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Monitoring Urban Poverty at the Bangladesh Bureau of Statistics

Design and Implementation Issues for an
Adaptive 1-2-3 Survey

Jean-Luc DUBOIS

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Jean-Luc Dubois¹

¹ Economist DIAL-ORSTOM

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Introduction

The most recent studies in Bangladesh show a stagnation in rural poverty and an increase in urban poverty and inequality. This has two main reasons. First, the migration from the rural to the urban areas, as a result of the insecurity from the lack of land and the regular river floods, tends to increase the number of the extremely poor. Second, growth benefits more the upper classes, which, as a consequence, worsen increases inequality in the income distribution and keeps a great number of people under the poverty line.

The Bangladesh Bureau of Statistics (BBS) is the government official institution producing regular data on these issues to monitor the poverty situation. It launched a series of statistical operations such as the Household Expenditure Survey (HES), the Labour Force Survey (LFS), Local Level Development Monitoring Survey (LLDMS) and the Health and Demographic Survey (HDS) which provide data on the various dimensions of both the rural and the urban poverty. Even the Agricultural Census, presently under implementation, includes, for the first time, an urban module taking into account the home production activities linked to agriculture. But the most interesting instrument is the Poverty Monitoring Survey (PMS) which provides twice a year representative information of the incidence of poverty¹.

The information produced presents some weaknesses. First, there is a permanent bias in favour of the rural areas where poverty is much more frequently studied. The PMS introduced only recently in urban areas the data collection on household expenditures and standards of living. Therefore the existing knowledge on urban poverty, on its origin and its main features, remains quite scarce. Second, most of the samples are either small, as for the PMS, or only focussing on specific categories, like for the LFS. This leads to the risk of insufficient representativity of the urban socio-economic groups mainly concerned by the rise in poverty. This is particularly true, for instance, for the self-employed and their families.

Having in mind to improve this situation in the next few years, the government of Bangladesh expresses to the European Union, through an official request, its desire to benefit from the technical assistance funds, in order to strengthen the urban poverty monitoring capability of the BBS. In September 1995, an identification and pre-appraisal mission went to Dhaka and

¹The BBS publications present results from the current statistical operations (through the Monthly and Yearly Statistical Bulletin, the Agriculture Statistics, the Education Statistics, the Trade and Industry Statistics), the censuses operations (i.e. Agricultural Census 1983/84 and 1997/98, Population census 1991 and 2001, Non-Farm Activities and Disabled Persons 1986), the sample surveys (i.e. HES 1991-92 and 1995-96, PMS 1994 and 1995, LLDMS 1994, LFS 1990-91 and 1995-96, Child Nutrition Survey 1992, Health and Demographic Surveys 1993-94 and 1997-98) and the National Accounts.

suggested to finance a project that would aim, through a set of objectives², at reinforcing the BBS monitoring role.

Two directions for action were suggested. First, to ensure the consistency of all concepts and methodologies related to poverty which are used in the current BBS operations such as the HES, the PMS and the LFS among others. Second, to adapt to the peculiar needs of the Bangladesh an innovative instrument, a three phases survey named the 1-2-3 Survey³, to gather information on employment and informal enterprises issues in urban areas. This should be considered as a pilot experiment aiming at collecting information, in a few selected sites, on a few topics insufficiently covered by the present BBS operations. It would also be an opportunity to improve the data processing and reduce the delays in the production of information.

A second mission went to Dhaka in April and May 1997, with these objectives in mind, to appraise a project entitled "Technical Assistance to the BBS". A series of meetings were held with the directors of the seven BBS wings⁴ and of some specific projects⁵, and the various national and international users of the BBS data. The review of the BBS needs, the discussion about the related administrative and technical consequences, and the visits to the regional and Thana offices lead to a series of proposals to strengthen the BBS capacity to monitor poverty. Among them came the proposal of implementing a survey equivalent to the 1-2-3 survey in the four cities of Dhaka, Chittagong, Tangail and Rangpur.

This survey, as part of the technical assistance project, aims at improving the data collection in the urban areas and the overall production of poverty information. More precisely, it aims at providing representative information on the small and cottage industries in the urban areas and at facilitating their integration into the national accounts system presently under revision. Through the various steps requested for its implementation, this survey helps the BBS to rethink some of its internal data production procedures, such as the relevance of the master sample frame, the decentralisation of the data processing and analysis operations, and the

² The three key objectives of this project are: (i) reinforcing the role of BBS in poverty monitoring ; (ii) Improving the co-ordination between agencies dealing with poverty issues, and (iii) strengthening the monitoring of urban poverty.

³ Initiated through the ORSTOM (French Scientific Research Institute for Development in Co-operation) research on the informal sector in Mexico, the 1-2-3 Survey was successfully implemented in Antananarivo, Malagasy Republic (1995) and in Yaoundé, Cameroon (1993).

⁴ (i) Population & Demographic Survey Wing ; (ii) Research, Training & Sample Survey Wing ; (iii) Industry, Trade, Labour Statistics & National Income Wing ; (iv) Agriculture Statistics Wing ; (v) Industry Statistics Wing ; (vi) Computer Data Processing & Statistical Cartography Wing ; (vii) Reproduction, Documentation & Publication Wing.

⁵ (i) Population Census and Housing 2001 ; (ii) Health and Demographic Project 1993-98 ; (iii) Regular and Continuous Monitoring of Poverty ; (iv) Nutrition Project ; (v) Strengthening the Data Entry System for the Household Expenditure Survey ; (vi) Agricultural Census ; (vii) Use of Agricultural Inputs for the Main Crops ; (viii) National Data Bank.

setting up of an in-depth economic analysis team able to produce official analysis on poverty issues using the data of the various BBS or external surveys,.

The Research Training and Sample Wing is the BBS' wing directly interested by the implementation of such a pilot survey. Through a series of joint working sessions with its staff, at headquarters and in the regional field offices, a comprehensive conceptual framework - linked to the overarching objective of strengthening the BBS capability to monitor urban poverty - was generated as guidelines for the survey design. It focuses, as its objective, on the study of the relation between employment, poverty and the creation of small and cottage industries, either in the formal or the informal sector. Answering to this objective implies to adapt the standard 1-2-3 Survey to the Bangladesh socio-economic environment by changing its structure and various methodologies. This has consequences on the detailed assessment of the costs and on the implementation agenda.

This report presents all issues pertaining to the design and the implementation of this new type of 1-2-3 Survey. The innovative approach required to modify its structure, through a new sequencing of the phases, to draw the questionnaires (including aspects of social capital and subjective poverty), to select the sample (small and cottage industries instead of informal sector), etc. is constantly underlined.

1. The Economic Background

Poverty alleviation is the key moto of the Bangladesh development strategy. The First Five Year Development Plan, published in 1973 just after independence, already focused on poverty reduction and set it as a top priority for the economic policy. But implementing appropriate poverty reduction policies require a good knowledge of the effective level of poverty, its dissemination among the urban and rural categories, and the mechanisms that lead and maintain the households into poverty. These are the issues to be dealt with in the next pages.

1.1. Poverty in Bangladesh

With a per capita GNP of \$230 in 1994⁶, Bangladesh still remains among the poorest low-income countries. In 1992, 47.4% of the population was living below the poverty line⁷. The value of its Human Development Index was 0.368 in 1994, which brings its at the rank 144th, ahead of 31 other countries⁸. This diagnosis is confirmed by the high levels of illiteracy rate (51% of the population in 1995), infant mortality (75‰) and child malnutrition (31% stunting and 7% wasting)⁹.

While considerable progress was made in macroeconomics management since 1971, the year of the Independence, Bangladesh still continues to lag behind other Asian countries. Between 1975, the first year in which the economy returned to a degree of normalcy after the war for Independence, and 1995, the GDP annual growth rate was 4.3%¹⁰ on average. In 1996, it was 5.3% due to the good harvests and an equivalent rate is expected for 1997. In the meantime, the population growth rate, which reached 2.7% till the beginning of the 80s, decreased regularly to 2% in the 90s. This shows the emergence of a demographic transition, the fertility rate decreasing from 7 children per woman in 1970 to 3.4 en 1995. As a result, the average size of the household, both in urban and rural areas became 5.3 in 1995.

Consequently, the annual growth rate in the per capita GDP increased from 1.5% at the end of the 70s to 2.2% in the 90s. Although modest by the standards of the other Asian developing countries, these rates are far greater than the former annual growth rate of 0.7% that the country experienced during the 20 years prior to Independence.

A number of natural catastrophic events, like the famines, are now better mastered. But the numerous population, with high density¹¹ on an exiguous area (147.570 sq km), is regularly threatened, during the May to October monsoon, by storms and floods from the Ganges and the Brahmaputra.

⁶ Ref: *Bangladesh. Annual Economic Update : Recent Economic Developments and Medium-Term Reform Agenda*, July 1996, The World Bank, Washington, 56 p.

⁷ Ref: (i) *Report on the Household Expenditure Survey 1991-92*, November 1995, 290 p.; (ii) *Summary Report of Household Expenditure Survey 1991-92*, February 1995, 22 p. ; Bangladesh Bureau of Statistics, Dhaka.

⁸ Ref: *The Human Development Report 1997 : Poverty and Human Development*, 1997, UNDP, Oxford University Press, 250 p.

⁹ Ref: *Achieving the Mid Decade Goals for Children in Bangladesh*, 1996, BBS and UNICEF, Dhaka, 68 p.

¹⁰ The rate of growth was stronger during 1975-80 (4.2%) and 1990-95 (4.6%) than between 1980-90 (3.4%).

¹¹ The decennial Population Censuses show that population increases from 28.9 million in 1901 to 41.9 in 1951, from 71.5 million in 1974 to 106.3 in 1991. It is estimated at 126.2 millions en 1997 with a density of 860 h/km².

The per capita GDP still remains at a low level, i.e. \$240 in 1995. However, expressed in power purchasing parity, which shows the households' capacity to satisfy their own needs at current local prices, the per capita GDP is 1.380 \$ in 1994, bringing Bangladesh at the equivalent level to Côte d'Ivoire (with per capita GDP of \$660 and \$1.580 in power purchasing parity)¹². The difference between these countries' estimates shows that imports are extremely expensive in Bangladesh, compared to the locally produced goods such as garment, food, housing, transport, etc. This is different for the African economies, especially those belonging to the CFA Franc zone like Côte d'Ivoire. To some extent, this explains the difficulty that they encounter in promoting their own local production.

One may notice, however, the improvement in basic social indicators during the last two decades. Between 1991 and 1995, for instance, the infant mortality rate decreases from 92‰ to 75‰, life expectancy increases from 56.1 years to 58.3, the illiteracy rate decreases from 64.7% to 51.3%, and the gross enrolment rate for the 5-24 from 42.9% to 48.8%.

1.2. Measuring the Level of Poverty

To measure the level of poverty and to monitor its evolution, the BBS conducted a series of surveys. Household expenditure surveys (HES) were carried out regularly since 1973-74¹³, the result of the last one - the 10th round in 1995-96 - are being printed. To complement this periodic operation, a Poverty Monitoring Survey (PMS) was set-up in 1994 to collect information twice a year¹⁴.

Other institutions, like UNICEF for the children and Helen Keller International for the poor, also conduct surveys in relation with the BBS. However, their samples, selected through purposive sampling techniques in poor villages and urban slums, are not representative at the national level. They give, however, a good description of the poverty situations for specific groups of people, but the comparison of their information with those of the BBS remains difficult.

Research centres, such as the Bangladesh Institute of Development Studies (BIDS) or the Centre of Urban Studies (CUS) at the Dhaka University, also carry out, on foreign funds,

¹² Ref: *The World Bank Atlas 1997*, The World Bank, Washington, 48 p.

¹³ Ten annual HES were conducted in 1973-74 (with 11.773 households), 1976-77 (11.520), 1977-78 (28.000 rural households), 1978-79 (17.750), 1981 (9.750), 1983-84 (3.840), 1985-86 (3.840), 1988-89 (5.760), 1991-92 (5.760), 1995-96 (7.440 households).

¹⁴ Implemented in 1994 the PMS conducted three rounds October 1994, April 1995 and December 1995. Only the last one collectd information on both rural and urban areas.

surveys and studies at the national level using their own methodology. This leads to confusion when faced with various results based on different poverty lines. On the other hand, it contributes to emphasise the need to strengthen the BBS in order to make it the only institution able to answer, quickly and with reliable data, to any request on the poverty situation at the national level.

The measurement of poverty is presently done through an absolute poverty line based on food-energy intake which relates the per capita per day calorie intakes, based on food consumption, to the total expenditures, food and non-food included. Two absolute poverty lines are estimated: the first one, for the urban areas, is based on a cut-off point of 2,112 per capita per day calories; the second, for the rural areas, has a cut-off point of 2,122 calories.

A hard core poverty line is also set up at 1,805 per capita per day calories to estimate the number of the extremely poor. Therefore, three categories of households are considered for the analysis: the extremely poor, the poor and the non poor. In 1995, the PMS estimates, in urban areas, the incidence of poverty at 43.6% and of extreme poverty at 18.2%¹⁵. The correlation to the household expenditures, food and non-food included, gives Thaka 710 (or \$17) for the absolute poverty line and Thaka 432 (or \$10) for the hard core poverty line.

These poverty lines are particularly useful to compare the poverty and the extreme poverty incidences between the urban and the rural areas for various periods of time, as shown in the following table.

Table 1 Incidence of Poverty: Percentage of Population under the Poverty Line

Survey Years	Absolute Poverty Lines 2,122 calories per capita per day		Extreme Poverty Line 1,805 calories per capita per day	
	Rural	Urban	Rural	Urban
1973-74	93,0	81,2	49,8	29,0
1981-82	73,8	66,0	52,4	30,9
1983-84	57,0	66,4	37,9	35,5
1985-86	51,0	56,0	22,1	19,2
1988-89	47,8	47,7	29,5	20,5
1991-92	47,6	46,6	28,3	26,1
Oct.1994 (PMS)	43,5	area not surveyed	data non available	area not surveyed
Apr.1995 (PMS)	47,9	area not surveyed	data non available	area not surveyed
Dec.1995 (PMS)	46,8	43,6	data non available	18,2

Source : *Summary Report of Household Expenditure Survey 1991-92*, February 1995. Bangladesh Bureau of Statistics, Dhaka, 22p.

¹⁵ Ref: *Poverty Monitoring Survey in the Urban Areas December 1995 : Summary Results*, 1997, Md. Delwar Hossain, Communication at the CIRDAP-BBS National Seminar on Poverty Monitoring 30 April 1997, Dhaka, 13 p.

This table which uses the data from all the HES and PMS rounds between 1973-74 and 1995 shows the decreasing trend for poverty in the long run; an equivalent tendency appearing for the extreme poverty.

Other studies disagree with these conclusions¹⁶. They indicate that the decline in poverty is not proved since there is no regular decrease over the whole period, since the measurement errors are able to explain these fluctuations¹⁷. In fact, the decline is obvious for the period between 1973-74 and 1985-86. After these dates the phenomenon is less clear especially for the extreme poverty. Part of this decline in rural areas may be explained by the migration of the poorest households toward the urban areas where they contribute, on the other hand, to the increase of the extreme poverty.

In the mean time changes in the urban income distribution occurs. The increase in the Gini ratio from 0.37 in 1985-86 to 0.40 in 1991-92 at a time where urban areas benefited the most from the last years growth demonstrates a failure in the redistribution process of income. This situation tends to slow down the long term decline of poverty.

Another approach, more qualitative, uses indicators on the standards of living such as the type of dwelling, the consumption patterns, the access to water and energy, the access to health and education services, employment opportunities, assets, social relationships, etc. The Local Level Development Monitoring Survey focuses the most on this basic needs approach of poverty¹⁸, although nearly all other national surveys collect information on some of these topics. The corresponding indicators, estimated for the various socio-economic groups, are usually presented through poverty profiles¹⁹ which allows a comparison between the differences in standards of living of various categories. For instance, the PMS shows, in its December 1995 results, that the poorest people ate mainly rice with a little fish, lived in houses with no sanitary equipment and straw or reeds roofs, drank water from public wells, etc. It also tells that the poorest households' heads in urban areas are labourers working in small production units (carpenters, potters, weavers, blacksmiths, hawkers, etc.) or in trade

¹⁶ A recent survey from the BIDS, using an other poverty line suggests modest progress in rural poverty reduction. Poverty would have declined from 57.5 % in 1987 to 51.7% in 1994 and extreme poverty from 25.8% to 22.5 %. Ref : (i) " Rural Poverty in Bangladesh : Trends and Determinants", 1992, M. Hossain and B. Sen, *Asian Development Review* n°10 ; (ii) " Monitoring Adjustment and Urban Poverty in Bangladesh : Issues, Dimensions, Tendencies", 1993, B. Sen and Q.T. Islam, in *Monitoring Adjustment and Urban Poverty in Bangladesh*, Dhaka.

¹⁷ For instance a survey, financed by the Asian Development Bank and conducted by the CUS on a sample of 3,000 urban households at the end of 1995, shows that 61.3% of urban households are poor and 40.2% extremely poor.

¹⁸ Ref: *Analysis of Poverty on Basic Needs Dimensions*, Vol.1, December 1995, Bangladesh Bureau of Statistics, Dhaka, 123 p.

¹⁹ Ref: *What is a Poverty Profile*, 1992, Christiaan Grootaert, Technical Note, SDA Project, The World Bank, 4 p.

and transport services such as taxi-scooter drivers, rickshaw-pullers, push-car, van drivers, etc..

1.3. A Focus on Urban Poverty

Concerning the urban future, the CUS provides rough estimates of the poverty incidence for the years 2000 and 2010. They give 45% and 40%, respectively, for the absolute poverty, and 25% and 20% for the extreme poverty. This shows a decrease in relative terms. However, since the urban population may increase from 37.3 million to 56.8 million between these dates, the number of poor will shift from 16.8 to 22.7 million, and the number of extremely poor from 9 to 10.8 millions²⁰. Therefore, in the future, the decrease of urban poverty in relative terms may be associated to an increase in absolute terms.

The tendency to urbanisation is, in Bangladesh, a long term trend. In 1991, the Population Census gave 22.5 million in urban areas out of 111.5 million for the whole country. For 1995, it is estimated at 27.6 million out of 122 million. Therefore, the share of urban population shifts from 5% in 1961, to 20% in 1991 and 23% in 1995. Recent forecasts estimate this share at 30% for 2010. This implies that the two main cities, Chittagong and Dhaka, will grow from 6.2 and 7.6 million in 1995, to between 12 and 15 million in 2010.

The causes and processes generating the urban poverty, moderate or extreme, and the rise in the income inequality have not been yet systematically studied and are much less understood than for the rural poverty. Two main reasons explain the increase in urban poverty. The first one relates to the migration from the rural areas. It concerns mostly the landless and the assetless households who cannot earn a living and the farmers whose dwellings are regularly threatened by the floods. Due to their lack of qualification, these migrants have difficulties to find employment in a new and hostile environment and contribute to the increase of the urban extreme poverty. The second one relates to the inadequate redistribution of the urban growth benefits to the poor, due to the lack of job opportunities and the insufficient coverage of the existing social safety nets implemented with the help of the international community.

Little information presently exists on these two issues. Therefore, there is a need for in-depth investigation on the situation and the causes of the urban poverty, and on its link with the income distribution and the migration issues. The 1995-96 HES and the PMS have already

these objectives in mind, but their samples are relatively small for a detailed analysis of what is presently happening in the urban areas.

1.4. Poverty is Related to Unemployment

In urban areas, poverty is mainly related to the issue of finding a job. This is not an easy matter since the rural migrants looking for employment opportunities are competing with the new entrants on the labour market resulting from the natural growth of the urban population. Consequently, the rate of unemployment and underemployment remains high. In the meantime, the opportunities in the public service and in the medium and large companies, which provide stable and well-paid jobs, are scarce.

The 1995-96²¹ LFS²² shows that the working age population - 10 years and over, i.e. the labour force age population - is 20.1 million in urban areas, and the economically active population, which does not include housewives and students, disabled and retired persons, etc., is 10.2 million. Since the public service, the state-owned enterprises, the industrial private sector do not create enough opportunities to absorb the labour force annual increase, the rate of unemployment and underemployment remains at respectively 5% and 20%. This is even the case for the educated youths among which 8% are unemployed.

Data reveals that the average number of economically active persons per household stands around 2, with a distribution between men and women of 1.45 and 0.55 respectively. Therefore, in half of the households, the spouse is only devoted to the house activities and the household 's head is assisted by an other man²³. Out of these 2 persons only 0.6 receive wages or are salaried.

In this context, self-employment and cottage industries remain the only solution to generate the minimum income required to survive. In 1995, 36.7% of urban people aged 15 and over where working in such a way mainly for petty trade, transportation and services.

Self-employment, by definition, concerns the individuals who work for their own household non-farm enterprise for profit or family gain, often without specific location, selling products

²⁰ This is the case for countries with a large young population base. India, for instance, was 353 million in 1947, out of which 75% under the poverty line, i.e. 265 million. In 1995, the population is 950 million with 30% under the poverty line, i.e. 285 million. The decrease is important in relative terms but there is an absolute increase.

²¹ Ref: *Report on the Labour Force Survey in Bangladesh 1995-96*, December 1996, Bangladesh Bureau of Statistics, Reproduction Documentation & Publication Wing, Secretariat, Dhaka, 195 p.

²² Seven LFS were conducted in 1983-84, 1984-85, 1985-86 and 1987-88 on 6.000 households, in 1989 and 1990-91 on 9.000 households, en 1995-96 on 15.000 households.

through petty trade activities or services such as the rickshaw drivers, the push-carts, the shoe cleaners, the sugar cane juice seller, the public writers, etc. Self-employment is usually considered as part of the cottage industries, but for analytical reasons in relation with the poverty situation of a household, it is necessary to make a distinction between the two concepts. A cottage industry is a unit, engaged either in manufacturing or servicing, whose investment does not exceed Tk 500,000, and is carried on by an individual alone or with the help of family members working whole time or part time. The cottage industries are usually run within the household, whereas small industries are established outside the household. A small industry is an industrial undertaking engaged either in manufacturing process or service activity, within a total investment between Tk 500,000 and Tk 30,000,000.

The number of cottage industries and small enterprises increased strongly during the past decade. Statistics from the Bangladesh Small and Cottage Industries Corporation shows that the number of cottage industries increases from 321,743 units in 1980 to 405,476 in 1991. Tailoring industries are the most frequent. Next come the bamboo and cane products, the salt producing units, rice husking, pottery, wood products, mat/reeds, blacksmiths and goldsmiths. Garments and auto repair allow the most important profits. In the meantime, the number of small industries increased from 24,005 to 38,294 units. The manufacturing of food and allied products emerges as the main activity in the country. Rice mills and biscuit bakery figure also in large numbers, followed by textile, wearing apparel and leather industry²⁴. However, reliable information on the importance of self-employed activities is still missing. The BSCIC includes the corresponding statistics into those of the cottage industries and the BBS through the Labour Force Survey does not collect representative information on this topic.

On the analytical side, the link, between the level of urban poverty and the development of self-employment and cottage industries needs to be studied. Since both of them, and particularly self-employment, are often the ultimate solution for the poorest urban segments of the population to escape from poverty. Unfortunately most of these jobs are unstable and brings very low revenue. For instance, the PMS shows, in the December 1995 round, that the poverty incidence was higher in the urban households whose heads were labourers in the petty trade group including handicraft production and transport.

²³ This information is useful to estimate the length of interview in a household for the first phase devoted to employment and individual activities.

²⁴ The Bangladesh Small and Cottage Industries Corporation (BSCIC) conducted country wide surveys in 1961, 1980, 1987-90 and 1994 and produced regular reports on the situation.

In this context, it is difficult for them to find ways of improving the productivity in order to increase their revenues. There is a risk that maintaining such activities places them in a permanent survival strategy that brings the whole household into a poverty trap. This situation raises several questions concerning the future of these activities. Are they only part of a short term survival strategy or will they favour the emergence of new opportunities in the long run? In other words, are self-employment and cottages industries a first step necessary to promote qualified manpower and small enterprises, that would later generate jobs and added value ?

Answering to these questions requires, first, to examine what the reasons for generating self-employment and cottage industries activities; second, to study the chances of having these activities transformed into small and middle size enterprises; and third, to review the existing financial and human constraints that may block such a long term process. These studies could also underline a series of specific life patterns in the employment opportunities and the income-generating activities of the households. For instance, investigating a sample of small and cottage industries would check if really a "middle is missing " in the range of existing enterprises and if all activities have equal chances to develop in the future²⁵.

Among the small and cottage industries, a part is considered as belonging to a so-called "informal sector" since they do not follow the official management rules concerning the trade registration, the payment of taxes, the recruitment of personnel, etc. They are part of a kind of "shadow economy" which produces goods and services, employs thousands of people and generates part of the national added value without being considered in the official data. But since the informal sector is not recognised as such, which is partly due to the difficulty in defining it precisely²⁶, its contribution to the whole economy is not yet integrated in the current value of the GDP.

For this reason, a better knowledge of the informal sector's contribution to the GDP, through the revision of the national accounts, gives the opportunity to consider the creation of small and cottage industries in the design of the public policies which aim at poverty reduction in the urban areas.

²⁵ Ref: Etude des trajectoires de microentreprises dans les pays en développement : aspects théoriques, méthodologiques et premiers résultats d'enquêtes sur échantillon constant, 1997, Sarah Marniesse, DIAL, Paris, 57 p.

²⁶ Ref: "Pour une nouvelle définition du secteur informel", Morrisson Christian et Mead Donald, 1996, Revue d'économie du développement 3/1996, PUF, Paris, pp.3-26.

2. The Need for an Appropriate Approach

Keeping in mind the overarching objective of poverty alleviation, focusing on the issue of poverty and unemployment in urban areas, and on the development of small and cottage industries - whether they belong to the "informal sector" or not - there is a need to understand how can all these issues be related together and how people can at the same time escape from poverty and participate in the development of an industrial network. The corresponding rationale is part of the substance of a conceptual framework.

It requires also the use of an appropriate instrument able to collect information on poverty, employment and enterprises for the corresponding empirical analysis. A particular survey, the 1-2-3 survey, which has already proved, through series of analysis²⁷, to be able to understand in urban areas the relation between employment, the informal enterprises and the consumption of products from the informal sector can be used as a basis for the design of a survey adequate to the Bangladesh needs and socio-economic environment.

The 1-2-3 Survey has the advantage of being easier to manage than the usual household expenditure related surveys, like those of the National Household Survey Capability Program (NHSCP) of the United Nations and Living Standard Measurement Study (LSMS) of the World Bank, since it uses three phases in a sequence, each of them focusing on a specific topic. However, its design imposes, first, to refer to the guidelines provided by the conceptual framework and to innovate through the various implementation steps such as the development of the questionnaire, the field operations, the data management, and so on.

2.1. The Conceptual Framework

The conceptual framework aims at defining, through an appropriate rationale, the needs for policy relevant information and at linking them to the statistical objectives of the survey. It therefore implies a series of choices and decisions concerning the survey structure and the related methodologies.

²⁷ Ref : *Conditions d'activité de la population de Yaoundé : principaux résultats, enquête 1-2-3 phase 1*, Juin 1993, 17 p. ; *Le secteur informel à Yaoundé : principaux résultats, enquête 1-2-3 phase 2*, novembre 1993, 29 p. ; *Consommation et conditions de vie des ménages à Yaoundé : principaux résultats, enquête 1-2-3 phase 3*, décembre 1993, 25 p. ; DIAL-DSCN, Paris-Yaoundé.

L'emploi, le chômage et les conditions d'activité dans l'agglomération d'Antananarivo, Enquête 1-2-3 phase 1, juin 1995, 31 p. ; *Le secteur informel dans l'agglomération d'Antananarivo, Performances, Insertion, Perspectives*, Enquête 1-2-3 phase 2, 49 p. ; *La consommation et le rôle du secteur informel dans la satisfaction des besoins des ménages dans l'agglomération d'Antananarivo*, Enquête 1-2-3 phase 3 ; Projet MADIO, Antananarivo.

The Poverty Reduction Objective

The Bangladesh Government launched in the early 1990s a comprehensive economic reform programme aimed at opening up the country and establishing a liberalised, market-based, and private sector-driven economy with substantial support from the international community. This implies reforming the public service, privatising the state-owned enterprises, improving agriculture productivity and promoting a dynamic private sector²⁸. The objective is to remove bottlenecks through an appropriate fiscal legislation and a more efficient banking system, in order to create an environment favourable to the private sector development. And consequently attract international private investors. The recent dynamism shown by such sectors as the garment, the frozen food, the fisheries and leather industries is a testimony of what could be done.

However, while it is recognised that the development of the private sector will generate employment opportunities, little is said on the mechanisms that could be used to integrate the poorest segment of the population into the labour market and to let them participate in and benefit from the growth. This is still an issue that needs to be addressed to bring new grounds to the present national poverty alleviation strategy. This latter emphasises three direction for action:

- (i) the generation of a labour-intensive economic growth based on the job creation in the micro and small-scale enterprises, with credit facilities, technical assistance and training to increase productivity;
- (ii) the development of human resources through food security and easy access to health and education; and
- (iii) the design of safety nets for the poorest, and the most vulnerable, through food for work, small credit and public works.

The first point of this strategy leads to the design of policies oriented toward the small and cottage industries since they present a lot of advantages in terms of employment and income. They create immediate gainful opportunities with relatively less investment per unit of employment (and with a short gestation period) than the big companies. They answer to substantial parts of the increasing demand for consumer goods at low prices. They exploit skills which are often unused or under-utilised. Finally, they contribute directly to the struggle against poverty, partly by removing the inequality of the income distribution.

For these reasons, a greater importance should be given to development strategies for the small and cottage industries sector. Moreover, it is also worth noting that a country considered as poor according to his GDP per capita, but having a comprehensive network of small and cottage industries, will be better ranked in terms of power purchasing parity, due to its capacity of satisfying the local demand at low production cost.

However, a distinction has to be made between those, unemployed or underemployed, who conduct survival strategies, and those having a wider vision of their role in the labour market due to their large human and social capital. In the former case, policies focus on improving the basic income by generating new employment opportunities. In the later case, they provide incentive to reorient the self-employed and cottage industries entrepreneurs towards the development of small export industries.

Since part of these industries belongs to the informal sector and therefore escapes to any measurement, their importance is therefore underestimated. This has several serious consequences. First, the GDP and its growth rate are regularly underestimated. Second, the social issue of employment is not treated correctly. Third, scarce funds are allocated to enhance the development of the small and cottage industries. Few actions favour the integration of the informal sector into the regular industrial sector.

Through appropriate policies, it is possible to keep the innovative capacities of the informal sector and its ability to integrate newcomers on the labour market, and to devise, according to their needs, flexible mechanisms - such as the creation of self-employed networks, production co-operatives, enterprises unions, production chains, etc. - that would promote its development and transform itself, through growth and duration, into formal industries and services.

Therefore, the following key issues need to be addressed when designing poverty alleviation policies: (i) the promotion of self-employment and the creation of cottage industries as a way to escape from poverty, (ii) the capacity of households to develop their own businesses from self-employment to small industries, and (iii) the effective contribution of small and cottage industries to the National Income²⁹. In more general terms, it implies to assess the link between unemployment, poverty, and micro-enterprises, informal or not, in urban areas. Most

²⁸ Ref: *Bangladesh. Annual Economic Update : Recent Economic Developments and Medium-Term Reform Agenda*, July 1996, The World Bank, Washington, 56 p.

²⁹ This is a contribution to the BBS project "Strengthening the National Accounts" which is partly financed by the Asian Development Bank.

of the data collected through the regular households surveys have scarcely been designed or processed with that objective in mind.

The Need for Relevant Information

The Bangladesh Small and Cottage Industry Corporation (BSCIC) is the official body which monitors the development of self-employment, cottage industries and small enterprises. It produces statistics on the types of enterprises, their activities and the number of people employed. However, the numbers of the self-employed and, to a certain extent, of the cottage industries appear underestimated and no disaggregation is made between those belonging to the informal sector and the others. Furthermore, it is not possible to relate the employment issues and the development of the small and cottage industries to the poverty issues.

On the other hand, the BBS, through its various operations collects information on employment and poverty, but the link with the small and cottages enterprises is not easy to establish because either the adequate data are not collected, or the sample is too small for specific analysis in urban areas (e.g. HES, LFS and PMS).

There is, consequently, an opportunity to design and implement an appropriate survey that could fill this gap and be tested, as a pilot experiment, on a few urban areas where self-employment and cottage industries are predominant. It should be an innovative tool that complement, for a short period of time, the existing surveys in order to test new methodologies and examine how they could be further integrated in the overall information system. This justifies the decision to give to the BBS the means of promoting a new operation, and, by this way, improve the production of timely reliable data.

In this context, the 1-2-3 Survey is able to bring a possible answer since its objective is to collect data on urban areas where small businesses are spreading over, with the objectives of studying the distribution of employment, the distribution of income and the emergence of self-employment and cottage industries. Focusing on a sub-sample of entrepreneurs, it collects data on their businesses thus providing information for the system of national accounts (such as estimates of production, inputs, added value, investment, etc.) and for the policy makers (the constraints to job creation, credit, and the capacity for development of small industries, etc.).

However, the survey should be perceived as a "light" or small scale survey, a complementary tool to what is existing. It creates a "zoom effect" on a particular topic : the issue of self-employment and cottage industries, and on a particular relation : the link between the household's fight against poverty and its ability to generate income through micro-enterprises.

Through this data, it will be possible to study the life pattern of a sample of cottage industries and to conceive various policy interventions. For instance, the access to small credit for the self-employed and the cottage industries, the access to the information on market opportunities for the low-paid labourers, the organisation of training sessions, etc., in order to facilitate the switching from self-employment to cottage industries, and then to small enterprises. This is one of the best ways to fight against unemployment in urban areas and therefore to alleviate poverty.

2.2. An Adaptation of the 1-2-3 Survey

The standard 1-2-3 Survey has not the measurement of poverty as a priority objective. It aims at understanding employment issues, at relating them to the informal sector and at measuring the consumption of the informal sector's products. But this survey has a very interesting characteristic: it relates information on enterprises to those in employment through the selection of individual entrepreneurs. Therefore, by adding a link to poverty through an appropriate module and by focussing on the small and cottage industries instead of the informal sector alone, it is possible to satisfy the information needs of the Bangladesh policies' design.

Three features characterise a 1-2-3 Survey: it is a light household survey, it is conducted through a sequence of three phases related one to the other by the sample design, and (iii) it focuses on the urban areas. The Bangladesh survey keeps these characteristics, even though important changes in structure and methodologies are made.

A Light Household Survey

Even if it gathers information on enterprises, the 1-2-3 Survey is a household survey. It is through a household sample that information on employment and poverty is collected and through a sub-sample of household members entrepreneurs that the information on enterprises is obtained.

The size of the household samples varies from one town to the other according to its size and to the range of its activities: for instance, 5,000 households in Dhaka, 3,000 households in Chittagong, 2,000 in Tangail and 2,000 in Rangpur. These sample sizes are compromises between the search for representative samples, for adequacy to the socio-economic environment and for easy management of the survey teams.

To make the survey easier to manage for data collection and to control for data quality, it was divided into three complementary phases. Therefore short questionnaires could be designed, thus decreasing the length of each interview which is kept at about one hour and a half including transportation.

A Three-Phase Survey

To satisfy the objective of collecting data on employment, poverty and small and cottage industries without increasing the size of the survey and the amount of information to be processed, the Bangladesh survey is broken down into three sequential phases, each of them focusing on a specific topic. This is the main difference from the standard 1-2-3 Survey.

The first phase on "Employment" focuses on the activity of the household members to estimate the rates of activity and unemployment at the national level, the characteristics of the working population (employees vs. entrepreneurs, wage earners vs. unpaid family helpers, etc.) and its distribution within the activity sectors (public vs. private, small and cottage vs. medium and large industries). A filter is created, while processing the data, to identify the household members who are entrepreneurs of small and cottage industries, including the self-employed, and are to be investigated during the third phase. This filter is used during the third phase to classify all enterprises according to their size, and through relevant criteria such as the number of registration, to distinguish those belonging to the informal sector.

The second phase on "Poverty" has the objective of measuring the standards of living. It collects information on the expenditures and the satisfaction of basic needs (health, education, housing, etc.) on the same sample of households than the first phase. It has to be carried out just after the employment one to bound the recall period for the household expenditures. Therefore the recall period boundaries correspond to the dates of the first and the second phase interviews. During the economic analysis, reference to the usual BBS poverty lines based on the per capita consumption distribution, will help define the poverty classes. This information is crossed with the one of the previous phases to relate unemployment to poverty and employment to the level of living.

The third phase on "Cottage industries" concentrates on the sub-sample of entrepreneurs, self-employed, heads of cottage and small industries selected at the end of the first phase. It collects data on the management and the functioning of their businesses (manpower structure, capital and investment, relations to the various markets, added value and capacity to generate income, main development constraints and perspectives). This information is crossed with the one of the previous phases to relate to both unemployment and poverty. Through an

appropriate definition of the informal sector its contribution to the economy could be estimated by referring to the National Accounts.

This survey differs from the standard 1-2-3 Survey for several reasons. First, it focuses on the small and cottage enterprises as a whole instead of considering only the informal sector. Second, it considers the issue of poverty as a priority which leads to the collection of information on all the household expenditures instead of the consumption of informal products on a sub-sample of households. Third, it links the poverty issue to the creation of enterprise as a way to escape from unemployment, therefore imposing the poverty phase to rank second.

Therefore the enterprises are disaggregated by type (i.e. self-employment, cottage industries, small industries, medium and large enterprises) and size (with 10 persons and over as the threshold between cottage and small enterprises) instead of being selected through informality criteria. However, it is easily possible to assess to which extent, these enterprises belong to the informal sector by testing a few criteria such as having a trade registration number, written accounts, a social security number, etc., once agreed upon the set of criteria. Using the data collected during the third phase other analysis can be conducted such as the estimation of the likelihood to leave the informal sector when the size or the duration of activity increase.

A detailed agenda presents the various phases of the survey and the corresponding implementation steps over a one year period (see annex 2). It covers and explains the costs related to the personnel, equipment, transportation, printing and data processing as well as for the technical assistance, and the training and seminar organisation (see annex 3 and 4).

An Urban Survey

The 1-2-3 Survey was originally conceived for the urban areas where most of the informal activities are, in relation to unemployment and underemployment. Therefore its adaptation answers automatically to the objective of urban poverty monitoring, by focusing on the urban areas where the incidence of poverty is rapidly increasing and where the self-employed and cottage industries thrive.

Following the advice of the BBS senior officials four towns were selected. Dhaka and Chittagong, were chosen among the four metropolitan cities and Tangail and Rangpur among the fourteen secondary cities for the following reasons.

Dhaka, with a population of 6,163,000 in 1991 and an estimated 7,631,000 in 1995, is the main city and the capital of Bangladesh. It stands out in all respects : the highest population

increase (24%) over the 1991/95 period, a high incidence of poverty (55%³⁰), and 18,654 cottage industries and 5,119 small industries in 1991.

Chittagong is the second largest city and an important harbour. With a population 5,744,000 in 1991 and an estimated 6,194,000 in 1995, the increase in population was 8% over this period. The poverty incidence is about 68%, with 21,558 cottage and 4,292 small industries in 1991.

Tangail is one of the fourteen secondary cities. It was chosen due to its present position as a trade centre between Dhaka, the right bank of the Jamuna River and India. The new bridge over the Jamuna River, presently under construction, will help increase economic exchanges between the two sides of the river, thus leading to changes in the standards of living of the population. Its population was 3,108,000 in 1991 and is estimated at 3,318,000 in 1995, showing a total increase of 7% over the period. The number of cottage industries was 6,324 and of small industries 730 in 1991. The poverty incidence is presently estimated at about 55%.

Rangpur is an other secondary city. Situated in the North East of Bangladesh, it was selected because of its position not far away from the Indian border, through which basic inputs for cottage and small enterprises are crossing. Its population was 2,269,000 in 1991 and is estimated at 2,436,000 in 1995, corresponding to an increase of 7% over the period. The number of cottage industries was 5,197 and of small industries 430 in 1991. The poverty incidence is presently estimated at about 55%.

2.3. The Bangladesh Bureau of Statistics

In the field of poverty measurement much is done either by the BBS or by other institutions. A series of relevant studies was published and permanent data collection operations are being conducted.

For the BBS, this includes nation-wide operations such as the HES, the PMS, the LBS and the future Agricultural Census, all of them being able to link, to a certain extent, the issues of employment with those of poverty. For the other institutions, the focus is mainly on rural areas (for instance, the Analysis of Poverty Trends Project of the BIDS, the Nutritional Surveillance Project of Helen Keller International, Goal Monitoring Survey of UNICEF and

³⁰ According to the *Study of Urban Poverty in Bangladesh, Final Report*, Asian Development Bank, May 1996, which is based on a poverty line of Tk 3,500, corresponding to a minimum calorie intake of 2,112 Kcal. However, this poverty line (footnote continued)

BBS, etc.) and on basic needs : malnutrition and food security, access to health and education. Little information is now being collected on urban areas on income and activities (e.g. Helen Keller International).

Most of these samples are either rather small (e.g. HES, PMS and LLDMS) or not representative since they focus on specific areas (e.g. Helen Keller International, UNICEF and BIDS) or combine random and purposive sampling techniques like the LFS. All of them do not consider unemployment as the focus point and the key factor leading to poverty.

The 1-2-3 Survey brings new insights and the BBS plays a key role in its development and implementation through its Research, Training and Survey Wing. The results produced complement, particularly for urban areas, the data on poverty already collected by the HES, the PMS and the LFS.

The regional and thana officers are the BBS staff in charge of supervising the field operations in the four towns. Computer equipment and technical assistance are provided to their teams. Close collaboration with the other wings and several projects of the BBS insure the efficiency for both the production of the data and their dissemination. These include, for instance, the Computer and Data Processing Wing for data treatment, the Industry Trade Labour Statistics and National Income Wing for updating the National Accounts, the Reproduction Documentation Publication Wing for the dissemination of the results through reports and seminars, etc.

Besides the objective of producing timely reliable information on the link between unemployment, poverty and cottage industries, the 1-2-3 Survey also contributes to the strengthening of the BBS capacity for data collection and analysis. This is done by proposing innovative approaches in sample design and data processing, and organising training sessions at each phase of the survey to explain its objectives, the methodology used and expected analysis. The technical experts involved in any of the various phases of the survey will have to devote an important part of their time for the training of the BBS' staff through on-the-job training activities as well as for in-office training sessions.

The BBS is the first beneficiary of this operation. First, the implementation of the 1-2-3 Survey complements the already existing operations through its "zoom effect" on some urban areas by focusing on employment, poverty and cottage industries. All methodologies developed are consistent with the current concepts and techniques used by the BBS for

differs from the official one calculated by the BBS through the Poverty Monitoring Survey.

sample design, poverty definition, self-employment, cottage industries, national accounts, etc., in its current surveys such as HES, PMS, LFS.

Second, the survey, as a pilot experiment, brings and tests innovative approaches in the survey methodology that could help the BBS in its permanent effort to increase efficiency in the production of reliable data. Two examples are the use of satellite remote sensing pictures for stratified sampling procedures and the decentralisation of data processing and analysis at the regional level.

Besides the BBS itself, all users of its data will benefit from the production of new and more precise information highlighting the link between poverty, employment and cottages industries in the urban areas. These include the planning Departments and Divisions in the public service, the University and its research centres, private and public research institutes and all donors, bilateral and multilateral, involved in the design of economic policies and in the implementation of development projects.

The survey is a pilot experiment which will last one year on the four towns of Dhaka, Chittagong, Tangail and Rangpur. Even if it brings new information on the joint issues of unemployment, poverty and cottage industries, it can not really monitor these issues on a long-term basis due to its short duration.

At the end of the project, an evaluation mission, including a specific evaluation of the 1-2-3 Survey, will debate the further steps. Its assessment will be based on the quality of the output - publications and seminars - and on the cost effectiveness of the data produced, as estimated by discussion with the various users. If the evaluation proves to be positive, the project should be pursued. Several alternatives related to the key objective of urban poverty monitoring have to be examined: either to extend the survey to a sample of towns representative of all urban areas in order to get representative results at the national level, or to conducted it again on the same sample in order to constitute a panel for the analysis of the enterprises behaviour. In both cases, the 1-2-3 Survey will have to be closely related to the PMS.

The European Union, which wants to play a key role in poverty monitoring, could confirm its interest in this topic by giving to the BBS the means to transform this pilot experiment into a regular poverty monitoring system on urban areas.

2.4. Implementation Issues

As for any survey, a series of steps is required to implement the 1-2-3 Survey. These includes the selection of the sample, the development of questionnaires, the planning of field

operations, the data processing, and the writing of the reports presenting the final results. A few issues pertain to each of these steps.

The Sample Design

Since, the 1-2-3 Survey is a household survey, a representative sample of households is selected in each town during the preparatory phase. This sample is used during both the first and the second phase to apply respectively the employment and the poverty questionnaires. For the third phase, a specific sub-sample of entrepreneurs, members of the previous households, is extracted from the household sample.

There is presently in Bangladesh no updated household sampling frame, since the last population census was conducted in 1991 and the current master sample (i.e. the Integrated Multi-Purpose Sample) did not take into account the recent sprawling of the urban areas. Therefore, the use of a two stages procedure for sampling remains the best way to select a representative sample of households.

Using a Probability Proportional to Size (PPS) procedure, a stratified sample of PSUs (Primary Sample Unit) is selected from the set of existing urban PSUs which covers all the municipality areas. The areas population density and the types of housing, which proxies the distinction between slums and residential areas, are the best stratification criteria. The listing (i.e. a small census) of all the households within each selected PSU constitutes an exhaustive sampling frame out of which a stratified sample is drawn through systematic sampling procedure. For the stratification, households are ordered, after the listing and before the selection, according to the activity of their head using the relevant variable gathered during the listing operation.

Cluster sampling of the households is not required since the distances between two of them in the urban areas is easily covered by the traditional means of transportation such as rickshaws or baby-scooters. A cluster effect appears at the first stage due to the PSUs selection. But stratification procedures at both the first stage - for the PSUs and based on the population density or the type of housing - and at the second stage - for the households and based on the head's activity - will compensate the cluster sampling error.

The constitution of a sampling frame of PSUs requires a clear knowledge of the municipality borders and of the number of PSUs within these borders. The PSUs remain related to the census enumeration areas and the administrative mahallahs. Since the municipalities are regularly evolving in density, it may be necessary to look for recent aeroplane or satellite pictures (using, for instance, remote sensing from the SPOT and LANDSAT satellites) to

update the present maps and decide what are the enumeration areas and administrative mahallahs to consider.

Consequently, five operations are carried out to select the household sample of the first and the second phase: (i) the mapping of the municipality area and its stratification according to the population density and housing criteria, (ii) an update of the PSUs sampling frame following these criteria, (iii) the selection of PSUs through a stratified sampling proportional to the size, (iv) the listing of the households within each PSU selected, and (v) a stratified systematic sampling of the households through this list.

For the third phase, the largest definition of the activities and the type of entrepreneurs is considered to obtain a correct sub-sample of households' members who are petty entrepreneurs. It includes the self-employed and the cottage industries with a size less than 10. However it may interesting for analytical purposes to consider the small enterprises which have developed between the first and the third phase, even if their size is higher.

The sample sizes are 5,000 households for Dhaka, 3,000 for Chittagong, 2,000 for Tangail and 2,000 for Rangpur are optimal. They are big enough to give good estimates of the available activities and of the income distribution, and to minimise the non-sampling errors, particularly those related to the management of large survey teams. Considering that the average size of a PSU is 250 households, out of which 20 are selected for interview, the number of PSUs required is 250 in Dhaka, 150 in Chittagong, 100 in Tangail and 100 in Rangpur. This allows a coverage wide enough in the present municipality areas.

In Tangail and Rangpur, since small enterprises are in insufficient numbers, it is difficult to have a representative sample of all activities. However, this category should still be considered for analytical purposes, i.e. to examine its specificity and to link its development with the cottage industries.

The Development of the Questionnaire

The whole household Dossier is composed of 36 questionnaires and divided in four parts (see annex 1). The first part includes information on the location and the team survey, on the set of questionnaires and the listing form. The listing form is used during the preparatory phase to list all households belonging to the PSUs selected and collect some basic information on them in order to constitute a sampling frame. This information concerns the serial number, the dwelling's address, the name of the household's head, the household's size (male, female, total) and the main occupation of the head. It is be used to stratify the sample and to check that the household is still in the same location at each phase.

The three other parts refer to each of the field phases. Specific questionnaires are designed according to the main topic. For the first phase, focusing on employment issues, questionnaires 4 to 16 collect information on the household's members, on their main occupation, secondary activity, unemployment, job history, etc..

For the second phase, focusing on poverty 17 to 27, questionnaires collect information on consumption including expenditures on goods and services, amenities, consumption of own production, gifts in kind, durable goods, etc., on the satisfaction of their basic needs like access to health and education and on their own perception of poverty.

The third phase, on small and cottage industries, collects information through questionnaires 28 to 36 on the self-employed entrepreneurs, the cottage businesses and the small enterprises, using the sub-sample of entrepreneurs selected after the first phase. Information relates to the location of the activity, the main characteristics of the unit, labour force, production, inputs and labour costs, customers and providers, equipment and investment, constraints and prospects.

These questionnaires are provided in a standard model (on paper and diskette) in order to facilitate their adaptation to the concepts and definitions currently in use in Bangladesh. Therefore, they require an in-depth review by the management team, for their content, format and structure, during the preparatory phase to ensure their relevance to the Bangladesh socio-economic context.

Once the final draft questionnaire is ready, a training session is organised in Dhaka for all the BBS staff involved in the supervision of the field operations (i.e. management team and headquarters staff, regional and thana officers for the four survey teams). It focuses on two points : the presentation of the objectives of the survey and of the three-phase questionnaires, and a field test to assess the relevance of the questionnaires and check the efficiency of the supervisors staff. A sample of 72 households randomly selected in Dhaka is quite enough to administer the field test. Following it, a revision of the questionnaire is organised to produce the printed final version.

Copies of the printed questionnaires are sent to the regional offices in numbers corresponding to the size of each sample. However, the pace of their production is related to the sequence of the three phases. While 12,000 copies for the first and for the second phases can be quickly printed, the number of questionnaires required for the third phase can only be available after the first phase analysis, to know the size of the entrepreneurs' sample to be surveyed.

A manual for the enumerators presents the basic concepts and definitions used, the structure of the questionnaire to ensure a clear understanding of the questionnaires. It also explains the survey objectives and the field procedures .

At the beginning of each phase, once the corresponding questionnaires are printed, a training session is organised by the BBS regional supervisors for the local enumerators recruited for the field operations. They learn how to use the questionnaires to collect data, to find answer to their questions in the manual, and to proceed within their team.

Conducting the Field Operations

At headquarters a survey management team is set composed of BBS staff and experts. It includes the project director, the survey manager, the data manager and the four regional field managers from BBS. Some national consultants, either the residential technical assistant or the experts coming on short missions assist the management team on technical issues.

In each town a survey team is under the responsibility of the regional field manager, with supervisors belonging to the BBS and enumerators recruited locally. According to the size of the sample there is 1 field manager, 5 supervisors and 30 enumerators in Dhaka; 1 field manager, 3 supervisors and 18 enumerators in Chittagong; 1 field manager, 2 supervisors and 12 enumerators in Tangail and the same in Rangpur.

The survey agenda is based on the sequencing of the various phases. The preparatory phase which includes the listing operation last about 2 months. Each of the three other phases requires also approximately two months of data collection. The second phase lasts longer, due to the great number of questionnaires on expenditures and basic needs. The duration of the third phase depends on the number of entrepreneurs selected at the end of the first phase, but should last less than any of the other phases.

To ensure the quality of the data collected, control visits are scheduled in the field for the supervisors, regional officers and members of the management team. In each town, the daily control of the enumerators' work is done by the supervisors, random visits by the field managers complement them. Periodic visits from the headquarters' staff supplement the control agenda.

The Data Management

A data manager, at headquarters, is in charge of all data processing operations. First, he is responsible for preparing the data entry programme using the IMPS package (as a possibility among others) available at the BBS. He writes the data entry manual for the operators presenting all operations and issues related to the three phases of the survey, i.e. the structure of the data entry programme, the data entry procedures, the consistency checks, and the way

to deal with the errors detected by the programme. This manual is the base for training sessions organised in the four towns at the beginning of each phase.

Second, his main job is to supervise the 22 data entry operators' work. Since the data entry operation is decentralised in the field, teams of data entry operators are constituted in each regional office. In Dhaka, the data entry team consists of 8 data operators, working on alternate time schedules, with 2 computers and 1 printer. In Chittagong, 6 operators also work on alternate time schedules, with 2 computers and 1 printer. In Tangail and in Rangpur, 4 operators work in the same way on 1 computer and 1 printer. To ensure a speedy data processing, the computers already provided by the Asian Development Bank during the last HES survey round are required besides those bought on the project itself.

It is innovative, and extremely motivating for the BBS staff of each town to have their, field managers able to produce the basic tables and indicators, since it updates instantly information on the issue of employment, cottage industries and poverty for the urban areas under their responsibility. This decentralisation of the data analysis requires the organisation of specific training sessions, by the data manager and experts in data analysis, on how to use the appropriate software to produce tables and indicators.

Consequently, four key operations are required to ensure a decentralised data processing at the regional level : (i) training of the operators on the data entry programme, (ii) data entry of the questionnaires and consistency checking, (iii) training of the field managers for data analysis on an appropriate software, and (iv) production of basic tables and indicators.

Complementary tables resulting from more complex procedures and in-depth analysis on specific topics are done in Dhaka at the BBS headquarters.

Expected Output and Dissemination

Several types of outputs are scheduled over the duration of the 1-2-3 Survey.

First, reports are produced at the end of each phase presenting the key results and corresponding analyses. Therefore reports on employment, on poverty, and on the small and cottage industries should be available at the end of the project. Their production is made by the staff assigned to the survey economic analysis, among which national consultants and experts specialised in economic analysis. This includes a series of indicators on the rates of activity and employment, the number of poor, the ratio of entrepreneurs in the population, the importance of the informal sector, etc.

Some sophisticated analysis on specific topics may require to combine data from various surveys sources such as HES, PMS, LFS, etc. The distribution of the occupations among the population, the distribution of the households' income, the relationships between employment

and poverty, between micro-enterprises and poverty, etc., are key results that needs to be confronted with information coming from other sources.

Second, seminars are organised at the end of each phase to disseminate the results and to debate, with the academicians, researchers and members of the donor community, the statistical results and economic analysis presented in these reports.

Third, the information collected during the third phase gives a better understanding of the contribution of the small and cottage industries, and the informal part of it, to the whole economy. More precisely, integrating some of the survey result in the current revision of the National Accounts helps estimating the effective value of the GDP and the related growth rate.

Conclusion

The 1-2-3 Survey proves to have the capacity to adapt quite easily to particular information needs, once its basic feature is kept alive, i.e. the link between employment and enterprises through the selection of individual entrepreneurs. It is easier to manage than the usual income and expenditures surveys or standards of living surveys, due to its break down in three phases and its focus on a few specific topics.

However, since it is tested on a pilot basis a few risks may appear during this experiment. The first risk concerns the possibility of delays due to difficulties in communication and transportation. It has the largest probability to occur, but its consequences are not serious, since delays may also imply quality increase in the work and a better understanding of what is being done. To reduce this risk a vehicle for the management team and motorbikes are bought for the supervisors.

The second risk concerns the quality of the data. Series of small mistakes at all stages of the survey design and implementation - i.e. during the sample selection, the design of the questionnaires, the data collection, and data entry - could add up to the production of inaccurate data. To avoid this pitfall, a technical and supervisory control of all operations is permanently required in order to ensure that the appropriate methodologies are correctly used.

The third risk, which is linked to the previous one, concerns the methodological aspect itself. Some of the innovative techniques suggested to adapt the 1-2-3 Survey to Bangladesh will have to be closely monitored: for instance, the use of satellite pictures, the sampling procedure linking the three phases, the data processing and analysis in the field, etc. Having a resident technical assistant may help in speeding up the process, thus avoiding the first risk.

However he may be less efficient in methodological terms than having several specialised experts unless he has a good working knowledge of the 1-2-3 Survey.

However, the 1-2-3 Survey can be a great interest to the BBS by bringing a new approach to tackle urban poverty issues, through employment and cottage industries, by testing new methodologies, on sample design and decentralisation of data treatment, and by contributing to its capacity to produce quick and reliable information on urban poverty.

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ANNEXES

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ANNEX 1. THE SET OF QUESTIONNAIRES

This annex presents the reference questionnaires for the survey. They should be considered as simple drafts to facilitate the design and drawing of appropriate and tailored questionnaires for the four towns. The local concepts and related definitions, the constraints due to the current socio-economic environment need to be taken into account for the elaboration of the final version of these questionnaires.

They include : the Household Dossier, the Listing Form for the preparatory phase, the Employment questionnaire of Phase 1, the Poverty questionnaire of Phase 2, and the Cottage Industries questionnaire of Phase 3.

The Household Dossier includes all information on the survey implementation and on the status of the set of questionnaires during the data collection operation.

The Listing Form is used for the Preparatory Phase to list all the households within a PSU. It constitutes the sampling frame out of which the households are selected, for the second stage, with a stratified systematic procedure.

The Employment questionnaire of the First Phase focuses on the activities and employment issues at the household level. It is applied to 5,000 households in Dhaka, 3,000 in Chittagong, 2,000 in Tangail and 2,000 in Rangpur. It provides information on the labour force and the existing forms of employment.

The Poverty questionnaire of the Second Phase focuses on poverty issues, by gathering information on expenditures, basic needs and social capital at the household level. Its aim is to provide information on the standards of living and on the level of urban poverty.

The Cottage Industries questionnaire of the third Phase provides information on existing types of enterprises, from the self-employed to the cottage industries and the small enterprises. It is selected from the sampling frame of the individuals surveyed during the first phase. It collects information on a sub-sample of entrepreneurs who head these trade and industrial activities.

Diskettes with the whole set of these reference questionnaires are available upon request. Publisher, a Microsoft software, is used for the drawing and revising of the questionnaires due to its convenience and its perfect compatibility with Excel, for the generation of tables, and Word, for the writing of the survey reports.

ANNEX 2. THE OPERATIONAL AGENDA

The following time table presents the sequencing of the key operations required to implement the survey over a period of twelve months. Four steps are considered, which correspond to the various phases : the preparatory phase, the first phase on employment, the second phase on poverty, and the third phase on small and cottage industries.

For each operation, an arrow links the beginning and the end dates, the length of the arrow being proportional to the duration of the operation.

Operational Agenda : the Time Table												
Months	1	2	3	4	5	6	7	8	9	10	11	12
Preparatory Phase												
Pictures, Maps	→											
Listing of PSUs		→										
Sample Design			→									
Pilot Survey			→									
Questionnaires			→									
Phase 1 Employment												
Data Collection			→	→	→							
Data Entry				→	→							
Data Processing					→							
Report Writing						→	→					
Seminar							→					
Phase 2 Poverty												
Data Collection						→	→	→	→			
Data Entry							→	→	→			
Data Processing								→	→			
Report Writing									→	→		
Seminar										→	→	
Phase 3 Cottage Industries												
Data Collection										→	→	→
Data Entry											→	→
Data Processing												→
Report Writing												→
Seminar												→

The table shows that a three month period is required, on average, to implement each of the four phases of the survey. To ensure the smooth proceeding, however, some overlaps are necessary between the operations of the various phases. For instance, the data collection of the second phase begins while the data entry of the previous one is still going on.

The link between the various operations and the tight schedule for the implementation of the survey imply, throughout the whole process, a permanent review of the allocation the staff and of the material resources used.

ANNEX 3. THE COST OF SURVEY

The total cost for the survey is about ECU 400,000 or Tk 21,000,000 and \$480,000. The exchange rates used to convert the Bangladeshi Thaka into the European ECU and the United States Dollar is ECU 1 = Tk 51.6 and \$ 1 = Tk 43.

This cost estimation was done very precisely by considering the cost of each item, goods and services, that need to be purchased for any of the three phases. This estimation leads to an amount of ECU 351,842 or Tk 18,154,704 and \$422,206. Adding 10% as a provision for contingencies and price increase brings the total cost to the level of ECU 387,026 or Tk 19,970,174 and \$ 464,427.

Since the survey requires the production of 30,000 questionnaires over the three phases period, the unit cost per questionnaire (and by extension per household) is on average ECU 13 and Tk 670 and \$ 15.

The total cost is broken down in two complementary ways: by item and by operation. The first focuses on the financial presentation for the European Union, the second on the operational agenda for the BBS.

The cost by items includes personnel, project equipment, training and seminar, transport and travel costs, stationery and publications. Following the accounting rules of the European Union, they are presented through a series of detailed tables in the next part.

To reduce the total cost to a minimum, several alternatives were reviewed and a few assumptions were made. For instance, the number of computers relates to the estimated amount of the data to be treated and the pace of the treatment. Computers are based in the regional offices, decentralising by this way the data processing and speeding up the process. The visits to the regional offices show that the use of transport means improvement to the data quality. Therefore the purchase of motorcycles for the supervisors was decided. Reducing the transportation time between two households to be interviewed, allows a tighter supervision of each of the enumerator's work, thus improving the quality of the data collected.

However, there is one exception to this rule. It concerns the high cost of expertise which includes both the national consultants and the external technical assistance. But since these remain one of the best ways to avoid delays in the implementation of the survey and to transmit new methodologies to the BBS' regular staff, a certain number of expertise months is included in the budget.

The total cost is also broken down by operation to facilitate the implementation of the survey. It includes the annual expenditures for the technical assistance and the equipment; the expenditures for the preparation phase for the sample design and the printing of the questionnaires; the expenditures for each of the three field phases related to data collection and data processing; and, the cost of disseminating the results, from the report writing and the publications to the seminars.

A table summarising all these costs is presented in the second part. It helps relating through a time table, the amount of money scheduled for each operation to the on-going of the operational agenda.

1. Item Disaggregation

The following items are considered in this breakdown: the personnel which include nationals and expatriates; equipment which includes the computers and the vehicles; the training sessions and seminars; the transportation and travel related costs; and stationery and publications.

Personnel

The personnel involved in the project includes staff from the BBS (i.e. the project director, survey manager, data manager, regional field managers and supervisors), enumerators and data entry operators which are recruited in each town, consultants, experts and technical adviser.

The national personnel can be divided into staff from the BBS and local enumerators or consultants. The cost for the national personnel is presented in the following table. For the BBS staff it only includes the daily allowance, or per diem, of the management team and the supervisors for their supervision tasks.

Local enumerators and data entry operators are directly recruited in each of the towns for the duration of the work. They will be trained through specific sessions by the BBS staff. The national consultants are specialised in several survey topics, the corresponding cost being estimated through the standards used by the European Union in other projects.

Expenditures on National Personnel					
Item	Number/Time	Unit cost Tk	ECU	Thaka	Dollar
BBS Staff			6,225	321,204	7,471
Project director	1 year	2,000/month	465	24,000	558
Survey manager	1 year	1,200/month	279	14,400	335
Data manager	1 year	1,200/month	279	14,400	335
4 regional field managers	4 years	1,200/month	1,116	57,600	1,340
Supervisors listing PSUs	22 / 1 month	1,200/month	512	26,400	614
Supervisors pilot Survey	12	Lump sum	1,551	80,004	1,861
Supervisors phase 1	12 / 2 months	1,200/month	558	28,800	670

Supervisors phase 2	12 / 3 months	1,200/month	977	50,400	1,172
Supervisors phase 3	12 / 1,75 month	1,200/month	488	25,200	586
Consultants			30,039	1,550,000	36,047
Sample design and maps	3 months	50,000/month	2,907	150,000	3,488
Questionnaire design	2 months	50,000/month	1,938	100,000	2,326
Data analysis	6 months	50,000/month	5,814	300,000	6,977
Economic analysis	20 months	50,000/month	19,380	1,000,000	23,256
Local enumerators			43,547	2,247,000	52,257
Enumerators listing PSUs	120 / 1 month	3,500/month	8,140	420,000	9,768
Enumerators phase 1	72 / 2 months	3,500/month	9,768	504,000	11,721
Enumerators phase 2	72 / 3,5 months	3,500/month	17,093	882,000	20,512
Enumerators phase 3	72 / 1,75 month	3,500/month	8,546	441,000	10,256
Data entry operators			4,920	253,800	5,902
Operators listing PSUs	22	2,000/month	698	36,000	837
Operators phase 1	22	2,000/month	1,303	67,200	1,562
Operators phase 2	22	2,000/month	1,946	100,400	2,335
Operators phase 3	22	2,000/month	973	50,200	1,168
Total			84,731	4,372,004	101,677

The amount allocated to technical assistance i.e. ECU 120,000. It may be used according to two alternatives: either by hiring a one year resident adviser to supervise and advise on all the implementation steps of the survey, or by organising a series of expert missions on specific fields such as sample design, questionnaire design, data processing, data analysis report writing, according to the needs of the various phases. In the former case, there are two drawbacks. First, it may be difficult to find the right person, in terms of qualification, for such a short period, and, second, if delays ever occur during the survey the adviser may be unable to bring the survey to its completion.

Concerning the economic analysis of the data, an expert is scheduled to organise a training session and to coach the work of local consultants working on specific topics.

Table 2 Cost of Technical Assistance

Item	Number	Unit cost ECU	ECU	Thaka	Dollar
A resident adviser (or expertise missions)	1 year (5 months)	120,000/year (24,000/month)	120,000 (120,000)	6,192,000 (6,192,000)	144,000 (144,000)
Economic analysis	2 weeks	24,000/ month	12,000	619,200	14,400
Total			132,000	6,811,200	158,400

Equipment

Three types of equipment are required for the survey : the computers for each regional office, the vehicles for the supervision and survey materials for the enumerators.

Computer equipment includes the computers and printers for each of the towns with the objective of decentralising data processing (i.e. data entry, tabulation and analysis). One vehicle is purchased for the general supervisory work of the management team. Motorcycles are purchased for each supervisor. This allows them to move quicker from one enumerator to the other and thus to conduct a better supervision of the field work.

Table 3 Equipment Expenditure

Item	Number	Unit cost Tk	ECU	Thaka	Dollar
Computer equipment			38,567	1,990,000	46,279
Computers	10	135,000	26,163	1,350,000	31,395
Printers	6	35,000	4,070	210,000	4,884
Diskettes, paper, maintenance	for 1 year	---	4,167	215,000	5,000
Software	Several	---	4,167	215,000	5,000
Vehicles			42,954	2,216,400	51,544
Project supervision vehicle	1	1,075,000	20,834	1,075,000	25,000
Fuel and maintenance	1	215,000	4,167	215,000	5,000
Motorcycles for supervisors	12	60,000	13,953	720,000	16,744
Fuel and maintenance	12	17,200	4,000	206,400	4,800
Survey materials			8,760	452,000	10,512
Listing of PSUs enumerators	58	2,000	2,248	116,000	2,698
Phase 1-2-3 enumerators	84	4,000	6,512	336,000	7,814
Total			90,281	4,658,400	108,335

Training and Seminars

Training sessions on data entry for the data entry operators, and on data analysis for the BBS staff are scheduled at the beginning of each phase. Seminars are also organised at the end of each phase to present and to debate on the final reports.

Table 4 Expenditures for Training Sessions Seminars

Item	Number	Unit cost Tk	ECU	Thaka	Dollar
Training on data entry	3	20,000	1,164	60,000	1,395
Training on data analysis	3	40,000	2,326	120,000	2,791
Dissemination seminars	3	100,000	5,814	300,000	6,977
Total			9,304	480,000	11,163

Transport and Travel

The transport and travel expenditures include the cost of a few supervision missions from Dhaka to Chittagong, Tangail and Rangpur for the management team. Supervision is scheduled for each of the three field phases.

Table 5 Transport and Travel Expenditures

Item	Number	Unit cost Tk	ECU	Thaka	Dollar
Supervision missions	12	5,000	1,163	60,000	1,395
Total			1,163	60,000	1,395

Stationery and Publications

The corresponding costs include the purchase of the satellite pictures and the maps for the sample design and the stationery for the whole year. Other expenditures concern the printing of the listing form, questionnaires, manuals for the enumerators and the data entry operators, and the final reports at the end of each phase.

Table 6 Expenditures for Stationery and Publications

Item	Number	Unit cost Tk	ECU	Thaka	Dollar
Stationery	1 year		3,333	172,000	4,000
Satellite pictures, maps	5 pictures	215,000	20,833	1,075,000	25,000
Printing listing form	7,500 pages	1	146	7,500	175
Printing questionnaires	303,600 pages	1	5,884	303,600	7,061
Printing manuals	5,000 pages	1	97	5,000	116
Final reports	3 at 100 pages	70,000	4,070	210,000	4,884
Total			34,363	1,773,100	41,236

2. Operation Disaggregation

Disaggregating the total cost according to each operation facilitates the implementation of the survey since it gives the amount to be disbursed and the sequence of these disbursements.

However, some expenditures can not be related to one or the other phase, since they refer to the all set operations and should be spent at the beginning of the survey. These include expenditures on some human resources (for instance, the survey management team and the technical assistance) and equipment (computers and vehicles). Therefore they are classified under a specific category: the annual expenditures.

All the other expenditures are broken down under the headings of the four phases: the preparatory phases and the three field operation phases (employment, poverty, cottage industries).

Table 7 Total Cost by Operation

	ECU	Thaka	Dollar
1. Annual Expenditures	258,955	13,362,000	310,745
Human resources	164,178	8,471,600	197,015
Equipment	94,777	4,890,400	113,730
2. Preparatory Phase	37,861	1,953,504	45,432
Satellite pictures and maps	20,833	1,075,000	25,000
Listing of the PSUs	8,652	446,400	10,382
Data entry of the listing operation	698	36,000	837
Printing of the listing form	146	7,500	175
Printing of questionnaires and manuals	5,981	308,600	7,177
Pilot survey : questionnaire field test	1,551	80,004	1,861
3. Field Operation Phase 1	12,017	620,000	14,418
Data collection	10,326	532,800	12,391
Data entry programme and training	388	20,000	465
Cost of data entry operators	1,303	67,200	1,562
4. Field Operation Phase 2	20,404	1,052,800	24,484
Data collection	18,070	932,400	21,684
Data entry programme and training	388	20,000	465
Cost of data entry operators	1,946	100,400	2,335
5. Field Operation Phase 3	10,395	536,400	12,475
Data collection	9,034	466,200	10,842
Data entry programme and training	388	20,000	465
Cost of data entry operators	973	50,200	1,168
6. Dissemination of Results	12,210	630,000	14,652
Training on data analysis	2,326	120,000	2,791
Report writing	4,070	210,000	4,884
Seminars	5,814	300,000	6,977
Survey Cost	351,842	18,154,704	422,206
Provision for inflation and contingencies 10%	35,184	1,815,470	42,221
Total Cost	387,026	19,970,174	464,427

Since the survey is a pilot project implemented on only four sites, the total cost is not too high. Being a small scale survey, split into three phases, it can provide interesting results on specific topics at a relatively low cost.

ANNEX 4. DETAILED COST ESTIMATES

The 1-2-3 Survey is implemented in one year. Therefore, we have to distinguish between the annual costs on one side, which include equipment and maintenance cost, consultants and technical assistance, and on the other side, the expenditures related to various phases : preparatory phase, field operation phases 1, 2 and 3, and dissemination expenditures.

The cost of the survey is Tk 18,154,704 or ECU 351,842 or \$422,206. By adding 10% as provision for inflation and contingencies, the total cost is Tk 19,970,174 or ECU 387,026 or \$ 464,427.

The exchange rates used to estimation these costs are Tk 43 for US\$ 1 and US\$ 1,2 for ECU 1. It is also assumed that the government does not pay taxes on the purchase of material and equipment, whether they are imported or not.

1. Annual Expenditures i.e. Tk 13,362,000 or ECU 258,955 or \$310,745

1.1. Human Resources i.e. Tk 8,471,600 or ECU 164,178 or \$197,015

- Technical assistance to the survey. This includes a resident adviser for one year or five missions of experts i.e. Tk 6,192,000 or ECU 120,000 or \$144,000
- One expert on economic analysis the for training session i.e. Tk 619,200 or ECU 12,000 or \$ 14,400
- Local consultants for the sample design (during 3 months), the questionnaire design (2 months), the data treatment (6 months), the economic analysis (20 months) i.e. Tk 1,550,000 or ECU 30,039 or \$36,047
- A project director from the BBS on a part time basis during 12 months at Tk 2,000 per month i.e. Tk 24,000 or ECU 465 or \$558
- A survey manager from the BBS on a full time basis for 12 months at Tk 1,200 per month i.e. Tk 14,400 or ECU 279 or \$335
- A data manager from the BBS on a full time basis for 12 months at Tk 1,200 per month i.e. Tk 14,400 or ECU 279 \$335
- 4 regional field managers from the BBS regional statistical officers on a full time basis during 12 months at Tk 1,200 per month i.e. Tk 57,600 or ECU 1,116 or \$1,340

1.2. Equipment i.e. Tk 4,890,400 or ECU 94,777 or \$113,730

- 10 computers of which 4 located in Dhaka, 2 in Chittagong, 2 in Tangail, 2 in Rangpur at Tk 135,000 each i.e. Tk 1,350,000 or ECU 26,163 or \$31,395
- 6 printers of which 2 located in Dhaka, 2 in Chittagong, 1 in Tangail, 1 in Rangpur at Tk 35,000 each i.e Tk 210,000 or ECU 4,070 or \$4,884
- Computer material such as paper, diskettes and maintenance i.e. Tk 215,000 or ECU 4,167 or \$5,000
- Data entry and data analysis software i.e.Tk 215,000 or ECU 4,167 or \$5,000

- Survey material for the 3 phase such as pencils, erasers, clip boards, pocket calculators, brief cases, badges, boots, raincoats for the 84 enumerators at Tk 4,000 each i.e. Tk 336,000 or ECU 6,512 or \$7,814
- Extra survey material for the 58 extra enumerators of the listing operation for the PSUs, at Tk 2,000 each i.e. Tk 116,000 or ECU 2,248 or \$2,698
- Stationery such as paper, photocopies, pencils, books and telephone i.e. Tk 172,000 or ECU 3,333 or \$4,000
- A project supervision vehicle i.e. Tk 1,075,000 or ECU 20,834 or \$25,000
 - The vehicle gasoline for an average 2,000 km a month and the maintenance i.e. Tk 215,000 or ECU 4,167 or \$5,000
 - The motorcycles for the 12 supervisors at Tk 60,000 each i.e. Tk 720,000 or ECU 13,953 ECU or \$16,744
 - The gasoline for the 12 motorcycles with an average of 1,200 km a month and the maintenance at Tk 17,200 each : Tk 206,400 or ECU 4,000 or \$4,800
 - The trips for the supervision missions from Dhaka with an assumption of 3 missions in each city i.e. 12 missions at Tk 5,000 each i.e. Tk 60,000 or ECU 1,163 or \$1,395

2. Expenditures for the Preparatory Phase i.e. Tk 1,953,504 or ECU 37,861 or \$45,432

2.1. Purchase of the Satellite Pictures and Drawing of Maps i.e. Tk 1,075,000 or ECU 20,833 or \$25,000

2.2. Listing Operation of the PSUs i.e. Tk 446,400 or ECU 8,652 or \$10,382

The following assumptions are made:

- A local enumerator costs Tk 3,500 per month including transportation
- A supervisor from BBS supervises six enumerators for Tk 1,200 per month
- There are 5 working hours (or whours) in a day and 1 hour for transportation
- There are 25 working days (or wdays) in a month
- 10 households (hh) are investigated each hour on average
- 250 households live in each PSU on average
- The listing operation will last 1 month

Therefore the corresponding cost is estimated by the following equations:

- In Dhaka 250 PSUs are selected with 250 hh each i.e. 62,500 hh which implies 6,250 whours or 1,250 wdays and therefore 50 enumerators and 9 supervisors on one month

- In Chittagong 150 PSUs are selected with 250 hh each i.e. 37,500 hh which implies 3,750 whours or 750 wdays and therefore 30 enumerators and 5 supervisors on one month

- In Tangail and in Rangpur 100 PSUs of 250 hh are selected in each town i.e. for the 2 towns 50,000 hh which implies 5,000 whours or 1,000 wdays therefore 40 enumerators (20 in each town) and 8 supervisors (4 in each town) on one month

Altogether this implies 120 enumerators at the total cost of Tk 420,000 or ECU 8,140 or \$ 9,767 and 22 supervisors at the total cost of Tk 26,400 or ECU 512 or \$614

2.3. Data Entry of the Listing Operation i.e. Tk 36,000 or ECU 698 or \$837

The following assumptions are made:

- Data entry is done in the regional offices
- The teams are recruited for the whole survey
- Two teams will alternate on a computer

Therefore the cost for 18 operators at Tk 2,000 each is Tk 36,000 or ECU 698 or \$837

2.4. Printing of the Listing Form i.e. Tk 7,500 or ECU 146 or \$175

The following assumptions are made:

- 600 PSUs are listed with 250 hh interviewed in each PSU which implies 150,000 hh
- 20 hh are listed on a single page which leads to 7,500 pages

Therefore the cost for 7,500 pages at Tk 1 each is Tk 7,500 or ECU 146 or \$175

2.5. Printing of the Questionnaires and Manuals i.e. Tk 308,600 or ECU 5,981 or \$7,177

The cost for the printing of the questionnaires is Tk 303,600 or ECU 5,884 or \$7,061

It includes: (i) the 50 page questionnaire for the pilot survey on 72 hh i.e. a total of 3,600 pages at Tk 1 each or Tk 3,600, and (ii) the 50 page questionnaire for the 3 phases sample of 12,000 hh i.e. a total of 300,000 pages at Tk 1 each or Tk 300,000

The cost of printing for the survey manuals: i.e. Tk 5,000 or ECU 97 or \$116

It includes: (i) 90 copies of a 50 page enumerator manual i.e. a total of 4,500 pages at Tk 1 each or Tk 4,500, and (ii) 25 copies of a 20 page data entry manual i.e. a total of 500 pages at Tk 1 each or Tk 500

2.6. Field Testing of the Questionnaire i.e. Tk 80,004 or ECU 1,551 or \$1,861

The following assumptions are made:

- 72 households are interviewed in Dhaka by 12 BBS supervisors

- The pilot survey last 10 days : (i) 3 days are for the training of supervisors, (ii) 3 days for the field testing of each of the phases 1 and 2, (iii) 1 day for the field testing of phase 3
- The reference cost for a training session is Tk 4,000 per person including transportation expenses

Therefore the cost for 12 supervisors at Tk 6,667 each (including the training session and the field testing days) is Tk 80,004 or ECU 1,551 or \$1,861

3. Expenditure for Phase 1 Field Operation i.e. Tk 620,000 or ECU 12,017 or \$14,418

3.1. Data Collection i.e. Tk 532,800 or ECU 10,326 or \$12,391

The following assumptions are made:

- Phase 1 includes 50 working days or 2 months
- Training of the local enumerators by the BBS supervisors lasts 4 days
- Data collection lasts 42 days
- 4 days remains available, if needed, to return to the field and check the consistency of the questionnaire
- The duration of a phase 1 interviews to fill the questionnaire is 1 hour on average
- 4 households on average are interviewed by an enumerator in a day

Therefore the corresponding cost is estimated by the following equations:

- In Dhaka interviewing 5,000 hh will require 5,000 whours or 1,250 wdays by 30 local enumerators and 5 supervisors from BBS
- In Chittagong interviewing 3,000 hh will require 3,000 whours or 750 wdays by 18 local enumerators and 3 supervisors from BBS
- In Tangail and in Rangpur interviewing 2,000 hh each time will require for each town 2,000 whours or 500 wdays by 12 local enumerators and 2 supervisors from BBS
- The cost for a total of 72 private local enumerators during 2 months at Tk 3,500 each is Tk 504,000 or ECU 9,768 or \$11,721
- The cost of a total of 12 BBS supervisors during 2 months at Tk 1,200 each is Tk 28,800 or ECU 558 or \$670

3.2. Data Entry Programme and Training i.e. Tk 20,000 or ECU 388 or \$465

The following assumptions are made:

- The development and testing of the data entry programme is done by the data manager during 2 weeks in Dhaka. Then during 4 days in each town he implements the program

- In each town a 3 days training session is held for the data entry operators

Therefore the total cost, including daily allowance and transportation, is Tk 20,000 or ECU 388 or \$465

3.3. Cost of Data Entry Operators i.e. Tk 67,200 or ECU 1,303 or \$1,562

The following assumptions are made:

- The average time to enter a full questionnaire is 20 minutes

- The data entry is done during 6 hours in a day to reach a total of 18 questionnaires per day

- There are 25 working days (or wdays) in a month

- Two teams alternate on the same computers

Therefore the corresponding cost is estimated by the following equations:

- In Dhaka the entry of data for 5,000 hh requires 35 wdays by 8 data entry operators at Tk 2,500 each per month (or 25 days) i.e. for 35 wdays: Tk 28,000 or ECU 543 or \$651

- In Chittagong the entry of data for 3,000 hh requires 28 wdays by 6 data entry operators at Tk 2,500 each per month i.e. for 28 wdays: Tk 16,800 or ECU 326 or \$391

-For Tangail and Rangpur the entry of data for 2,000 hh in each of the town require 28 wdays by 4 data entry operators at Tk 2,500 each per month i.e. for 28 wdays: Tk 11,200 or ECU 217 or \$260 for each town

4. Expenditure for Phase 2 Field Operation i.e. Tk 1,052,800 or ECU 20,404 or \$24,484

4.1. Data Collection i.e. Tk 932,400 or ECU 18,070 or \$21,684

The following assumptions are made:

- Phase 2 includes 91 working days or 3,5 months

- Training of the local enumerators by the BBS supervisors lasts 4 days

- Data collection lasts 83 days

- 4 days remain available, if needed, to return to the field and check the consistency of the questionnaire

- The duration of a phase 2 interview to fill the questionnaire is 1 hour and a half on average
- 3 households on average are interviewed by an enumerator in a day

Therefore the corresponding cost is estimated by the following equations:

- In Dhaka interviewing 5,000 hh will require 7,500 whours or 2,500 wdays by 30 local enumerators and 5 supervisors from BBS
- In Chittagong interviewing 3,000 hh will require 4,500 whours or 1,500 wdays by 18 local enumerators and 3 supervisors from BBS
- In Tangail and in Rangpur interviewing 2,000 hh each time will require for each town 3,000 whours or 1,000 wdays by 12 local enumerators and 2 supervisors from BBS
- The cost for a total of 72 private local enumerators during 3,5 months at Tk 3,500 each is Tk 882,000 or ECU 17,093 or \$20,512
- The cost of a total of 12 BBS supervisors during 3,5 months at Tk 1,200 each is Tk 50,400 or ECU 977 or \$1,172

4.2. Data Entry Programme and Training i.e. Tk 20,000 or ECU 388 or \$465

The following assumptions are made:

- The development and test of the data entry programme is done by the data manager during 2 weeks in Dhaka. Then during 4 days in each town he implements the program
- In each town a 3 day training session is held for the data entry operators

Therefore the total cost, including daily allowance and transportation, is Tk 20,000 or ECU 388 or \$465

4.3. Cost of the Data Entry Operators Tk 100,400 or ECU 1,946 or \$2,33

The following assumptions are made:

- The average time to enter a full questionnaire is 30 minutes
- Data entry is done during 6 hours in a day to reach a total of 12 questionnaires per day
- There are 25 working days (or wdays) in a month
- Two teams alternate on the same computers

Therefore the corresponding cost is estimated by the following equations:

- In Dhaka the entry of data for 5,000 hh requires 52 wdays by 8 data entry operators at Tk 2,500 each per month (or 25 days) i.e. for 52 wdays: Tk 41,600 or ECU 806 or \$968

- In Chittagong the entry of data for 3,000 hh requires 42 wdays by 6 data entry operators at Tk 2,500 each per month i.e. for 42 wdays: Tk 25,200 or ECU 488 or \$586

-For Tangail and Rangpur the entry of data for 2,000 hh in each of the towns requires 42 wdays by 4 data entry operators at Tk 2,500 each per month i.e. for 42 wdays: Tk 16,800 or ECU 326 or \$391 for each town

5. Expenditure for Phase 3 Field Operation i.e. Tk 536,400 or ECU 10,395 or \$12,475

It is difficult to estimate the cost of this phase without knowing what number of entrepreneurs is found in the sample of the phase 1. However, based on the previous experiences of Cameroon and Madagascar, it is assumed that the size of the entrepreneurs' sub-sample surveyed will be about half the size of the households' sample (it was 49% in Cameroon and 44% in Madagascar)

5.1. Data Collection i.e. Tk 466,200 or ECU 9,034 or \$10,842

The following assumptions are made:

- Phase 3 includes 50 working days or 2 months
- Training of the local enumerators by the BBS supervisors lasts 4 days
- Data collection lasts 42 days
- 4 days remain available, if needed, to return to the field and check the consistency of the questionnaire
- The duration of a phase 3 interview to fill the questionnaire is 1 hour on average
- 3 households on average are interviewed by an enumerator in a day

With these assumptions the corresponding cost is half of phase 2, i.e.: Tk 466,200 or ECU 9,035 or \$10,842

- The cost for a total of 72 private local enumerators during 1,75 month at Tk 3,500 each is Tk 441,000 or ECU 8,546 or \$10,256
- The cost of a total of 12 BBS supervisors during 1,75 months at Tk 1,200 each is Tk 25,200 or ECU 488 or \$586

5.2. Data Entry Programme and Training i.e. Tk 20,000 or ECU 388 or \$465

The following assumptions are made:

- The development and testing of the data entry programme is done by the data manager during 2 weeks in Dhaka. Then during 4 days in each town he implements the program

- In each town a 3 day training session is hold for the data entry operators

Therefore the total cost, including daily allowance and transportation, is Tk 20,000 or ECU 388 or \$465

5.3. Cost of the Data Entry Operators i.e. Tk 50,200 or ECU 973 or \$1,168

The following assumptions are made:

- The average time to enter a full questionnaire is 30 minutes

- Data entry is done during 6 hours in a day to reach a total of 12 questionnaires per day

- There are 25 working days (or wdays) in a month

- Two teams alternate on the same computers

With these assumptions the corresponding cost is half of phase 2, i.e.: Tk 50,200 or ECU 973 or \$1,168

6. Analysis and Dissemination of the Results i.e. Tk 630,000 or ECU 12,210 or \$14,652

6.1. Training on Data Analysis i.e. Tk 120,000 or ECU 2,326 or \$2,791

In the middle of each phase a training session will be organised in Dhaka with the most qualified staff of the 4 regional offices and the headquarters to teach how to produce the basic tables and some statistical analysis by using the data set entered in each town.

The estimated cost for ten persons in each session is Tk 40,000 i.e. for the 3 sessions Tk 120,000 or ECU 2,326 or \$2,791.

6.2. Report Writing i.e. Tk 210,000 or ECU 4,070 or \$4,884

At the end of each phase, a 100 page final report will be produced and printed. The total cost will be Tk 70,000 for each report i.e. for the 3 reports Tk 210,000 or ECU 4,070 or \$4,884.

6.3. Dissemination Seminars i.e. Tk 300,000 or ECU 5,814 or \$6,977

At the end of each phase, a seminar will be organised to present and debate on the key results. The total cost will be Tk 100,000 for each seminar i.e. for 3 seminars Tk 300,000 or ECU 5,814 or \$6,977.

ANNEX 5. INTERNATIONAL COMPARISON OF THE 1-2-3 SURVEY COSTS

Once the total cost of the Bangladesh 1-2-3 survey is estimated, a key question still remains i.e.: "Is the cost of the Bangladesh survey in the same range than the standard 1-2-3 survey which already implemented in other countries ?". This annex is an answer to this question. It compares the amount of ECU 400.000 (or FRF 2.640.000) to be spent on a survey on 12.000 households in the four urban centres of Dhaka, Chittagong, Tangail and Rangpur, to the corresponding amounts of the Cameroon, Madagascar and Senegal surveys which are smaller in scale.

1. Total Costs of the Various 1-2-3 Surveys

Since most of these countries are francophone and two of them belong to the franc CFA zone, we will express all the following costs in French Franc (FRF) keeping in mind the exchange rate of ECU 1 for FRF 6,6.

- *Cost of the Yaounde survey, Cameroon, 1993*

Phase 1 : 1,961 households and FRF 190,000

Phase 2 : 957 households and FRF 7,000

Phase 3 : 400 households and FRF 40,000

Total : 3,318 households and FRF 303,000 (without the expertise cost)

- *Cost of the Antananarivo survey, Madagascar, 1995*

Phase 1 : 2,560 households and FRF 115,000 (without the expertise cost)

- *Estimated cost for the San Salvador City survey, Salvador, 1996*

Total : FRF 530,000 (without expertise cost)

- *Estimated cost for the Dakar survey, Senegal, 1997*

Phase 1 : 2,500 households and FRF 216,098

Phase 2 : 1,000 households and FRF 134,607

Phase 3 : 400 households and FRF 116,000

Total : 3,900 households and FRF 527,305 (without the expertise cost)

Adding technical assistance will increase the cost by FRF 378,600

- *Estimated cost for the Dhaka, Chittagong, Tangail et Rangpur surveys, Bangladesh, 1998*

Phase 1 : 12,000 households (breaking down the total cost by phase will be

Phase 2 : 12,000 households of no use due to the weight of the annual costs

Phase 3 : 6,000 households in the overall budget).

Total : 30,000 households and ECU 255,026 or FRF 1,683,172

(without the expertise cost)

Adding technical assistance will increase the cost by ECU 132,000 or FRF 871,200

2. The Unit Cost of the 1-2-3 Surveys

The cost of the Bangladesh survey is the highest one. This is due to the size of the sample in each town: Dhaka 5.000 households for 7.6 million inhabitants, Chittagong 3.000 households for 6.2 million inhabitants, Tangail 2.000 households for 3,3 million inhabitants and Rangpur 2.000 households for 2,4 million inhabitants.

Computing, for all surveys, the unit cost per household (hh) is the only way to give a comparable standard and therefore make easier the comparison between the various operations.

Country Name	Number of Households	Total Survey Cost	Unit Cost
Cameroon	3,318	FRF 303,000	91.32 FRF/hh
Madagascar	2,560	FRF 115,000	44.92 FRF/hh
Salvador		FRF 530,000	
Senegal	3,900	FRF 527,305	135.21 FRF/ hh
Bangladesh	30,000	FRF 1,683,172	56.11 FRF/hh

Madagascar has the least expensive survey but its cost is only related to the first phase. On the other side, Senegal has the most expensive one. The difference between the two is about FRF 100 per household. This is partly explained by the exchange rate between the two national currencies which tends to overvalued the cost for Senegal.

The Bangladesh survey is located between these two extreme cases, but is closer to Madagascar. This is explained by the low level of the expenditure on personnel, once adjusted by the exchange rate.

3. Comparison of the Personnel Costs

To compare the cost of personnel between the Bangladesh survey and the Senegal's one, we compute the share of the personnel expenditures on the total cost of the respective surveys. Facing large differences between the results, we thus have to compare the salaries for the various categories of staff. Then, replacing the average salaries of Senegal by those of Bangladesh for all these categories, we simulate the effect of a Bangladesh equivalent salary

level on the Senegal total survey cost. Finally, the result proves the two surveys to be very similar for their total cost.

- *Personnel expenditures share on the total survey cost*

Senegal	Phase1 FRF	Phase2 FRF	Phase3 FRF	Total FRF	Share %
Personnel	168,002	99,850	83,200	351,052	75.1
Other expenditures	47,998	34,757	33,400	116,155	24.9
Total	216,000	134,607	116,600	467,207	100.0

Bangladesh	Total ECU	Total FRF	Share %
Personnel	84,731	559,225	33.2
Other expenditure	170,295	1,123,947	66.8
Total	255,026	1,683,172	100.0

By comparing the two tables, one can see that the expenditures on personnel are only one third of the Bangladesh total survey cost while they represent three quarters in the Senegal's one. This is mainly due to the differences in the level of monthly salaries for all categories of staff.

- *Comparison of the respective monthly salaries*

Senegal		Bangladesh		Salary ratio
Position	Salaries	Position	Salaries	
Managers	FRF 1,600	Managers	FRF 255	6.27
Supervisors	FRF 1,400	Supervisors	FRF 153	9.15
Enumerators	FRF 1,200	Enumerators	FRF 448	2.68
Data entry oper.	FRF 1,000	Data entry oper.	FRF 255	3.92

Computing the salary ratio between Bangladesh and Senegal we arrive at numbers which are on average greater than 3. Even in the case of the enumerators recruited on a private basis, which is the most expensive case, the ratio is near 3. This shows that the cost of the survey manpower in Senegal is more than three times that of Bangladesh.

It is therefore possible to estimate what would be the cost in Senegal of a Bangladesh equivalent survey by imputing the average salary level of the Bangladeshis to the equivalent Senegalese positions.

- Cost in Senegal of a Bangladesh equivalent survey

While keeping all the other expenditures at the same level, we then reduce the expenditures on personnel in the Senegal survey by one third which corresponds to the average salaries ratio between the two countries. This leads to the following fictitious cost.

Senegal	Present cost	Fictitious cost	Share %
Personnel	351,052	117,017	50.18
Other expenditures	116,155	116,155	49.82
Total	467,207	233,172	100.00

This cost of FRF 233,172 is to be related to the sample size of 3.900 households, in order to calculate the corresponding fictitious unit cost, which is FRF 59,79 per household. This value is not very different from the present FRF 56,11 which is the unit cost for the Bangladesh survey. The gap between the present and the fictitious survey cost represents 6.2% of the total Bangladesh survey cost and can be covered by the 10% provision for contingencies and inflation already included in the budget.

4. Conclusion

The budget which was proposed to the European Union for this adjusted 1-2-3 survey (employment, poverty and cottage industries) in Bangladesh is therefore consistent with the cost of the standard 1-2-3 survey which was implemented or is scheduled for implementation in other countries of Africa and Latin America.