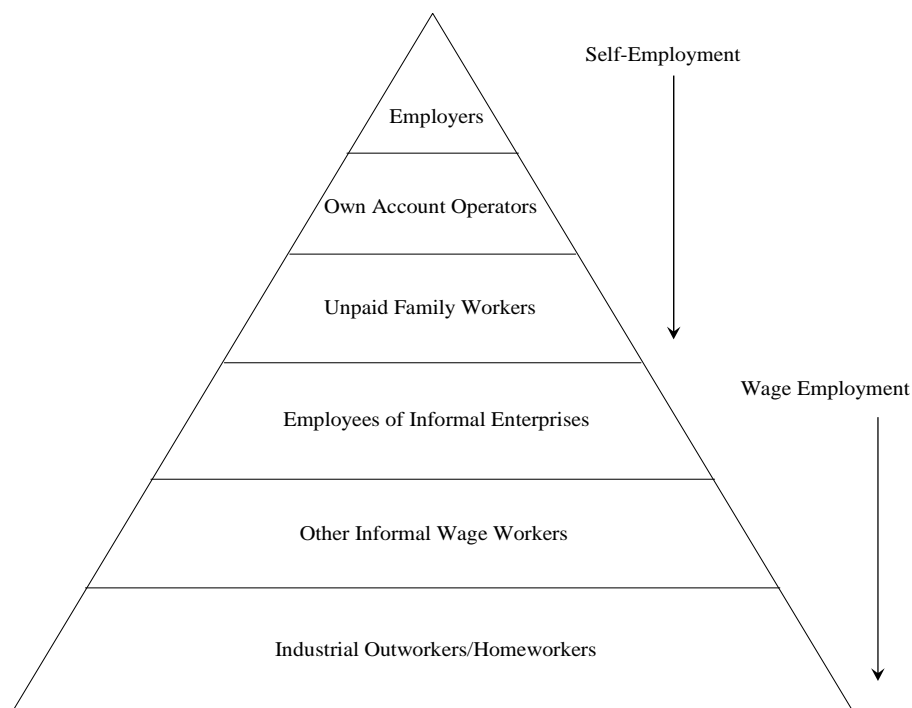
² This is the most cost effective approach for collecting data on the informal sector since it does not require a more comprehensive listing operation of all informal sector production units which are very difficult to identify in the field and hence, also very costly to construct

³ Informal enterprises are household enterprises engaged in the production of goods or services with the primary objective of generating employment and incomes to the persons concerned; that typically operate at a low level of organization, with little or no division between labor and capital as factors of production and on a small scale. Labor relations - where they exist - are based mostly on casual employment, kinship or personal and social relations rather than contractual arrangements with formal guarantees.

The dichotomy discussed above suggests that informal employment cuts across all employment status categories: employers, employees, own account workers, unpaid family workers and members of producers' cooperatives (Husmanns, 2004). Employment status is critical in understanding the link between informality and poverty. The United Nations Development Fund for Women (UNIFEM) and the global network Women in Informal Employment: Globalizing and Organizing (WIEGO) came up with measurement techniques for measuring the risk of poverty among employed persons in different employment statuses. These studies found that informal agricultural workers have the highest risk of poverty while informal employers are the least susceptible to poverty among non-agricultural workers. These results suggest that the link between informal employment and poverty is discernible only when informal workers are classified by employment status and industry/trade (or national accounts) sectors.

The country studies discussed above also support the segmentation of informal employment, as shown in Figure 1. The segmented "iceberg" in Figure 1 (Chen 2004) represents the hierarchy of the classes of workers in informal employment according to their relative visibility. The employers, who are the most visible among workers in the informal sector, are at the tip and those home workers who are usually neglected in policy making and monitoring are at the bottom. A modification of this iceberg will be introduced in the succeeding section such that the iceberg will also represent the hierarchy of average earnings across the different segments with the height of the segment representing the mean wage or earnings. The employers at the top of the visibility iceberg also have the highest earnings. On the other hand, the home workers at the base of the pyramid have the lowest average wages. Self-employed or own-account workers and other types of workers are placed in between.

Figure 1. Segmentation of the Informal Economy



Source: Chen (2004)

Because the 2005 Labour Force Survey does not have sufficient questions for determining poverty status, the approach of the UNIFEM-WIEGO country studies described above cannot be replicated for Bangladesh. However, the average wages across employment status and by industry/trade could be analyzed to explore the links of informality and poverty. Other studies also suggest that there are more women workers in the informal sector who are poor (ILO 2002). There is also a significant gap in wages between men and women reflected in prior research. This result can be verified by comparing the wage differentials of men and women across national accounts sector and employment status.

Workers, whether those in the formal or informal sector, encounter the same family/personal issues that often undermine their well-being and livelihood: illness, property loss, disability, old age, and death. But because of the very nature of informal employment, informal workers do not enjoy the same social protection mechanisms that come with formal employment. Also, in general, informal workers do not have job security and received very little benefits from employers. To validate these perceptions, comparative analysis of wages, benefits and working conditions between formal/informal workers by employment status can be undertaken. These results will be informative on the risks faced by informal workers and could also become the basis for designing appropriate social and legal protections for the informal workforce.

The analysis described above will be performed on Bangladesh's 2005 LFS, the questionnaire (refer to Appendix 1) and sample of which were not designed to capture informal employment or informal sector data. In particular, the set of questions as recommended by the UN Interregional Cooperation on the Measurement of Informal Sector and Informal Employment (ICMISIE)⁴ (refer to Appendix 2) to screen for informal employment or any other equivalent set was not applied. However, there are some questions that were not specifically formulated for this purpose but could be used for identifying informal workers. Hence, the internationally accepted concepts of informal employment and employment status will be applied despite these limitations. This process will identify the pitfalls in the current questionnaire design that should be minimized in the next LFS round. The pitfalls will be documented and resolution of which will be formulated as inputs to the questionnaire design for the next LFS. Moreover, as an additional output of the data analysis, the issues that were encountered in analyzing the data, such as out of category responses and other data validation issues, will also be identified and utilized.

Methodology

The first step in the implementing the analytical framework described above on the 2005 LFS was to identify the employed and unemployed population by applying the International Labour Organization (ILO) definition. The questions from the LFS questionnaire that could be used to apply the ILO concept of employment were used to filter the appropriate respondents and properly classify them. It is critical to correctly distinguish those in the labor force and not, since the survey included all adult respondents in the sample household. Moreover, these estimates will be the basis of further examination of the dataset, thus, should coincide with the estimates published by the Bangladesh Bureau of Statistics (BBS).

⁴ ICMISIE is a multiyear and multilateral development account project of the United Nations, with the Economic and Social Commission for the Asia and Pacific as the lead agency, with the main objectives to increase the availability of data on the informal sector and informal employment and to improve the calculation of the contribution of informal sector to employment and to GDP.

The queries used to determine the labor force are the ones pertaining to having work/job and those concerned about the actions taken to look for a job, specifically, Questions 4.1, 4.2, 8.2, 8.3, and 8.5 (See Appendix 1). The decision matrix in classifying whether one is employed or unemployed is presented in Table 1.

Table 1. Decision matrix for identifying the employed and unemployed persons.

Employment Status	Combination of answers to identify the employed and unemployed persons							
	Q4.1 Any economic activity during the last week?		Q4.2 Any economic activity? (If Q4.1 = no)		Q8.2 Tried to find a job during the last week?		Q8.3 Step taken to get a job	Q8.5 Reasons for not looking for a job
Employed	1 - yes							
	2 -no	&	1 - yes					
Unemployed	2 -no	&	2 -no	&	2 -no	&	Contact w/ (1) gov't recruiting centers (2) NGO recruiting centers (3) Employers (5) Friends/relatives (4) Search in working unit/place Applied (6) based on newspaper advertisement, (7) by internet (8) Others	
	2 -no	&	2 -no	&	2 -no			& Waiting (1) for re-appointment (2) to join after appointment

Applying the conditions presented in the matrix resulted to the following estimates which fit the official numbers of Bangladesh.

Table 2. Labor Force Estimates, 2005-06.

Variable	Estimate		
	Total	Men	Women
Employed	47,356,591	36,079,828	11,276,763
Unemployed	2,137,672	909,144	1,228,528
Labor Force	49,494,263	36,988,972	12,505,291

Among those employed, workers are then classified into having either formal or informal employment. Using the 15th and 17th International Conference on Labour Statisticians (ICLS) definitions of the informal sector and informal employment, respectively, as the standard concepts, the 2005 LFS questionnaire was examined to identify the questions that may be used for determining informal employment inside and outside the informal sector. The questions that were identified are presented in Table 3.

Table 3. Screening questions for formal/informal employment. (Note: All questions were lifted verbatim from the 2005-06 Bangladesh Labor Force Survey Questionnaire)

4.6 What was the main task in which you were engaged most of the time during the last week? Main activity Code _____	
4.12 What was your status in employment where you worked most of the time during the last week?	
1 – Regular paid employee (HH work/irregularLab/apprentice) 2 – Employer 3 – Self-employed 4 – Unpaid-family worker 5 – Irregular paid worker	6 – Day labour (Agriculture) 7 – Day labour (Non-agriculture) 8 – Domestic worker (Maid servant) 9 – Paid/Unpaid apprentices 10 -- Others
4.13 In which sector did you work during the last week?	
1 – Government 2 – Private formal sector 3 – Personal Household 4 – Personal Establishment 5 -- Others	
4.14 What was your place of work during the last week?	
1 – At home/ house compound 2 – Agriculture land/Farm 3 – Factory/Business Institution/Godown (1-9 member) 4 – Restaurant/ Tea stall 5 – Road/Market /Construction place	6 – Factory/Business Institution/Godown (10 and above member) 7 – Government Office 8 – NGO/other non-govt organization) 9 – Others
4.15 Did you work on full-time or part-time basis during the last week? 1 -- Full time 2 – Part-time	
4.16 Did you get any employment or contract letter from the employment where you worked or temporarily absent during the last week?	
1 – Written contract/Appointment letter 2 – Verbal contract 3 – Non-contract 4 – Unknown	
4.17 How do you get the salary/wages?	
1 – Daily 2 – Weekly 3 – Monthly 4 – Piece rate/ work rate 5 -- Others	
4.21 Does the working establishment or industry unit has got any recommendation from the formal authority or from any other formal institution?	
1 – Yes 2 – No	
4.22 Does the working unit or establishment keep written accounts for their transaction?	
1 – Yes 2 – No	

Cross tabulations of the responses of these questions were carefully examined to validate the responses and to develop a decision matrix similar to Table 1 for determining informal/formal employment. Table 4 presents the combination of questions for which cross tabulations were generated.

Table 4. Combination of Questions from the 2005-06 Bangladesh Labor Force Survey Questionnaire Used for the Cross Tabulation Analysis.

Question	Description		Question	Description
Q 4.6	Main Task	Vs	Q 4.12	Employment Status
Q 4.6	Main Task	Vs	Q 4.13	Sector of Work
Q 4.12	Employment Status	Vs	Q 4.13	Sector of Work
Q 4.12	Employment Status	Vs	Q 4.14	Place of Work
Q 4.12	Employment Status	Vs	Q 4.15	Period of Employment
Q 4.12	Employment Status	Vs	Q 4.16	Type of Contract
Q 4.12	Employment Status	Vs	Q 4.17	Mode of Payment
Q 4.12	Employment Status	Vs	Q 4.21	Registration/Recommendation
Q 4.12	Employment Status	Vs	Q 4.22	Written Accounts

To interpret the codes in Q 4.6 the occupational lists provided by the BBS was used. However, the codes in the survey data file are available as 4-digit codes while the occupational list codes in the data dictionary have either one digit (10 categories), two digits (28 categories) or three digits (117 categories). To resolve this incompatibility, the first two or three digits of the code in the data file were interpreted using the codes in the data dictionary. Using this methodology, cross tabulations of Q 4.6 against Q4.12 and 4.13 were performed. The results, however, revealed mixed generalizations, some acceptable, others questionable.

To illustrate, the respondents classified as legislators and senior officials (using the 3-digit codes are identified as legislators, senior government officials, traditional chiefs and heads of villages, senior officials of special interest) only answered government, private formal sector, and others, as their sectors of employments. There were no respondents from the personal household and personal establishments sectors. Moreover, among the ten selections of employment statuses, only two were chosen by these respondents, namely, the regular paid employee and self-employed choices. These outcomes are reasonable, thus, verifying the notion that the process implemented was acceptable. Still, further analysis resulted to some debatable conclusions such as:

1. Physical & engineering science associate, Life science & health associate professionals, Teaching associate professionals, and the like, classified as unpaid family worker and domestic worker (maid servant); and
2. Teaching professionals and Office clerks falling under the day labor (agriculture) employment status; and
3. Subsistence agricultural & fishery workers and Agricultural, fishery & related laborers identified as working in the Government sector.

The risk of incorrectly classifying the respondents by main task, consequently led to the decision of dropping Q 4.6 from the questions considered. Table 5 summarizes the remaining inconsistencies that were identified in the examination of cross tabulations described in Table 4.

Table 5. Inconsistencies/Irregularities Identified from Cross Tabulations described in Table 4.

Cross-tabulated Questions	Examples of Observed Inconsistencies/Irregularities
Q 4.12 vs Q 4.13 Employment Status vs Sector of Work	Employers, self-employed workers, unpaid family workers and domestic worker (maid servant) who answered government as the sector of work.
Q 4.12 vs Q 4.14 Employment Status vs Place of Work	Unpaid family worker, day labour (agriculture and non-agriculture) who answered government and non-government organization as the place of work.
Q 4.12 vs Q 4.15 Employment Status vs Period of Employment	Based on the skipping pattern, Q4.15 should have been administered to paid/salary based workers, which comprise all employment status except the employers, self-employed, and unpaid family workers. However, a total of 2,008 respondents (unweighted) identified as employers (55), self-employed (1,605), and unpaid family workers (348) provided answers.
Q 4.12 vs Q 4.16 Employment Status vs Type of Contract	<p>Based on the skipping pattern, Q4.16 should have been administered to paid/salary based workers, which comprise all employment status except the employers, self-employed, and unpaid family workers. However, a total of 1,711 respondents (unweighted) identified as employers (52), self-employed (1,354), and unpaid family workers (305) provided answers.</p> <p>Unpaid family worker, day labour (agriculture and non-agriculture) and domestic worker (maid servant) who answered that they have written contracts of their employment.</p>
Q 4.12 vs Q 4.17 Employment Status vs Mode of Payment	<p>Based on the skipping pattern, Q4.17 should have been administered to paid/salary based workers, which comprise all employment status except the employers, self-employed, and unpaid family workers. However, a total of 1,896 respondents (unweighted) identified as employers (55), self-employed (1,578), and unpaid family workers (263) provided answers.</p> <p>Regular paid employees and the domestic workers (maid servant) who were paid by piece rate/work rate</p> <p>Day labour (agriculture) and day labour (non-agriculture) who fall under the category weekly and monthly modes of payments</p>
Q 4.12 vs Q 4.21 Employment Status vs Registration of Establishment	Based on the skipping pattern, Q4.21 should have been administered only to the employers, self-employed, and unpaid family workers. However, a total of 1, 243 respondents (unweighted), other than the three intended, provided answers.
Q 4.12 vs Q 4.22 Employment Status vs Written Accounts of Establishment	<p>Based on the skipping pattern, Q4.22 should have been administered only to the employers, self-employed, and unpaid family workers. However, a total of 1, 278 respondents (unweighted), other than the three intended, provided answers.</p> <p>Domestic workers who answered “yes” to the question if the establishment they are working in keep written accounts of their transactions.</p>

These inconsistencies could have stemmed from the questionnaire design, or from the enumeration process. The former could arise because questions and response choices may not

have been properly formulated on the basis of standard definitions/concepts. For example, in question 4.12 (Status of Employment), there is a choice item that corresponds to “paid/unpaid apprentices”, a compound choice that is difficult to decompose. It is difficult to assess this type of worker since it can be interpreted as a paid (by wage) assistant, unpaid on the job training assistant without allowance, or unpaid intern with allowance. Basically, the “paid” and “unpaid” workers are deemed to belong in different categories, and should not be classified together. However, it is also possible that the “paid” and “unpaid” terms refer to “allowances” and not to wage payment, thus, this particular grouping. This ambiguity, with a more than one possible interpretation for the particular option, can confuse the respondent and introduce uncertainty in the analysis.

Another example would be choice number “2” in Q 4.13 (Sector of Work) which corresponds to private formal sector. It is unclear how the private formal sector is defined since when cross tabulated with Q 4.21 (Registration/Recommendation) and Q 4.22 (Written Accounts), the outcomes are contradictory. From the term “formal” sector in the choice title, it is expected that the responses, of those who identified themselves working in this sector, would be “yes” in both questions. However, of the number⁵ who answered, 41%⁶, replied “no” to Q 4.21, while 44%⁷ said that the establishment they work for do not keep written accounts of its transactions. Therefore, either the private formal sector does not coincide with the ILO description of the formal sector, meaning, it is defined differently in the Bangladesh LFS, or the term “formal” in this case was inappropriately applied to choice 2.

On the other hand, there could also be inconsistencies arising from the enumeration process, when skipping patterns were not properly observed. As described in Table 5, even though items 4.15 to 4.20 (6 items) were identified in the questionnaire to be queries for Paid/Salary Based workers only, there were still some employers, self-employed, and unpaid family workers who answered one or more of the six questions. Similarly, while items 4.21 and 4.22 were exclusive to self-employed, employers, and unpaid family members, there were regular paid workers, irregular paid workers, day laborers (agriculture and non-agriculture), domestic workers, and paid/unpaid apprentices who replied to the queries. Moreover, a number of unpaid family workers provided information on the amount of wage they received (Q 4.18 and 4.19) and the manner (Q 4.17) by which they were paid. These results are also indicative of a survey preparation training and data validation system that still have a large room for improvement.

In light of these inconsistencies and data limitations, identifying the informal workers became a difficult procedure. For example, there were respondents that said they are unpaid family workers or domestic workers but then they also either work in the government, or are paid monthly/weekly, or are working in establishments with written accounts and are registered in the proper authorities (see Table 5). Also, with the existence of the vague choice selections, a substantial number of missing data was recorded in the dataset. This situation resulted to inconclusive classification of workers as respondents would fall under neither the formal nor informal categories because some conditions were not satisfied. Most of these respondents were regular paid employees who provided no answers on the mode of payment and those employers and/or self-employed who neither answered “yes” nor “no” to the questions on availability of written accounts of business and/or registration of establishments. These respondents are distributed across all sectors of employment. Lastly, because of the option “others” in Q 4.12 and 4.13, two of the key questions used to determine the type of employment,

⁵ Meaning the non-response is not considered.

⁶ Based on unweighted number of respondents.

⁷ Ibid.

a clear-cut description of some workers became impossible. Hence, with the available LFS dataset and through a series of analysis, the process of setting criteria for identifying formal employment was deemed more practical than determining informal employment based on the informal employment definition and criteria. A mix of enterprise and employment-based criteria were used. Results of the cross tabulations on the listed (8) queries showed that the items significant or useful for identifying formal sector employment using the 2005 LFS are the following:

1. Employment status (Q 4.12)
2. Sector of work (Q 4.13)
3. Mode of payment (Q. 4.17)
4. Registration of business (Q 4.21)
5. Availability of written accounts of business (Q 4.22).

The conditions set in identifying formal employment are presented in Table 6.

Table 6. Decision matrix for identifying the formal sector employment.

Criteria	4.12 Employment Status		4.13 Sector of Employment		4.17 Mode of Payment		4.22 Written Accounts		4.21 Registration	
Formal Employment	1 – Regular paid employee	&	1 – Government	&	2 – Weekly					
			2 – Private formal sector		3 - Monthly					
	2 – Employer	&	1 – Government				&	1 - yes		
			2 – Private formal sector							
	3 – Self-employed	&	1 – Government				&	1 - yes		
			2 – Private formal sector							
	10 - Other	&	1 – Government				&	1 - yes		
			2 – Private formal sector							
	2 – Employer	&	4 – Personal Establishment				&	1 - yes	&	1 - yes
			5 - Other							
	3 – Self-employed	&	4 – Personal Establishment				&	1 - yes	&	1 - yes
			5 - Other							
	10 - Other	&	4 – Personal Establishment				&	1 - yes	&	1 - yes
			5 - Other							

In this matrix, the chief factors considered in defining formal workers are:

1. for regular paid employees -- their sector of employment and the mode of payment by which wages are received;
2. for employers and self employed workers, as well as those that fall under the “others” category, working in either the government or private formal sector -- the existence of

written accounts of their businesses and/or whether the business is registered with the proper authorities

3. for employers and self employed workers, as well as those that fall under the “others” category, working in either the private establishments or “other” sector – the existence of written accounts of their businesses and/or whether the business is registered with the proper authorities.

The respondents who were not able to satisfy these conditions were classified as informal workers. With this approach, the informal workers were surmised to be:

1. all those who identified themselves to be unpaid family workers, irregular paid workers, day laborers in agriculture, day laborers in non-agriculture, domestic workers, and paid/unpaid apprentices;
2. all workers employed in the personal household sector;
3. paid employees working in the government or private formal sector and are NOT paid weekly or monthly;
4. paid employees working in personal establishments and “others” sectors; and
5. employers, self employed workers, and “other” workers employed in businesses with NO written accounts and/or are NOT registered with the proper authorities.

Using this classification, estimates of the formal and informal employment in Bangladesh, based on the 2005 LFS are summarized in Table 7 below.

Table 7. Formal and Informal Employment Estimates, 2005-06.

Variable	Estimate
Formal employment	5,818,582
Informal employment	41,538,009
Total employment	47,356,591

As defined in the Analytical Framework, there are five categories of employment status, namely: 1) own account workers; 2) employers; 3) unpaid family workers; 4) employees; and 5) members of producers’ cooperatives (Husmanns, 2004). Meanwhile Chen, et al. (2006) have noted that there are both formal and informal employees as well as informal wage workers. Informal employees and wage workers do not have formal contracts, worker benefits or social protection and may be employed by formal or informal enterprises/employers or by households. With the data limitations described above, these categories were applied to the 2005 LFS with the following resulting employment classes:

1. employees – composed of the regular paid employees
2. employers – composed of the employers
3. own account workers – composed of the self-employed
4. unpaid workers – composed of the unpaid family workers
5. wage workers – composed of the irregular paid workers, day laborers in agriculture, day laborers in non-agriculture, domestic workers, and paid/unpaid apprentices

Hence, in addition to the analysis of Bangladesh’s employed population by sector in the national accounts, the study also investigated the formal and informal employment by this revised

employment status classification. These classifications and analysis approach is then used to examine the wage differentials between the formal and informal workers.

In computing for the wage differentials, questions 4.18 and 4.19 of the 2005-06 LFS questionnaire were considered; by combining the responses in the two questions, the total wage per respondent was estimated. Meanwhile, analysis of wage differentials were conducted by computing for the mean wage of formal and informal workers by class of worker and by industry as classified in the national accounts.

However, it must be mentioned that Q 4.18 and Q 4.19 are applied only to those respondents who identified themselves to be paid or salary workers or, by class of worker, those categorized as employees and wage workers. But, as in other cases, skipping pattern for this set of questions was also not followed; employers and own account workers also provided answers. Working on this type of dataset, one needs to make adjustments in data analysis and maximize the use of information available. Thus, though the earnings data of the employers and own account workers may just be products of non-implementation (or wrong) of skipping patterns, these were still utilized for the wage analysis as no other questions pertaining to income were inquired from the workers who are not paid/salary based.

However, before this decision was reached, various hypotheses on the reasons behind these wage results were presented and discussed. To reiterate, the primary assumption is that the skipping pattern was not followed. Another notion is that the questions themselves were placed in the wrong section and they were intended for all types of workers, hence, they were answered by all possible respondents. Justification for this assumption is the use of the term “earn” in the questions, instead of “wage” or “salary”, which may be applicable to all types of workers. Moreover, of the total employer respondents, 40% or 57 out of the total 184 (unweighted), answered the question. On the other hand, a lower 5.5% (1,576 unweighted) of the total self-employed respondents provided responses on their earnings, which still produced usable data. With the lack of information, however, no definite conclusion may be reached; and due to the significant need for wage/earnings analysis, the total earnings of the employers and own account workers were also gathered from Q 4.18 and Q 4.19.

In connection to the preceding discussion and in line with the irregularities observed in the dataset, the unpaid family workers also provided answers to questions pertaining to wage/earnings. Aside from the fact that no monetary payments should be received by this class by virtue of its definition as unpaid, respondents answered the questions Q 4.18 and Q 4.19 which, as mentioned before, are questions intended for the paid/salary workers. The noticeable number of these respondents, 185,826 (weighted) and 253 (unweighted) or 1.8% of total unpaid workers, warranted more investigation of the wage data and the associated errors. A possible justification for this case is that estimates were computed from the total monetary value of the “in kind” payment. This idea, however, did not hold much ground since only one respondent, in each of the questions, provided answers for the “in kind” answer choice. In effect, the data shows that all respondents supplied answers to the “in cash” item. On the other hand, the notion cannot be completely excluded because given the data inconsistencies, it is plausible that misinterpretation of answer choices might have also occurred. Unfortunately, we are only confined to make speculations because of our limited ability to confirm or validate most of the assumptions.

Results like these imply problems, from data gathering to validation until data processing. However, due to lack of data and because of the conspicuous number of respondents

answering questions, it is difficult to ignore these results. Therefore, some of these wage information, though dubiously collected, were still incorporated in the analysis.

It should also be noted that the 2005 LFS utilized a two-stage stratified cluster sampling design called the Integrated Multi Purpose Sample (IMPS) in selecting the sample households and individuals. Clusters of about 200 households each were formed as enumeration blocks for each zila (municipality) on the basis of the 2001 Census of Population. These enumeration blocks served as the primary sampling units (PSUs) in IMPS and were classified as urban, rural and statistical metropolitan areas (SMA). Further geographical stratification was also introduced by classifying the zilas according to six divisions – Barisabal, Chittagong, Dhaka, Khulna, Rajshahi and Sylhet. In all, there were 129 strata formed - 64 strata corresponding to 64 rural zilas, 61 strata classified under urban with the other three, Gazipur, Narayanganj and Khulna taken together to form one strata under SMA in addition to the other three SMA strata formed from urban areas with very large population – Dhaka, Chittagong, Rajshahi.

The correct survey weights are critical in getting unbiased estimates from probability sample survey. However, Maligalig and Barcenas (2008) found that the survey weights in this LFS round was derived as the ratio of total households in the strata (updated as of April 2006) to the sample households instead of the product of the base weight (the inverse of the selection probability) and the adjustments for non-response and non-coverage. Because measure of sizes and selection probabilities that were used when the sample households were selected are not available anymore, the comparative analyses performed and reported in the next section were based in the survey weights specified in IMPS. As shown in Maligalig and Barcenas (2008), the use of these incorrect weights would usually lead to biased estimates. However, since the correct survey weights could not be constructed anymore, the only available recourse had to be taken.

In addition to incorrect survey weights, Maligalig and Barcenas (2008) also identified the following issues that were critical to the successful implementation of the LFS survey design:

- 1) The domain was not specified in IMPS and as a consequence, the sample size was not determined following the standard practice. The results, therefore, of the 2005 LFS was limited to the national level and big groups of the population;
- 2) The number of PSUs and the number of households to be sampled within a PSU were determined subjectively without the benefit of analysis. Selecting 40 households from a PSU with an average size of 200 is not usually practiced since households in a cluster are likely to have similar socio-economic characteristics; and
- 3) Sample allocation across strata was subjectively implemented causing inequitable allocation. Stratification measures and sample allocation across strata have to be reviewed to improve the efficiency of estimates.

To make the comparative analysis of wages received by the formal and informal workers more critical and informative, the mean wages of workers were examined:

1. by formal and informal categories (all employed workers) to establish the general idea of the wage discrepancy between the two sectors;

2. by class⁸ of workers to identify which class receives the lowest and the highest average wages, and to measure the wage gap between the formal and informal workers; and
3. by national accounts industry classification to determine which sector provides the lowest and highest mean wages, as well as to identify which industry posts the widest formal-informal wage differential.

It was mentioned in the earlier section of the paper that those that belong in the informal employment have very limited assurance of regular work while receiving very few benefits. To verify this notion, the estimated formal and informal workers, by class of workers, were cross tabulated with Question 4.20 – “What benefits are provided other than wages and salaries by employer?” This item provides 12 choices namely: 1) paid holdings (including wages and salaries)⁹; 2) paid sick leave; 3) bonus; 4) working dress (free of cost); 5) free meals; 6) subsidized meals; 7) free transport; 8) telephone facilities; 9) free lodging; 10) subsidized lodging; 11) others; and 12) no facility is given. The respondents were allowed to provide more than one answer, to a maximum of six.

Like in the preceding cases of ambiguity in choice selection (i.e. choice 9 in Q 4.12) option 12 in this item seems to provide variety of interpretations. One may assume that it means that the worker receives no benefits, or that no particular facility related to work, such as telephones, lodging or transportation, is provided but not necessarily no benefits at all. To clarify this issue, additional procedures were performed, particularly verifying if the first understanding is valid. Thus, the investigation centered on identifying whether the respondents who chose “12=no facility given” no longer provided other answers to the item. Results showed that of the total 12,280 respondents who answered “12 = no facility given” to Q 4.20, only 54 respondents supplied additional responses. Provided that almost all, 99.6%, gave a single answer, it was therefore concluded that the 54 cases were products of error in data processing and that choice “12” signifies “no benefits provided”.

Thus, working on this assumption, the frequency distribution of formal and informal workers with benefits was computed, together with their corresponding ratios per type of benefit. This analysis showed the discrepancy in the amount of benefits received by formal and informal workers, as well as identified the kinds of benefits usually provided to each kind.

Informal Employment Profile

Based on the 2005 LFS, the unemployment rate in Bangladesh is about 4%. The employed workforce is composed of 47.36 million workers who are predominantly self-employed (42%): while just about as many are either wage or unpaid workers, which each comprised 21% of the total. Employees comprise only 13.3% of the employed workforce. By sex, the employed population is primarily comprised of men, at 76.2%, while the unemployed, by women, at 57.5%. Men also have a larger number in all class of workers, except for the unpaid family worker class where 66.0% are women and only 44.0% are men. Table 8 is also indicative of the possibility of substantial informal employment among those employed workers.

⁸ Class of workers refers to the devised grouping, a combination of Hussmann (2004) and Chen's (2006) employment classifications presented in the Analytical Framework section. Class of worker is comprised of the following: 1) employees; 2) employers; 3) own account workers; 4) unpaid workers; and 5) wage workers.

⁹ Interpreted as paid leave.

Table 8. Labor Force Characteristics in Bangladesh, 2005-2006

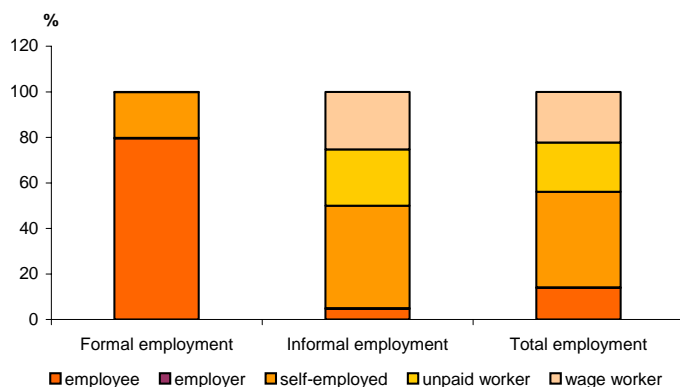
Labor Force Characteristic	Frequency			Percentage*
	Men	Women	Total	
Employed	36,079,828	11,276,763	47,356,591	95.7
Employee	5,248,649	1,317,765	6,566,414	13.3
Employer	117,178	12,916	130,095	0.3
Self-employed	18,055,845	1,788,717	19,844,562	40.1
Unpaid worker	3,487,707	6,779,789	10,267,496	20.7
Wage worker	9,170,448	1,377,576	10,548,024	21.3
Unemployed	909,144	1,228,528	2,137,672	4.3
Total labor force	36,988,972	12,505,291	49,494,263	100.0

* percent to total labor force

As Figure 2 shows the employed workforce is predominantly informal. The Figure further emphasizes the differences between the formal and informal employment structures; employees chiefly compose the formal (79.5%), while self-employed workers dominate the informal (45.0%). Moreover, the formal employment can generally be divided into two classes, the employees and the self employed. On the other hand, informal employment has at least four distinct groupings.

Among the employees, 70.5% are formally employed while only 29.5% are informal. Conversely, among employers, only 9.3% are engaged in formal employment and 90.7% in informal; among self employed, 5.9%, formal and 94.1% informal; and among wage workers, only 0.1% are employed formally and 99.9% are working informally.

Figure 2. Employment sector composition, by class of worker and nature of employment



It must be noted, however, that these results are taken from a survey that is not well validated as the previous section has shown. For instance, (refer to Table 5) some respondents identified themselves to be either self-employed or unpaid family workers in Q4.12 (status of employment), but also replied to be working in the government in Q4.13 (sector of employment) when the two questions were cross-tabulated. This is questionable since the logical answer for the same respondent should have been personal household, personal establishment or others.

Inconsistencies of this sort are discussed in full in the preceding section. It is mentioned here for emphasis.

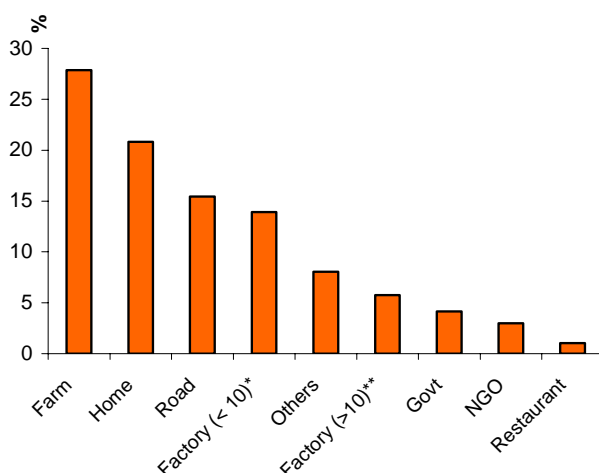
Of the 47.36 million employed, 41.54 million are informal workers (87.71%), while only 5.82 million are engaged in formal employment. With these numbers, it is not surprising that half of the employed population works in the personal household sector, and almost a quarter, in the personal establishment. These two are the sectors which employ 78.5% of the workers.

Table 9. Employment distribution, by sector of work

Sector of Work	Frequency	Percent
Government	2,127,198	4.5
Private formal Sector	4,459,862	9.4
Personal Household	26,405,491	55.8
Personal Establishment	10,742,983	22.7
Others	3,618,972	7.6
Total	47,354,507	100.0

As shown in Figure 3, of the employed, 27.9% work in farms; 20.8% at home and 15.4% in the road/market/construction. As these places are typically associated with informal employment, the estimates support the earlier analysis that the employed workforce is chiefly engaged in informal employment. This also suggests that place of work can also be used as an indicator to validate the type of employment.

Figure 3. Employment distribution, by place of work



Notes: Farm also refers to agricultural land; Restaurant includes tea stalls; Road includes market and construction place.

* Factory with less than 10 workers.

** Factory with more than 10 workers.

Informal workers are largely concentrated in Dhaka, Chittagong and Rajshahi as shown in Table 10 below. Rajshahi workers, however, is 93% informal while Dhaka, with the biggest

metropolitan area, has the lowest concentration of informal workers at 83.1%. At the SMA¹⁰ level, only 67.2% of the workers are informal while in the rural areas in which the agriculture sector dominates, 92% of the workers are informal.

Table 10. Frequency Distribution of Workers in Bangladesh, By Nature of Employment, Division and Locality

Area	Nature of Employment		Total
	Formal	Informal	
Division			
Chittagong	1,415,581	7,782,386	9,197,967
Dhaka	2,483,181	12,211,304	14,694,485
Khuha	488,485	5,069,714	5,558,199
Rajshahi	763,399	10,202,852	10,966,251
Barisal	355,552	3,029,563	3,385,115
Sylhet	312,383	3,242,190	3,554,574
Total	5,818,582	41,538,009	47,356,591
Locality			
Rural	2,899,327	33,232,904	36,132,231
Urban	931,116	4,223,014	5,154,130
SMA	1,988,139	4,082,092	6,070,230
Total	5,818,582	41,538,009	47,356,591

Table 11 indicates that workers with informal employment are mostly in the agriculture, hunting and forestry (52%); wholesale and retail trade (15%); manufacturing (9%); and transport, storage and communications (9%) sectors. On the other hand, workers with formal employment are mostly in the manufacturing (27%), education (18%), wholesale and retail trade (13%), and public administration and defense (13%) sectors. The Government of Bangladesh employs the largest number of formal workers, a combined 31%, from the education and public administration and defense sectors. Meanwhile, workers with formal employment are least found in the sectors on mining and quarrying; private households; fishing; and electricity, gas, and water.

Table 11. Distribution of type of workers by industry

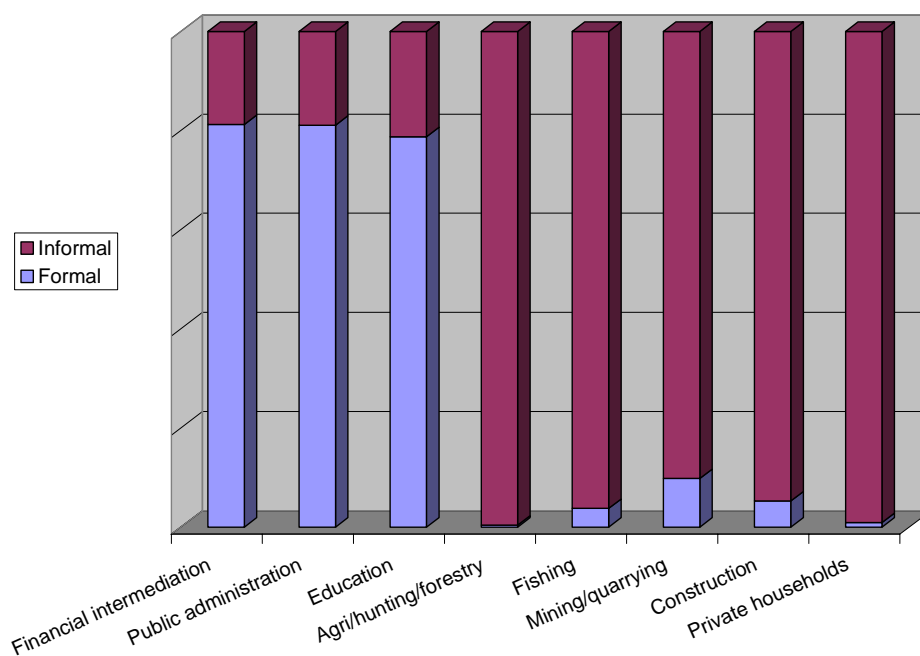
Industry	Type of Worker			
	Formal		Informal	
	Frequency	Percentage	Frequency	Percentage
Agriculture, hunting and forestry	86,076	1.48	21,585,741	51.97
Fishing	41,368	0.71	1,053,834	2.54
Mining and quarrying	5,002	0.09	46,046	0.11
Manufacturing	1,554,892	26.72	3,669,243	8.83

¹⁰ SMA stands for statistical metropolitan areas, one of the three basic strata by locality (together with urban and rural) in the Bangladesh 2005-06 LFS Integrated Multi-Purpose Sample Design (IMPS). Three zilas, Gazipur, Narayanganj and Khulna, were taken together to form one strata under SMA. In addition other three SMA strata were formed from urban areas with very large population, namely Dhaka, Chittagong, Rajshahi.

Electricity, gas and water supply	45,516	0.78	30,967	0.07
Construction	80,665	1.39	1,443,677	3.48
Wholesale and retail trade, repairs, etc.	770,471	13.24	6,337,639	15.26
Hotels and restaurants	100,163	1.72	612,070	1.47
Transport, storage, and communications	433,156	7.44	3,542,741	8.53
Financial intermediation	411,954	7.08	95,082	0.23
Real estate, renting, and business activities	66,708	1.15	171,896	0.41
Public administration and defense, social security	714,916	12.29	166,818	0.40
Education	1,028,854	17.68	277,361	0.67
Health and social work	218,841	3.76	143,268	0.34
Other community, social and personal services	248,313	4.27	1,599,045	3.85
Private households with employed persons	7,254	0.12	761,527	1.83
Others	4,434	0.08	1,054	0.00
Total	5,818,582	100.00	41,538,009	100.00

The figure below shows the distribution of formal and informal workers in selected industries. Only selected industries are represented in the figure and these were chosen on the basis of their overwhelming disparity in the number of workers on a per sector basis. For instance, the ratio of formal sector workers to informal sector workers in the sectors of financial intermediation, public administration and education ranges is at least 80:20. Or, it may be stated that for every five workers in any of the three sectors mentioned earlier, four would have formal employment and only one would have informal employment. In contrast, almost every worker in the agriculture, fishing, mining, construction and private households sector would have informal employment.

Figure 4. Percentage Distribution of Workers in Selected Industries in Bangladesh, By Nature of Employment



If employment size were to be used as gauge for contribution to GDP, then the findings here support the estimates done by the Bangladesh Country Team during their presentation of the Bangladesh Country Paper on Informal Sector and its Measurement at inception workshop of RETA 6430: Measuring the Informal Sector.¹¹ The country team estimated that the wholesale and retail trade, which is largely an informal sector, contributes 12.4% to GDP. This is followed closely by the agriculture, hunting and forestry sector which contributes 11.8% to GDP. Together, these two sectors account for 67% of informal sector workers. On the formal sector side, they estimated the manufacturing sector with the biggest share to GDP at 12.5%, followed by education and public administration and defense sectors with a combined share to GDP of 4.8%. These three sectors account for 58% of the workers in the formal sector. A copy of the estimates by industry is shown in Table 12.

Table 12. A rough estimate of the size of informal sector as a percent of GDP

ISIC sector	Total share to GDP (%)	Share to GDP (%)	
		Formal	Informal
1. Agriculture	16.6	1.0	15.7
2. Fishing	4.7	0.7	4.0
3. Mining and quarrying	1.2	0.8	0.4
4. Manufacturing	17.6	12.6	5.0
5. Electricity, gas and water supply	1.6	1.6	0.0
6. Construction	9.2	2.8	6.4
7. Wholesale and retail trade	14.2	1.4	12.4
8. Hotel and restaurants	0.7	0.5	0.2
9. Transport, storage and communication	9.9	7.4	2.5
10. Financial intermediation	1.7	1.7	0.0
11. Real estate, renting and business activities	7.6	0.5	7.2
12. Public administration and defense	2.8	2.8	0.0
13. Education	2.5	2.1	0.5
14. Health and social works	2.3	2.0	0.3
15. Community, social and personal services	7.1	0.7	6.4
Total	100.0	36.9	63.6

* Reprinted from the Bangladesh Country Paper on Informal Sector and Its Measurement.

Comparative Analysis

According to studies in other countries, there is a segment of the informal sector that benefits more by staying informal but there are also vulnerable segments of the informal sector. Employers in the informal sector earn more by staying informal because they don't pay taxes nor observe minimum wage laws and consequently, wage workers, unpaid workers and others receive far less benefits and wages. In general, being employed in the formal sector is more

¹¹ On 20-23 May 2008, ADB hosted an inception and planning workshop for its technical assistance project on "Measuring the Informal Sector". The Bangladesh Country Team was headed by Director K.M. Kabir Ahmed.

desirable because of better wages and working conditions and benefits. While analysis between informal and formal sector is not possible in this paper due to data limitations, the succeeding analysis investigates if these results also apply to informal workers. It looks into the differences of wages and benefits of those under the informal and formal employment and whether there is reason to support the notion that women are more vulnerable than men in terms of wages and benefits and type of employment (informal/formal).

Wage Differentials

Across industries, Table 13 shows that workers in formal employment are paid better than workers in the informal. In terms of average weekly wage, the industry groups with the widest wage gaps in absolute number of workers are construction (T6,336); electricity, gas, and water (T5,995); health and social work (T4,950); and mining and quarrying (T4,599). Conversely, the smallest wage discrepancies are recorded in the private households (with employed persons) at T1,137, followed by fishing, T1,645, and education, at T2,055.

Meanwhile, formal workers in the Others category received 10 times more wages than the informal workers in the same industry. Other industries with high formal-informal wage ratios are construction, with a ratio of 8:1; mining and quarrying, 5:1; and TSC and agriculture, hunting and forestry which both registered 4:1 ratios. The lowest formal-informal wage ratio, on the other hand, was recorded by the education industry, at 1.5: 1. The following industries posted a 2:1 ratio each: 1) financial intermediation, 2) public administration, defense and social security, 3) real estate, renting and other business activities, 4) other community, social, and personal services, and 5) health and social work.

The difference in average weekly wages between the informal and formal workers was also tested for statistical significance. These results supported the conclusion of other studies cited in the analytical framework, that workers engaged in formal employment receive better wages on the average. Wage differential testing was also done across industries, the results of which are presented in Table 13. In all industry sectors, workers in formal employment receive significantly better wages than those in informal employment.

Table 13. Mean Weekly Wages of Workers in Bangladesh, By Nature of Employment and Industry Classification, in Taka

Industry Classification ^{a/}	Mean Weekly Wages		Difference [^]	P-value ¹²
	Formal	Informal		
Agriculture, hunting and forestry	2,737.6	652.9	2,084.7	0.0240
Fishing	2,535.3	890.7	1,644.6	0.0220
Mining and quarrying	5,635.8	1,038.1	4,597.8	0.0000
Manufacturing	3,881.6	1,419.4	2,462.3	0.0000
Electricity, gas and water supply	8,467.9	2,472.8	5,995.1	0.0000
Construction	7,278.5	942.3	6,336.2	0.0000
Wholesale and retail trade, repairs, etc.	5,505.4	2,077.6	3,427.8	0.0000
Hotels and restaurants	4,601.6	1,702.4	2,899.2	0.0220
Transport, storage, and communications	6,026.7	1,622.1	4,404.6	0.0000
Financial intermediation	9,693.3	6,047.4	3,645.9	0.0230
Real estate, renting, and business activities	5,732.5	2,892.0	2,840.6	0.0000
Public administration and defense, social security	6,882.0	3,997.2	2,884.9	0.0000
Education	6,251.2	4,196.0	2,055.1	0.0090
Health and social work	8,303.0	3,353.0	4,950.0	0.0000
Other community, social and personal services	5,292.7	1,683.4	3,609.3	0.0000
Private households with employed persons	2,109.2	971.9	1,137.2	0.0110
Others	6,297.8	600.0	5,697.8	0.0490
<i>Average</i>	<i>5,880.2</i>	<i>1,189.1</i>	<i>4,691.1</i>	

Notes:

a/ based on the International Standard Industrial Classification (ISIC) for all Economic Activities Revision 3.1

^ Mean wages (ormal) - Mean wages (informal)

Workers in informal employment receive the highest mean weekly wages in financial intermediation (T6047.35), education (4196.04), and public administration (T3997.15). These industries, however, have marginal informal employment, with only 1.3% informal workers or just a little over 500,000 out of 41.5 million workers. Apart from “Others”, informal workers earned the least in agriculture (T652.93), fishing (T890.68), and construction (T942.31), which comprise 24.1 million informal workers.

For those with formal employment, the top three highest mean weekly wages are given in the sectors on financial intermediation (T9693.27); electricity, gas, and water (T8,467.92); and the health and social work (T8302.99). Note however, that these three industries account only for a mere 11.6% of formal workers. The bottom three sectors with the lowest mean weekly wages are private households with employed persons (T2109.16); fishing (T2535.27); and agriculture, hunting and forestry (T2737.64); accounting for only 2.3% of formal workers.

¹² The p-value of the test is the probability of getting the test statistic (result) or more extreme than it from the population(s) being tested assuming that the null hypothesis is true. A p-value of .05, for example, indicates that there is only a 5% chance of getting the same or more extreme test statistic if null hypothesis is true -- hence we say that the test statistic is less likely to have come from the population(s) in which the null hypothesis, which in this case is that there are no differences between the mean wages of formal and informal workers is true, and therefore, we have to reject the null hypothesis. In statistical parlance, the result is highly significant if the p-value of the test is < 0.01, significant if the p-value is <0.05. If the p-value is more than 0.05, the null hypothesis is usually accepted and the appropriate conclusion is that there are no significant differences of the mean wages in this case. However, in the social sciences, where measurement issues abound regarding the data, these thresholds are usually lower.

The minimum monthly wage for garment workers was adjusted to T1,662 in 2006, from T950 since 1994.¹³ Compared with the mean weekly wages for the manufacturing sector, T3,882 (formal) and T1,419 (informal), the cited minimum monthly wage translating to a weekly wage of 416 takas is really low, considering as well that data for wages were taken in 2005-2006. It should be noted, however, that data for manufacturing, showed a range of wages as little as 20 takas to as high as 42,000 takas a week. One possible explanation for the discrepancy is the diverse composition of the respondents in manufacturing in terms of job positions; such that managers, supervisors, and other executive level workers comprised the high wage levels, while less skilled or specialized workers supplied the data on low salary rates. Another possible reason is the variation in sub-sectors of manufacturing itself; those working in steel, fuel and oil, or cement production, are perceived to receive more than the garment workers. Other possible explanations are the seasonality of informal sector work in the garments industry or possible errors in coding or enumeration. On the former, the survey may have been conducted when the garment industry was not very active. On the latter, since the published minimum monthly wage is way below the computed mean wage data from LFS, there is a strong possibility that responses to wages were provided in terms of monthly rather than weekly rates that have been specified in the questionnaire. This conjecture could have been validated in the data processing stage if data ranges were specified in consistency checking. Those suspect data could have been verified in the field. However, this type of verification is not possible anymore since the 2005 LFS has long been completed.

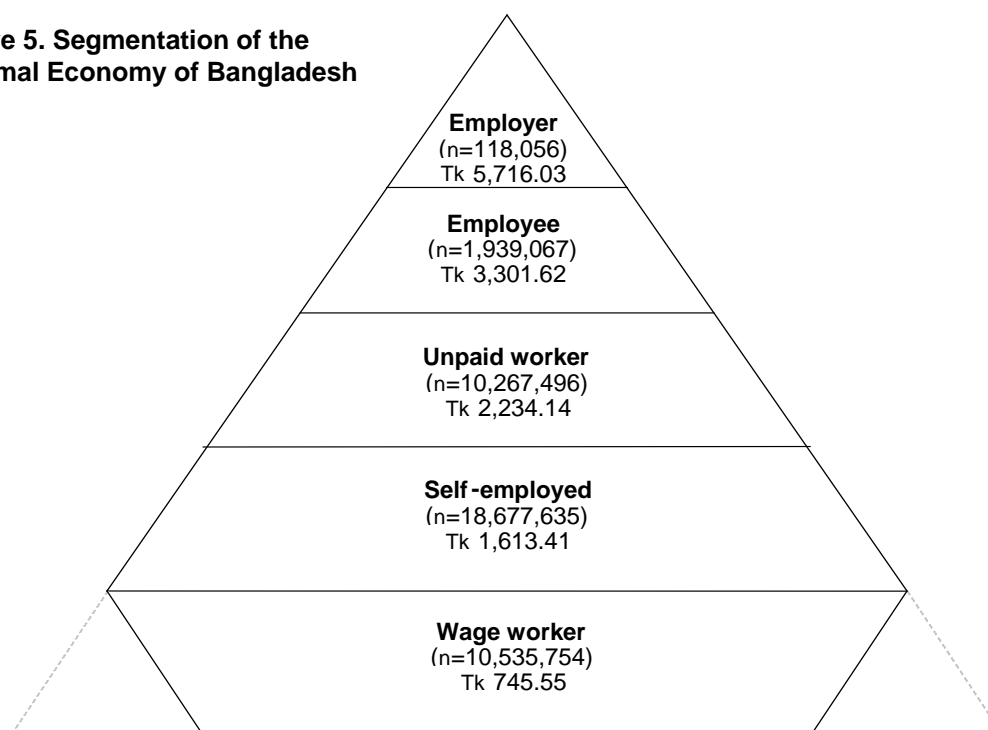
For the following, the wage/earnings of the unpaid family workers were included. Discussion on this set of data was presented in the earlier sections, including the rationalization for using the results for analysis.

An attempt to apply Chen's model (Figure 1), as presented in the section on the analytical framework in which the segmentation of the informal economy is represented by an iceberg, is shown in Figure 5. However, the model has been modified to show the relative sizes of the different segments, in addition to their relative visibility and earnings. From top to bottom, Chen's model holds true in terms of the mean wage. The most visible or the best known segment, the employers, is at the top of the iceberg, and at the base lies the least visible segment, the wage workers. The diagram also shows similar findings of Chen (et al), that in the informal economy, the self-employed earn less than the employees but more than the casual wage workers.

But since this modified version also includes representation of relative sizes of the segments, instead of a solid triangle base, the diagram illustrates broken lines at the bottom layer of the iceberg. The broken lines represent the relative size of the wage workers as compared to the other segments. If the broken lines were followed, the model would take on the shape of a one-dimensional diamond cut instead of a triangle or an iceberg. Interpretation of the modified model in the case of Bangladesh includes: 1) the higher the visibility of the segment, the higher is its relative wage/earnings; and 2) in general, the higher the relative wage/earnings, the greater is the relative size of the segment. It would be interesting to see if the "cut" (broken lines) in segments would also appear in other informal economies, and at which segment it (cut) would apply. The second finding may be expounded and tested if the following interpretation will hold merit -- like in the formal economy, as a segment becomes more visible, the greater is the requirement for specialization, which also translates to the fewer number or size of the segment and higher wage received.

¹³ The Associated Press. Dhaka, 7 October 2006.

Figure 5. Segmentation of the Informal Economy of Bangladesh



Gender

Table 14. Employment by Sex

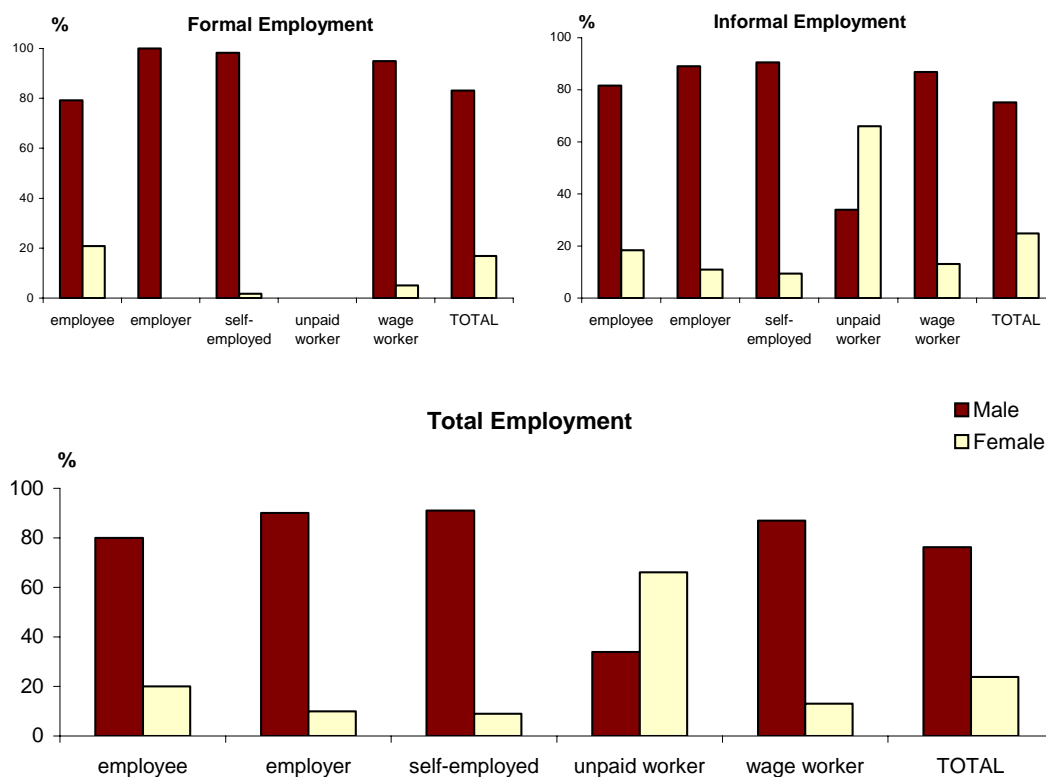
Sex	Total Employed	Percent Employed in	
		Formal	Informal
Male	36,079,828	13.40	86.60
Female	11,276,763	8.71	91.29
<i>Total</i>	<i>47,356,591</i>	<i>12.29</i>	<i>87.71</i>

Men outnumber women in the total employed population on a 3:1 ratio. They also dominate over all classes of workers, except in the unpaid worker category, where women are almost double the number of men. Meanwhile, for every male worker in the formal sector there are corresponding 6 male workers in the informal sector. For females, there are lesser opportunities for formal employment such that for every 11 female workers, 10 would be engaged in informal employment compared to one (1) in the formal.

To further illustrate this point, Figure 6 shows the differences with regard to the participation of women in the formal and informal employment. First, women are more visible in the informal than in the formal; women are represented in all worker classes in the informal employment.

However, this is not true in the formal employment; in fact, employers in this category are almost all men, while at least 11% of informal employers are composed of women. Second, not including the unpaid worker classification which is completely comprised of informal workers, there is generally a higher percentage of women in every worker class in the informal than in comparable classes in the formal category. As an example, 9.5% of the self-employed in the informal economy are women, compared to 1.8% of the formal self-employed; and there are 13.1% wage workers who are females in the informal, compared to 5.1% in the formal. Lastly, a total of 24.8% of informal workers are women, 7.9 percentage points higher than their share in the formal workforce, at 16.9%.

Figure 6. Percentage of men and women in the employment sector, by class of worker



Focusing on informal employment, Table 15 shows that male informal workers outnumber the females by a ratio of 3:1. The men are mostly self-employed (54%) or wage workers (29%). On the other hand, the women are mostly unpaid workers (66%), outnumbering the men by a ratio of 2:1. Female workers earn less than their male counterparts regardless of their class. On the average, mean weekly wages of male informal workers are higher than those for female informal workers by 31%.

Table 15. Frequency, Percent Distribution, and Mean Weekly Earnings of Informal Workers in Bangladesh, By Gender and Class of Workers

Class of Worker	Number of Workers				Mean Weekly Earnings in Taka	
	Male		Female		Male	Female
	Frequency	Percent	Frequency	Percent		
Employee	1,582,118	5.1	356,949	3.5	3,537.3	2,229.9
Employer	105,139	0.3	12,916	0.1	5,832.9	4,765.4
Self-employed	16,909,706	54.1	1,767,930	17.2	1,631.6	1,390.1
Unpaid worker	3,487,707	11.2	6,779,789	65.9	2,287.1	1,857.5
Wage worker	9,158,798	29.3	1,376,956	13.4	771.2	569.8
<i>Total</i>	<i>31,243,469</i>	<i>100.0</i>	<i>10,294,540</i>	<i>100.0</i>	<i>1,226.5</i>	<i>939.7</i>

Gender inequality is also prevalent across industries; the males dominate in all industry types, except in the private household classification where 80.5% are females. Meanwhile, at least a quarter (25%) of the workers in the following industries is composed of women: agriculture, manufacturing, education, health, private households, and others (Table 16).

Disparity between sexes is widest in Transportation, Communication and Storage (TCS), at 96.7 percentage points, followed by EGW, at 91.4; real estate, 90.4; WRT, 88.6; and the hotel industry, at 85.6 percentage points. Conversely, the gap is narrowest in the others classification, at 4.7 percentage points, next is agriculture, at 30.8, and health, at 32.9 percentage points.

Table 16. Frequency and percent distribution of employed workers, by industry

Industry	Male		Female	
	Frequency	%	Frequency	%
Agriculture	14,167,886	65.4	7,503,931	34.6
Fishing	916,212	83.7	178,989	16.3
Mining and Quarrying	43,953	86.1	7,095	13.9
Manufacturing	3,926,292	75.2	1,297,844	24.8
EGW	73,195	95.7	3,287	4.3
Construction	1,420,736	93.2	103,606	6.8
WRT	6,704,797	94.3	403,314	5.7
Hotels	661,103	92.8	51,130	7.2
TCS	3,910,042	98.3	65,854	1.7
Financial Int	392,277	77.4	114,759	22.6
Real Estate	227,202	95.2	11,401	4.8
Public Administration	778,058	88.2	103,675	11.8
Education	963,633	73.8	342,582	26.2
Health	240,563	66.4	121,545	33.6
Other Community	1,500,690	81.2	346,668	18.8
Private Household	150,316	19.6	618,465	80.5
Others	2,872	52.3	2,616	47.7
TOTAL	36,079,828	76.2	11,276,763	23.8

By industry, women engaged in informal employment still have more participation than those working in the formal. This is true in most industry types, except in manufacturing, EGW, TCS, and health. Concentrating the analysis on the informal classification, Table 17 shows that there are twice as many male informal workers than females in the agriculture sector. Males likewise outnumber females by more than a million workers in the manufacturing, wholesale and retail trade, and transport and communication sectors. Females outnumber males only in the private households with employed persons sector and others.

In terms of mean weekly wages, men's wages are higher than female wages in 14 out of 17 sectors. Mean wages of female workers are higher than those for male workers only in the mining and quarrying; electricity, gas, and water; and others. Wages are highest for males in the financial intermediation sector (T6,753) and for females in the electricity, gas, and water sector (T5,600).

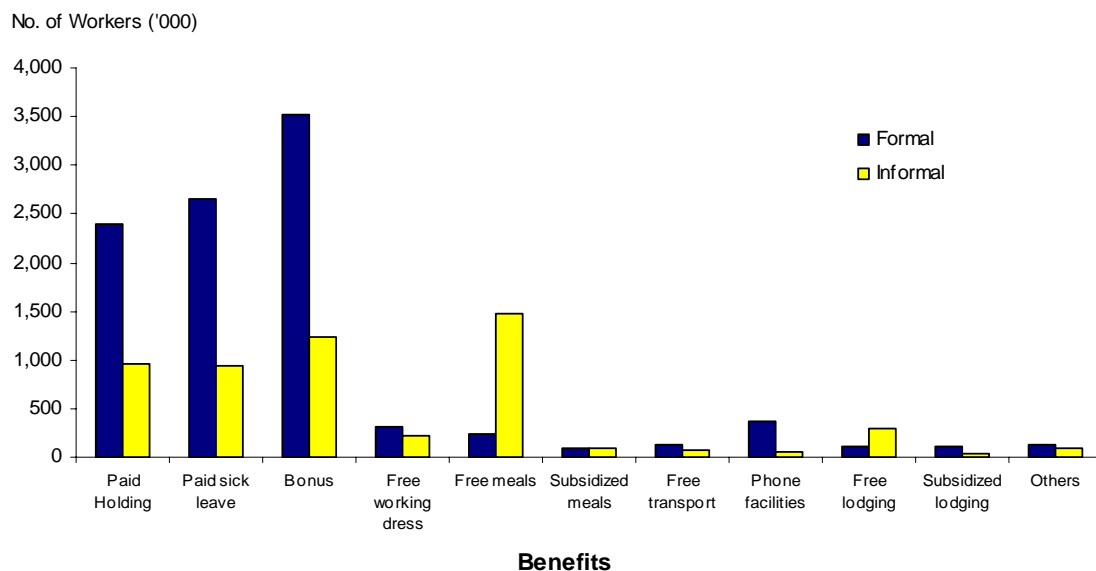
Table 17. Percent Distribution and Mean Weekly Wage of Informal Workers by Industry Classification, by Nature of Employment and by Sex

Industry	Frequency		Mean Weekly Wage (T)	
	Male	Female	Male	Female
Agriculture	14,101,835	7,483,906	662	497
Fishing	875,830	178,004	943	318
Mining and Quarrying	38,951	7,095	977	1,315
Manufacturing	2,760,618	908,625	1,568	907
Electricity, gas and water	30,487	480	2,442	5,600
Construction	1,345,488	98,189	965	527
Wholesale and retail trade	5,947,200	390,439	2,137	674
Hotels	564,101	47,969	1,813	887
Transport, C & S	3,496,282	46,459	1,624	1,485
Financial Intermediation	72,281	22,801	6,753	3,669
Real Estate	163,512	8,383	2,944	1,905
Public Administration	144,594	22,224	4,426	1,746
Education	184,419	92,942	4,746	3,244
Health and social work	102,190	41,077	3,639	3,143
Other Community	1,270,202	328,843	1,741	1,021
Private Household	145,478	616,049	2,016	768
Others	0	1,054	0	600
<i>Total</i>	<i>31,243,469</i>	<i>10,294,540</i>	<i>1226.48</i>	<i>939.70</i>

Benefits

As expected, more workers with formal employment have paid leaves and bonuses. The only benefit that more informal sector workers enjoy than workers in formal employment are free meals and free lodging. Not shown in the Figure below are the workers who do not receive any form of benefit, numbering close to 9 million, 95% of which have informal employment. Indeed, this Figure illustrates that workers in informal employment have lesser benefits than those in formal employment.

Figure 7. Comparative Analysis of Benefits Received by Workers: Formal vs Informal



The table below shows the employment benefits received by class of worker under formal and informal employment. The bonuses, paid sick leave, and the paid holdings are the top types of benefits enjoyed by both formal and informal employees. In fact, there are narrow percentage differences between the formal and informal employees who answered these choices. On the other hand, there is a steep discrepancy between formal, at 4.4%, and informal employees, at 19.1%, who did not receive any benefits.

Among formal own account workers, the most common benefits received are bonuses, free lodgings, and paid sick leaves, while the informal own account workers' top choice answers are bonuses, paid holdings, and paid sick leaves. Like in the case of employees, there is also a wide percentage difference among formal and informal own accounts workers who did not receive any benefits, at 17.0% and 51.1%, respectively.

Most of the wage workers under formal employment, at 51.1%, identified “others” as one of the benefits received, followed by free working dresses, at 15.1%, and paid sick leave, at 2.4%. Meanwhile, 12.4% of informal wage workers received free meals, 2.5% have paid sick leaves, and another 2.5% enjoy bonuses.

Unpaid family workers usually receive bonuses (20.6%), free meals (19.0%), paid sick leave (8.8%) and paid holdings (7.8%). It can also be observed that the percentage of unpaid family workers with no benefits received, at 27.7%, is relatively lower than the own account workers and wage workers'. Connecting this section to the wage data for the unpaid family workers, it is possible that the respondents interpreted questions 4.18 and 4.19 as the monetary equivalent of the benefits received. Still this assumption would need further investigation to be verified.

Among worker classes in formal employment, wage workers are most likely not to enjoy any benefit (31.4%), followed by own account workers (17.0%) and employees (4.4%). Excluding the unpaid family workers, the same trend is observed among the worker classes in informal employment. Lastly, subsidized meals and lodging are the least likely benefits given to workers engaged in either formal or informal employment.

Table 18. Benefits received by class of worker and nature of employment (in percent)

Type of Benefits	Employee		Own account worker		Wage worker		Unpaid worker
	Formal	Informal	Formal	Informal	Formal	Informal	Informal
Paid Holding	22.9	22.6	3.4	11.4	0.0	1.8	7.8
Paid sick leave	25.3	19.2	10.4	10.1	2.4	2.5	8.8
Bonus	33.3	27.6	34.4	14.7	0.0	2.5	20.6
Free working dress	3.1	1.0	0.3	1.5	15.1	1.7	0.7
Free meals	2.2	5.4	7.3	6.4	0.0	12.4	19.0
Subsidized meals	0.9	0.8	1.6	0.6	0.0	0.6	2.3
Free transport	1.2	1.0	3.0	1.3	0.0	0.3	3.2
Phone facilities	3.5	1.1	6.5	0.7	0.0	0.1	3.1
Free lodging	1.0	1.7	16.2	0.6	0.0	2.2	5.8
Subsidized lodging	1.0	0.2	0.0	0.5	0.0	0.3	0.0
Others	1.2	0.4	0.0	1.1	51.1	0.6	1.1
No benefits	4.4	19.1	17.0	51.1	31.4	75.0	27.7

Note:

Percent computed using the total number of respondents who answered in all 12 choices per class of worker and nature of employment. Since a respondent may answer more than once to this question, Q4.20, a respondent is likely to be counted more than once in the computation of total. However, a respondent is limited by its class of worker and nature of employment, thus analysis by these set of conditions is possible.

It is assumed that those respondents who answered "no benefits" are counted only once.

*All unpaid workers are under informal employment.

** No employer under formal employment provided answers, thus, this class of worker was not included in the analysis.

Conclusions and Recommendations

Informal employment analysis using the 2005 LFS was possible albeit a questionnaire that was not designed for such purpose and the many unresolved problems in data processing and validation that were clearly described in the methodology section of this paper. The application of the internationally accepted definition of the informal employment on the 2005 LFS proved to be difficult because of issues that could not be tackled now, three years after the 2005 LFS was conducted and processed. Hence, for analysis to be performed, the formal employment was first identified with the assumption that its complement is all informal employment. With this workable definition, it was found that informal employment dominates Bangladesh's labour market, with 87.71% of the total employed working under informal circumstances. The biggest concentration of informal workers are in the rural areas with 92% and the least dense at the SMA level, with 67.2% of the workers are informal.

Workers in informal employment are mostly in the agriculture, hunting and forestry, wholesale and retail trade; manufacturing; and transport, storage and communications sectors. The Government of Bangladesh employs most of the workers under formal employment. As expected, workers with formal employment are consistently better paid than those with informal employment. The mean wages for informal and formal employees are significantly different by each sector but they are markedly different in construction; in electricity, gas and water; in mining; and in transport, storage and communication. Agriculture informal workers are paid the

least while those under financial intermediation receive the highest wages among informal workers.

In the informal economy, employers have the highest earnings and wage workers, the lowest but those self-employed constitute the biggest segment. Most women are informal workers and they are paid less than men of similar class and industry, except for in the mining and quarrying; electricity, gas, and water; and others. Male informal workers dominate all industry except for personal households.

Informal workers are found to have significantly less benefits than those with formal employment, except for free meals and free lodging. In particular, self-employed and unpaid workers comprise a little over 20 million of informal workers but less than 2 million of them enjoy benefits.

These results were derived from survey data that are beset with consistency issues and design problems (Maligalig and Barcenas, 2008) that cannot be resolved because of the almost three years that have elapsed from the conduct and processing of the survey. If this survey has just been processed and the inconsistencies have been properly identified then supervisors and enumerators could have gone back to respondents to verify suspect data. It is rather unfortunate, however, that this process of verification cannot be done anymore. Moreover, correct selection probabilities cannot be specified because the selection processes were not properly documented. Because of these, the results of this survey will be continuously questioned, discounting the value of the results that were obtained from the survey.

To ensure that surveys, which are usually very expensive to conduct, are utilized to its fullest, surveys should be designed, conducted and processed following standards that have been tested and accepted. In this case, if analysis of informal employment is one of the objectives of the survey, the questions that have been tested to screen for informal employment should be incorporated. Examples of such questions are in Appendix 2 of this paper. In general, the questionnaire should be designed to fulfill the objectives of the survey. Questions and response choices should be formulated within the analytical framework of the study. These questions and choices should add clarity and not confuse data users. Skipping patterns can be properly introduced to reduce the response time. To ensure that the questionnaire has comprehensive coverage of the objectives of the survey, this should be tested in the field, and the results of which should also be processed. This pre-test can also be a time and motion study that will give survey managers indication of how much time an enumerator needs to administer a questionnaire and what steps should be done by supervisors to ensure the proper administration of the survey questionnaire.

Manuals for enumerators and supervisors should be developed to anticipate and address issues that may occur in the field such as clarification of concepts and terminology, refusal to provide answers, incomplete answers, etc. The manuals should include clear definitions of all concepts and terminologies that are used in the questionnaire, probing questions that have tested to elicit responses, procedures for replacing sample households that cannot be located, among others. These manuals are necessary survey instruments for reducing data issues such as those identified in the methodology section and consequently, for controlling non-sampling errors that occur in the field.

Another measure that can reduce suspect data is a good training program for enumerators and supervisors in which all the facets of the questionnaire, the procedures for manual edits and completeness checks are clearly explained.

If some errors are not identified in the field, they can also be screened during the data validation stage, when usually data have been entered into an electronic file which can automatically be reviewed against preset business rules. In this stage, various types of data checks are applied. For questions with a clear set of choice answers, then checks can be applied on acceptable answer codes. Otherwise, acceptable data range (for weekly wage for example) can also be set. Known relationships of questions/responses can also be reviewed. For example, unpaid worker should not have wages. This business rule can easily be built into the data validation stage. Those responses that are suspect can be checked against the questionnaires and if needed, enumerators can return to the respondents for verification.

Care must be given to the survey sampling design and estimation procedures. The former, if done correctly, guarantees that conclusions drawn from the survey will also apply to the whole population. Sampling errors of major characteristics or indicators must be derived to give an indication of the reliability of the survey. Correct survey weights must be used to ensure unbiased estimates.

References

- Chen, Martha, Joann Vanek and James Heintz. 2006. Informality, Gender and Poverty: A Global Picture. *Economic and Political Weekly*. 27 May 2006.
- Chen, Martha and Marilyn Carr. 2004. "Globalization, Social Exclusion and Work: With Special Reference to Informal Employment and Gender." *International Labour Review: Special Issue on More Equitable Globalization*, Vol. 143, Nos. 1-2, Geneva: ILO.
- Chen, Martha. 2004. Rethinking the Informal Economy: Linkages with the Formal Economy and the Formal Regulatory Environment. Expert Group on Development Issues and United Nations University- World Institute for Development Economic Research Conference: *Unlocking Human Potential: Linking the Informal and Formal Sectors*. 17-18 September 2004. Helsinki, Finland.
- Chen, Martha, Renana Jhabvala and Frances Lund. 2002. "Supporting Workers in the Informal Economy: A Policy Framework." *Working Paper on the Informal Economy*, No. 2. Geneva : ILO.
- Delhi Group/International Labour Organization. 2007. Draft Manual on Surveys of Informal Employment and Informal Sector.
- Fifteenth International Conference of Labour Statisticians. 1993. Resolution concerning statistics of the employment in the Informal Sector.
- Giri, B. K., A. Roy, S. K. Mukhopadhyay. 2007. Calculation of Gross Value Added in the Unorganized Sector: An Alternative Approach to Measuring Labour Inputs. *Economic and Political Weekly*. 15 September 2007.
- Husmanns, Ralf. 2004. Defining and Measuring informal employment. Bureau of Statistics. International Labour Office.
- International Labour Office. 2002. Women and Men in the Informal Economy: A statistical Picture. ILO Employment Sector. Geneva.
- Kantor Paula, U. Rani and J. Unni. 2006. Decent Work Deficits in Informal Economy: Case of Surat. *Economic and Political Weekly*. 27 May 2006.
- Maligalig, Dalisay and Marissa Barcenas. 2008. Examining Bangladesh's Integrated Multi-Purpose Sample Design. Paper to be presented in the Inception Mission to Bangladesh for RETA 6430: Measuring the Informal Sector.
- Sakhthivel and P. Joddar. 2006. Unorganized Sector Workforce in India: Trends, Patterns and Social Security Coverage. *Economic and Political Weekly*. 27 May 2006.

Appendix 1

Govt. of the People's Republic of Bangladesh
 Bangladesh Bureau of Statistics
 Industry and Labour Wing
 Parisankhyan Bhaban
 E-27/A, Agargaon, Dhaka-1207.

Confidential
 (Personally given data will not be disclosed)

Team:
 Quarter:
 Round:

DPC No.

(For office use only)

Annual Labour Force Survey, 2005-06

Section-1: Identification of the Sample Area		
Sample Area Particulars	Name	Code No.
Region		<input type="text"/> <input type="text"/>
Zila		<input type="text"/> <input type="text"/>
Upzila/Thana		<input type="text"/> <input type="text"/>
Union/Ward		<input type="text"/> <input type="text"/>
Mouza/Mohalla		<input type="text"/> <input type="text"/> <input type="text"/>
Area (Rural-1, Urban-2)		<input type="text"/>
PSU No.		<input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>
Sample Household No.		<input type="text"/> <input type="text"/> <input type="text"/>
Head of the Household		

DESCRIPTION OF THE VISITING

Visit	Date	Progress of the collected data (Quote the Tick Mark)		
1 st visit		1- Complete	2- Incomplete	3- Refused
2 nd visit		1- Complete	2- Incomplete	3- Refused
INVESTIGATOR & EDITOR/CODER	I. NAME	Signature	Date	Code
Name of the Interviewer				
Name of the Supervising Officer				
Name of the Editor/Coder				

Section-2: Household/Dwelling Particulars			
2.1	<p style="text-align: center;">OWNERSHIP OF HOUSE</p> <p>1- Owned 2- Rent free 3- Rented 4- Less rent/Rent subsidies 5- Others (specify) -----</p>	2.7	<p>Sources of fuel for cooking ?</p> <p>1- Fire wood 2- Dung/Straw/Leaf 3- Electricity 4- Natural gas (pipe line supply) 5- Cylinder gas 6- Kerosene oil 7- Others (specify) -----</p>
2.2	<p>Type of dwelling household?</p> <p>1- Kutcha 2- Semi-pacca 3- Pucca 4- Others (specify) -----</p>	2.8	<p>A. B. C. Toilet facilities</p> <p>1- Flushed comod toilet 2- Pucca sanitary latrine 3- Ring slab 4- Pucca toilet (non-flushed) 5- Kutcha toilet (permanent/temporary) 6- Other services</p>
2.3	<p>Number of living rooms in dwelling ?</p> <p>1- Total number of rooms <input type="text"/></p> <p>2- Total number of rooms used <input type="text"/></p>	2.9	<p>Does the household own any of he following ? (Tick one or for consumption more than one of use sametime)</p> <p>1- Radio/Tape Recorder 2- TV 3- Freeze 4- Telephone 5- Mobile phone 6- Sewing machine 7- Motor cycle 8- Bicycle 9- Others (specify) ----- 10- None of he above</p>
2.4	<p>Source of lighting ?</p> <p>1- Electricity 2- Kerosene oil 3- Others (specify) -----</p>		
2.5	<p>Source of drinking water ?</p> <p>1- Tubewell/Pump machine 2- Canal/Rever/Pond 3- Supply water/Tape water 4- Others (specify) -----</p>		
2.6	<p>Facility of kitchen room ?</p> <p>1- Inside house 2- Separate/outside the house 3- Others (specify) -----</p>		

<p>2.10</p>	<p>II. HOUSEHOLD'S OWN LAND</p> <div style="display: flex; justify-content: space-around; align-items: center;"> <div style="border: 1px solid black; width: 30px; height: 30px; display: flex; align-items: center; justify-content: center;"> </div> <div style="border: 1px solid black; width: 30px; height: 30px; display: flex; align-items: center; justify-content: center;"> </div> </div> <p>(Land of all members including homestead Acres Decimal)</p>	<p>2.13</p>	<p>III. MAIN SOURCE OF INCOME OF YOUR HOUSEHOLD ?</p> <p>1- Self-employed (agriculture) 2- Self-employed (non-agriculture)</p> <p>3- Regular employment 4- Day labourer (agriculture/non-agriculture) 5- Pension, dividends, interest, house rent, property income 6- Other sources of income (write properly) ----- V.</p>
<p>2.11</p>	<p>IV. DOES THE HOUSEHOLD OWN ANY ON THE FOLLOWING ACTIVITY ?</p> <p>1- Animal husbandry 2- household basis poultry production 3- Dairy farm 4- Fishing farm 5- Horticulture (nursing)</p> <p>6- None of the above</p>	<p>2.14</p>	<p>VI. THE AVERAGE MONTHLY INCOME OF HOUSEHOLD ?</p> <p>a) Self-employed <input style="width: 80px; height: 20px;" type="text"/> Tk.</p> <p>b) Regular paid employee <input style="width: 80px; height: 20px;" type="text"/> Tk.</p> <p style="text-align: center;">IX.</p>
<p>2.12</p>	<p style="text-align: center;">VII.</p> <p>VIII. TYPE OF ACTIVITY HOUSEHOLD PRIMARILY ENGAGED ?</p> <p>1- Agriculture 2- Manufacturing (small & cottage) 3- Trade</p> <p>4- Service (government/private sector)</p> <p>5- Construction/Repairing work) 6- Other services (specify) ----- XI.</p>	<p>2.15</p>	<p>X. THE AVERAGE EXPENDITURE OF HOUSEHOLD ?</p> <p style="text-align: right;"><input style="width: 80px; height: 20px;" type="text"/> Tk.</p>

Section-3 : Composition of Household										
For all household members						10 years & above	Members for 5 years and above			
Q. → Line No. ↓	3.1 Name of all household members Residing in this household and taking their meals altogether, include the member those who are temporarily absent but to all return within 6 months. <u>Exclude</u> Visitors and strangers.	3.2 Relation-ship to head of the family/ household	3.3 Gender 1- Male 2- Female	3.4 Age (Incomplete years, if less than one year write 00)	3.5 Religion 1- Islam 2- Hindu 3- Buddhist 4- Christ 5- Others	3.6 Marital status 1- Unmarried 2- Married 3- Widow/ Widower 4- Divorced 5- Separated (separate living)	3.7 Can you write a letter? 1- Yes 2- No.	3.8 What class you have passed (Write education code)	3.9 Are you recently attending in any education institute? 1- Yes 2- No.	3.10 Have you received any training? (write training code)
01										
02										
03										
04										
05										
06										
07										
08										
09										
10										
11										
12										
Relation code (Q. No-3.2)	1- Head of the household 2- Husband/wife	3- Son/daughter 4- Brother/sister	5- Grand son/grand daughter 6- Son in law/daughter in law	7- Father/mother 8- Father in law/mother in law and others relatives	9- Non-relative 10- House servant					
Education code (Q. No-3.8)	1- No class had been passed 2- Class 1–Class V	3-ClassVI–Class VIII 4- Class IX	5- Secondary or equivalent 6- Intermediate or equivalent	7- Graduate or equivalent 8- Post-Graduate or equivalent	9- Medical/Engineering 10- Technical education (Technical/vocational etc.) 11- Others					
Training code (Q. No-3.10)	1- No training obtained 2- Vocational/Technical	3- Computer 4- Motor Driving	5- Shorthand/Typing 6- Tailoring/Garments	7- Welding/Electrical 8- Motor Mechanics	9- Inservice Training 10- Nursing 11- Youth Development 12- Others					

Section-4 : Current Activity Status 15 years and above						
Q.No. ↓	Name →					
	Line No.→	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
4.1	Did you do any economic activity for at least one hour or more during the last week as paid XII. WORKER OR FOR FAMILY GAIN OR PROFIT OR FOR OWN XIII. USE OR CONSUMPTION ? 1- Yes (Go to Q. No.-4.3) 2- No.	<input type="text"/> 1 <input type="text"/> 2	<input type="text"/> 1 <input type="text"/> 2	<input type="text"/> 1 <input type="text"/> 2	<input type="text"/> 1 <input type="text"/> 2	<input type="text"/> 1 <input type="text"/> 2
4.2	Even if you did not work during the last week for some reasons, did you have a job attachment or engagement in any economic activity ? 1- Yes 2- No. (Go to Section-8)	<input type="text"/> 1 <input type="text"/> 2	<input type="text"/> 1 <input type="text"/> 2	<input type="text"/> 1 <input type="text"/> 2	<input type="text"/> 1 <input type="text"/> 2	<input type="text"/> 1 <input type="text"/> 2
4.3	What is the name of your establishment or industry where you worked most of the time during the last week ?	Name of the institution ----- -----	Name of the institution ----- -----	Name of the institution ----- -----	Name of the institution ----- -----	Name of the institution ----- -----
4.4	What was the type of activity or industry or where you worked or served during the last week or from which you were absent (describing details).	Main activity ----- --- ----- ----- ----- Code <input type="text"/>	Main activity ----- --- ----- ----- ----- Code <input type="text"/>	Main activity ----- -- ----- ----- ----- Code <input type="text"/>	Main activity ----- ----- ----- ----- ----- Code <input type="text"/>	Main activity ----- -- ----- ----- ----- Code <input type="text"/>

Q.No ↓	Name →	-----				
		Line No.→				
4.5	What was the position in your occupation you were engaged most of the time in the last week ?	Designation----- ----- -----	Designation----- ----- -----	Designation----- ----- -----	Designation----- ----- -----	Designation----- ----- -----
4.6	What was the main task in which you were engaged most of the time during the last week ? <i>(Please describe)</i>	Main activity ----- ----- ----- Code <input type="text"/>	Main activity ----- ----- ----- Code <input type="text"/>	Main activity ----- ----- ----- Code <input type="text"/>	Main activity ----- ----- ----- Code <input type="text"/>	Main activity ----- ----- ----- Code <input type="text"/>
4.7	How many hour you were engaged in your main task or job during the last week ?	<input type="text"/> <input type="text"/> <input type="text"/> Hour	<input type="text"/> <input type="text"/> <input type="text"/> Hour	<input type="text"/> <input type="text"/> <input type="text"/> Hour	<input type="text"/> <input type="text"/> <input type="text"/> Hour	<input type="text"/> <input type="text"/> <input type="text"/> Hour
4.8	Were you engaged in any other activity or work without your principal work during the last week? 1- Yes 2- No. (Go to Q. No. - 4.11)	<input type="text"/> <input type="text"/>	<input type="text"/> <input type="text"/>	<input type="text"/> <input type="text"/>	<input type="text"/> <input type="text"/>	<input type="text"/> <input type="text"/>
4.9	What is the informal work/occpation <i>(Please describe).</i>	Informal activity -- ----- ----- Code <input type="text"/>	Informal activity -- ----- ----- Code <input type="text"/>	Informal activity --- ----- ----- Code <input type="text"/>	Informal activity -- ----- ----- Code <input type="text"/>	Informal activity --- ----- ----- Code <input type="text"/>

Q.No ↓	Name → Line No.→	----- <input type="text"/>	----- <input type="text"/>	----- <input type="text"/>	----- <input type="text"/>	----- <input type="text"/>
4.10	How many hour did you work in the secondary activity during the last week ?	<input type="text"/> <input type="text"/> Hour	<input type="text"/> <input type="text"/> Hour	<input type="text"/> <input type="text"/> Hour	<input type="text"/> <input type="text"/> Hour	<input type="text"/> <input type="text"/> Hour
4.11	In total how many hour did you work in main and secondary activity during the last week ?	<input type="text"/> <input type="text"/> Hour	<input type="text"/> <input type="text"/> Hour	<input type="text"/> <input type="text"/> Hour	<input type="text"/> <input type="text"/> Hour	<input type="text"/> <input type="text"/> Hour
4.12	<p>What was your satus in employment where you worked most of the time during the last week ?</p> <p>1- Regular paid employee(HH work/irragularLab./ apprentice)</p> <p>2- Employer</p> <p>3- Self-employed</p> <p>4- Unpaid family worker</p> <p>5- Irregular paid worker</p> <p>6- Day labour (Agriculture)</p> <p>7- Day labour (Non-agriculture)</p> <p>8- Domestic worker (Maid servent)</p> <p>9- Paid/Unpaid apprentices</p> <p>10- Other (Specify)-----</p>	<input type="text"/> 1 <input type="text"/> 2 <input type="text"/> 3 <input type="text"/> 4 <input type="text"/> 5 <input type="text"/> 6 <input type="text"/> 7 <input type="text"/> 8 <input type="text"/> 9 <input type="text"/> 10	<input type="text"/> 1 <input type="text"/> 2 <input type="text"/> 3 <input type="text"/> 4 <input type="text"/> 5 <input type="text"/> 6 <input type="text"/> 7 <input type="text"/> 8 <input type="text"/> 9 <input type="text"/> 10	<input type="text"/> 1 <input type="text"/> 2 <input type="text"/> 3 <input type="text"/> 4 <input type="text"/> 5 <input type="text"/> 6 <input type="text"/> 7 <input type="text"/> 8 <input type="text"/> 9 <input type="text"/> 10	<input type="text"/> 1 <input type="text"/> 2 <input type="text"/> 3 <input type="text"/> 4 <input type="text"/> 5 <input type="text"/> 6 <input type="text"/> 7 <input type="text"/> 8 <input type="text"/> 9 <input type="text"/> 10	<input type="text"/> 1 <input type="text"/> 2 <input type="text"/> 3 <input type="text"/> 4 <input type="text"/> 5 <input type="text"/> 6 <input type="text"/> 7 <input type="text"/> 8 <input type="text"/> 9 <input type="text"/> 10
4.13	<p>In which scetor did you work during the last week?</p> <p>1- Government</p> <p>2- Private formal Sector</p> <p>3- Personal Household</p> <p>4- Personal Establishment</p> <p>5- Other (Specify)-----</p>	<input type="text"/> 1 <input type="text"/> 2 <input type="text"/> 3 <input type="text"/> 4 <input type="text"/> 5	<input type="text"/> 1 <input type="text"/> 2 <input type="text"/> 3 <input type="text"/> 4 <input type="text"/> 5	<input type="text"/> 1 <input type="text"/> 2 <input type="text"/> 3 <input type="text"/> 4 <input type="text"/> 5	<input type="text"/> 1 <input type="text"/> 2 <input type="text"/> 3 <input type="text"/> 4 <input type="text"/> 5	<input type="text"/> 1 <input type="text"/> 2 <input type="text"/> 3 <input type="text"/> 4 <input type="text"/> 5

Q.No ↓	Name →					
	Line No.→	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
4.17	How do you get the salary/wages ?					
	1- Daily	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
	2- Weekly	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
	3- Monthly	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
	4- Piece rate / work rate	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
	5- Other (Specify)-----	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
4.18	How much did you earn during the last a. week ? (Day Labour)					
	1- In cash	Tk. <input type="text"/>	Tk. <input type="text"/>	Tk. <input type="text"/>	Tk. <input type="text"/>	Tk. <input type="text"/>
	2- In kind (in taka)	Tk. <input type="text"/>	Tk. <input type="text"/>	Tk. <input type="text"/>	Tk. <input type="text"/>	Tk. <input type="text"/>
	3- Both in cash and in kind (in taka)	Tk. <input type="text"/>	Tk. <input type="text"/>	Tk. <input type="text"/>	Tk. <input type="text"/>	Tk. <input type="text"/>
4.19	How much did you earn during the last week ? (Paid worker)					
	1- In cash (in Tk.)	Tk. <input type="text"/>	Tk. <input type="text"/>	Tk. <input type="text"/>	Tk. <input type="text"/>	Tk. <input type="text"/>
	2- In kind (in Tk.)	Tk. <input type="text"/>	Tk. <input type="text"/>	Tk. <input type="text"/>	Tk. <input type="text"/>	Tk. <input type="text"/>
	3- Both in cash and kind (in Tk.)	Tk. <input type="text"/>	Tk. <input type="text"/>	Tk. <input type="text"/>	Tk. <input type="text"/>	Tk. <input type="text"/>

Q.No ↓	Name →	-----		-----		-----		-----		-----	
	Line No.→	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
4.20	What benefits are provided other than wages and salaries by the employer ? (Answer may be more than one) 1- Paid holding (Including wages and salaries) 2- Paid sick leave 3- Bonus 4- Working dress (Free of cost) 5- Free meals 6- Subsidise meals 7- Free transports 8- Telephone facilities 9- Free lodging 10- Subsidiary lodging 11- Other (Specify)----- 12- No facility is given	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
<i>For Self Employed/Employer and Unpaid Family Workers</i>											
4.21	Does the working establishment or industry unit has got any recommendation from the formal authority or from any other formal institution 1- Yes 2- No	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
4.22	Does the workign unit or establishment keep written accounts for their transaction ? 1- Yes 2- No	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

Section-5: Current Activity Status Child 5-14 years during the last week						
Q.No ↓	Name →					
	Line No.→	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
5.1	Did you do any economic activity for at least one hour or more during the last week as paid worker or for family given or for profit or for own use or for consumption ? 1- Yes (Go to Q.No. 5.3) 2- No	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
		<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
5.2	Even if you did not work during the last week for some reasons, did you have a job attachment or engagement in any economic activity? 1- Yes (Go to Q.No. 5.3) 2- No	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
		<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
5.3	What is the name of the establishment or industry where you worked most of the time or you were absent for some reasons during the last week ?	Name of Institution ----- -----	Name of Institution ----- -----	Name of Institution ----- -----	Name of Institution ----- -----	Name of Institution ----- -----
5.4	What was the type of your activity where you worked most of the time or absent for some reasons during the last week ?	Main Activity----- ----- ----- ----- Code <input type="text"/>	Main Activity----- ----- ----- ----- Code <input type="text"/>	Main Activity----- ----- ----- ----- Code <input type="text"/>	Main Activity----- ----- ----- ----- Code <input type="text"/>	Main Activity----- ----- ----- ----- Code <input type="text"/>

Q.No ↓	Name → Line No.→	----- □ □	----- □ □	----- □ □	----- □ □	----- □ □
5.8	<p>What was your place of work during the last week ?</p> <p>1- At home/home premise</p> <p>2- At employer's home</p> <p>3- Factory</p> <p>4- Business institution/shop</p> <p>5- Farm</p> <p>6- Restaurant/Tea stall</p> <p>7- Godown</p> <p>8- At street/Market</p> <p>9- Construction place</p> <p>10- Other (Specify)-----</p>	<p>□ 1</p> <p>□ 2</p> <p>□ 3</p> <p>□ 4</p> <p>□ 5</p> <p>□ 6</p> <p>□ 7</p> <p>□ 8</p> <p>□ 9</p> <p>□ 10</p>	<p>□ 1</p> <p>□ 2</p> <p>□ 3</p> <p>□ 4</p> <p>□ 5</p> <p>□ 6</p> <p>□ 7</p> <p>□ 8</p> <p>□ 9</p> <p>□ 10</p>	<p>□ 1</p> <p>□ 2</p> <p>□ 3</p> <p>□ 4</p> <p>□ 5</p> <p>□ 6</p> <p>□ 7</p> <p>□ 8</p> <p>□ 9</p> <p>□ 10</p>	<p>□ 1</p> <p>□ 2</p> <p>□ 3</p> <p>□ 4</p> <p>□ 5</p> <p>□ 6</p> <p>□ 7</p> <p>□ 8</p> <p>□ 9</p> <p>□ 10</p>	<p>□ 1</p> <p>□ 2</p> <p>□ 3</p> <p>□ 4</p> <p>□ 5</p> <p>□ 6</p> <p>□ 7</p> <p>□ 8</p> <p>□ 9</p> <p>□ 10</p>
5.9	<p>How many hours did you engage in your economic activity during the last week ?</p>	<p>□ □ □ Hour</p>	<p>□ □ □ Hour</p>	<p>□ □ □ Hou r</p>	<p>□ □ □ Ho ur</p>	<p>□ □ □ Hou r</p>

Q.No ↓	Name → Line No.→	----- <input type="text"/>	----- <input type="text"/>	----- <input type="text"/>	----- <input type="text"/>	----- <input type="text"/>
For Regular Paid Children of 5-14 years of Age						
5.10	How much did you earn during the last week? <i>b.</i> <i>c. (Day Labour)</i> 1- In cash 2- In kind (In Taka) 3- Both cash and in kind (In Taka)	Tk. <input type="text"/> Tk. <input type="text"/> Tk. <input type="text"/>	Tk. <input type="text"/> Tk. <input type="text"/> Tk. <input type="text"/>	Tk. <input type="text"/> Tk. <input type="text"/> Tk. <input type="text"/>	Tk. <input type="text"/> Tk. <input type="text"/> Tk. <input type="text"/>	Tk. <input type="text"/> Tk. <input type="text"/> Tk. <input type="text"/>
5.11	How much did you earn during the last month? <i>(Paid employee)</i> 1- In cash 2- In kind (In Taka) 3- Both cash and in kind (In Taka)	Tk. <input type="text"/> Tk. <input type="text"/> Tk. <input type="text"/>	Tk. <input type="text"/> Tk. <input type="text"/> Tk. <input type="text"/>	Tk. <input type="text"/> Tk. <input type="text"/> Tk. <input type="text"/>	Tk. <input type="text"/> Tk. <input type="text"/> Tk. <input type="text"/>	Tk. <input type="text"/> Tk. <input type="text"/> Tk. <input type="text"/>

Section-6 : Education and Current Activities Status 5-30 years						
Q.No ↓	Name →					
	Line No.→	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
6.1	<p>Are you currently studying in any educational XIV. INSTITUTE OR TRAINING INSTITUTE ?</p> <p>1- Yes, Full time 2- Yes, Part time 3- No</p>	<input type="text"/> 1 <input type="text"/> 2 <input type="text"/> 3	<input type="text"/> 1 <input type="text"/> 2 <input type="text"/> 3	<input type="text"/> 1 <input type="text"/> 2 <input type="text"/> 3	<input type="text"/> 1 <input type="text"/> 2 <input type="text"/> 3	<input type="text"/> 1 <input type="text"/> 2 <input type="text"/> 3
6.2	<p>If the answer of question 6.1 is 'No' than what is the reason for not attending the educational institution or training institute ?</p> <p>1- Due to unavailability of reliable educational at institution/ training institute 2- Due to incapability of bearing the expenses of education institution or training education 3- For maintaining own livelihood 4- Weak/not so good in studies 5-Unwillingness for training and study/Failure in examination 6- Physical illness/incapability 7- Due to engagement in household dwellings/Due to the work assistance of household dwellings work 8- Worked for wages/salaries (for own family) 9- For household economic activity/For assistance in business institution 10- Engagement in own business institution for earning 11- Unwillingness for education/Training of the family 12- Others (Specify)-----</p>	<input type="text"/> 1 <input type="text"/> 2 <input type="text"/> 3 <input type="text"/> 4 <input type="text"/> 5 <input type="text"/> 6 <input type="text"/> 7 <input type="text"/> 8 <input type="text"/> 9 <input type="text"/> 10 <input type="text"/> 11 <input type="text"/> 12	<input type="text"/> 1 <input type="text"/> 2 <input type="text"/> 3 <input type="text"/> 4 <input type="text"/> 5 <input type="text"/> 6 <input type="text"/> 7 <input type="text"/> 8 <input type="text"/> 9 <input type="text"/> 10 <input type="text"/> 11 <input type="text"/> 12	<input type="text"/> 1 <input type="text"/> 2 <input type="text"/> 3 <input type="text"/> 4 <input type="text"/> 5 <input type="text"/> 6 <input type="text"/> 7 <input type="text"/> 8 <input type="text"/> 9 <input type="text"/> 10 <input type="text"/> 11 <input type="text"/> 12	<input type="text"/> 1 <input type="text"/> 2 <input type="text"/> 3 <input type="text"/> 4 <input type="text"/> 5 <input type="text"/> 6 <input type="text"/> 7 <input type="text"/> 8 <input type="text"/> 9 <input type="text"/> 10 <input type="text"/> 11 <input type="text"/> 12	<input type="text"/> 1 <input type="text"/> 2 <input type="text"/> 3 <input type="text"/> 4 <input type="text"/> 5 <input type="text"/> 6 <input type="text"/> 7 <input type="text"/> 8 <input type="text"/> 9 <input type="text"/> 10 <input type="text"/> 11 <input type="text"/> 12

Section-8 : For Unemployed/Vagabond persons activity status of the age of 15 years and above						
Q.No ↓	Name →	-----	-----	-----	-----	-----
	Line No.→	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
8.1	If you did not work during the last 7 days were you prepared for job or searching job ?					
	1- Yes	<input type="text" value="1"/>	<input type="text" value="1"/>	<input type="text" value="1"/>	<input type="text" value="1"/>	<input type="text" value="1"/>
	2- No	<input type="text" value="2"/>	<input type="text" value="2"/>	<input type="text" value="2"/>	<input type="text" value="2"/>	<input type="text" value="2"/>
8.2	Did you try to find a job during the last week?					
	1- Yes	<input type="text" value="1"/>	<input type="text" value="1"/>	<input type="text" value="1"/>	<input type="text" value="1"/>	<input type="text" value="1"/>
	2- No <i>(Go to Q. No. 8.5)</i>	<input type="text" value="2"/>	<input type="text" value="2"/>	<input type="text" value="2"/>	<input type="text" value="2"/>	<input type="text" value="2"/>
8.3	What steps you have taken to get a job ? (Mark on maximum four possible answers)					
	1- Contact with Government Recruiting Centers	<input type="text" value="1"/>	<input type="text" value="1"/>	<input type="text" value="1"/>	<input type="text" value="1"/>	<input type="text" value="1"/>
	2- Contact with Non-government Recruiting Organization	<input type="text" value="2"/>	<input type="text" value="2"/>	<input type="text" value="2"/>	<input type="text" value="2"/>	<input type="text" value="2"/>
	3- Direct contact with employers	<input type="text" value="3"/>	<input type="text" value="3"/>	<input type="text" value="3"/>	<input type="text" value="3"/>	<input type="text" value="3"/>
	4- Searching in working unit, factory gate, working place etc.	<input type="text" value="4"/>	<input type="text" value="4"/>	<input type="text" value="4"/>	<input type="text" value="4"/>	<input type="text" value="4"/>
	5- Contact with friends/relatives	<input type="text" value="5"/>	<input type="text" value="5"/>	<input type="text" value="5"/>	<input type="text" value="5"/>	<input type="text" value="5"/>
	6- Applied based on News Paper advertisement	<input type="text" value="6"/>	<input type="text" value="6"/>	<input type="text" value="6"/>	<input type="text" value="6"/>	<input type="text" value="6"/>
	7- Applied for job by internet	<input type="text" value="7"/>	<input type="text" value="7"/>	<input type="text" value="7"/>	<input type="text" value="7"/>	<input type="text" value="7"/>
	8- Others (Specify)-----	<input type="text" value="8"/>	<input type="text" value="8"/>	<input type="text" value="8"/>	<input type="text" value="8"/>	<input type="text" value="8"/>
9- Nothing	<input type="text" value="9"/>	<input type="text" value="9"/>	<input type="text" value="9"/>	<input type="text" value="9"/>	<input type="text" value="9"/>	

Appendix 2

Questionnaire Module on Informal Employment in the LFS

For employees only: (to be asked for main job and, if applicable, second job)

Several aspects pertaining to the informality/formality of jobs are covered by the questions. The objective is to be able to analyze nature of informality as well as degree (according to number of conditions that hold) of informality.

QIE1: What is the duration/nature/stability of your employment?

1. Permanent job/business/unpaid family work
2. Short-term or seasonal or casual job/unpaid family work
3. Worked for different employer on day-to-day or week-to-week basis

QIE2: Are the terms of your employment covered by a written contract?

1. Yes, I have a written contract for long-term employment
2. Yes, I have a written contract for short-term employment
3. No, I only have a verbal contract
4. No, I do not have any contract

QIE3: Does your employer pay contributions to the legislated pension fund for you?

1. Yes
2. No
3. Do not know

QIE4: Do you benefit from paid annual leave/holiday leave or from compensation instead of it?

1. Yes
2. No
3. Do not know

QIE5: In case of incapacity to work due to health reasons, would you benefit from paid sick leave?

1. Yes
2. No
3. Do not know

QIE6: In case of birth of a child, would you be given the opportunity to benefit from maternity leave?

1. Yes
2. No
3. Do not know
4. Not applicable

QIE7: Unless there is due cause, could your employment be terminated by your employer without advance notice?

1. Yes
2. No
3. Do not know

QIE8: In case of termination of employment (either initiated by you or your employer), would you receive the benefits and compensation specified in the existing labour laws?

1. Yes
2. No
3. Do not know

Classifying Jobs of Employees as Informal Jobs

1. **“At least one” criterion:** A job is said to be informal if at least one of the responses to questions QIE1 – QIE8 corresponds to “informal job”:

Question	Response category	
	Formal job	Informal Job
QIE1	1	2, 3
QIE2	1, 2	3, 4
QIE3	1	2
QIE4	1	2
QIE5	1	2
QIE6	1	2
QIE7	2	1
QIE8	1	2

2. A minimum (>1) specified set of benefits is not received— can be developed with the objective of analyzing degree of informality