GOVERNMENT OF NAGALAND

EMPLOYMENT AND UNEMPOYMENT SITUATION IN NAGALAND

NATIONAL SAMPLE SURVEY
68th ROUND (JULY 2011–JUNE 2012)

DIRECTORATE OF ECONOMICS & STATISTICS
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PREFACE

The National Sample Survey Organisation (NSSO), Government of India undertakes annual surveys on various socio-economic aspects in the country. The 68th round of NSS was held during the period July 2011-June 2012, covering two important subjects namely "Household Consumer Expenditure" and "Employment and Unemployment".

The Directorate of Economics and Statistics (DES), Government of Nagaland has been participating in the nation-wide socio-economic survey conducted annually by the NSSO since 1972 in its 27th Round. This report on "Employment and Unemployment Situation in Nagaland" is based on the State Sample data of NSS 68th round surveyed during July 2011 –June 2012 covering 88 rural villages and 120 urban blocks. In the 88 sample villages, 704 households were surveyed and 760 households were surveyed in 120 urban blocks. A total of 1664 households in Nagaland were surveyed in the 68th Round.

In a State where the State Government is the largest employer and where employment in the government sector has already reached a point of over saturation, unemployment is one of the major socio-economic problems in Nagaland. Therefore publishing a report analysing the "Employment and Unemployment Situation in Nagaland" at this crucial juncture is highly imperative, and at the same time very challenging. Further, this report being the first on such a pertinent subject would serve as a critical input and as a base for future reference.

I am grateful to the NSS Section led by Shri. P.Singson (Dy. Director), Smti.T.Belho (Asst.Director), Shri. K.Rhanbemo Kithan (Statistical Officer), Smti. Esther Ayimla (Statistical Officer) and all the NSS officials who have rendered their commendable service in the preparation and publication of this report.

In the light of the prevailing chronic unemployment scenario in the State, I hope this report will be useful to planners, policy makers, academicians and researchers. Comments and suggestions for further improvement are most welcome.

Sd/-
(**Y. Sacheo Ovung**)
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August, 2015
Director

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Chapter One
Introduction

Genesis of Employment and Unemployment Survey of NSSO

The quinquennial survey on employment and unemployment is one of the important surveys conducted repeatedly by the NSSO. The first such survey was carried out in the 27th round of NSSO during October 1972 - September 1973. The current employment and unemployment survey of NSS 68th round is like a quinquennial survey as far as subjects of enquiry, design, questionnaires and sample sizes are concerned. Including the present employment and unemployment survey of NSS 68th round (July 2011 - June 2012), nine such comprehensive surveys on the employment and unemployment situation in India have so far been conducted by NSSO.

The National Sample Survey Office (NSSO), as a part of its 68th round survey programme during the period July 2011 - June 2012, carried out an all-India household survey on the situation of employment and unemployment in India. In this survey, a nation-wide household enquiry was conducted to generate estimates of various characteristics pertaining to employment and unemployment at the national and State/UT levels. Information on various facets of employment and unemployment in India was collected in NSS 68th round through a schedule of enquiry (Schedule 10) adopting the established concepts, definitions and procedures. Based on the data collected during the entire period of survey, estimates of various characteristics pertaining to employment and unemployment for Nagaland have been presented in this report.

Objective of the Employment and Unemployment surveys of NSSO
The main objective of the employment and unemployment surveys conducted by NSSO at periodic interval is to get estimates of level parameters of various labour force characteristics at the national and State/UT level. These statistical indicators on labour market are required for planning, policy and decision making at various levels, both within the government and outside. The critical issues in the context of labour force enquiries pertain to defining the labour force and measuring participation of the labour force in different economic activities. The activity participation of the people is not only dynamic but also multidimensional - it varies with region, age, education, gender, level of living, industry and occupational category. These aspects of the labour force are captured in detail in the employment and unemployment surveys of NSSO and estimates are generated for labour force participation rate, worker population ratio, unemployment rate, extent of underemployment, wages of employees, etc. The indicators of the structural aspects of the workforce such as status in employment, industrial distribution and

occupational distribution of the workers are also derived from these surveys. Besides, from the data collected on the particulars of enterprises and conditions of employment, the aspects of employment in the informal sector and informal employment are reflected through the conceptual framework of the survey.

Scope of NSS 68th round Survey on Employment and Unemployment
The critical issues in the context of labour force enquiries pertain to defining the labour force and measuring participation of labour force in different economic activities. In the employment and unemployment surveys of the quinquennial rounds of NSSO, persons are classified into various activity categories in three approaches on the basis of activities (economic/non-economic) pursued by them during certain specified reference periods. The three approaches are usual status approach, current weekly status approach and the current daily status approach. Three reference periods used in NSS surveys are (i) one year, (ii) one week and (iii) each day of the reference week. In the usual status approach, the activity status of a person is determined on the basis of the reference period of one year. The activity status of a person in current weekly status approach is determined on the basis of the reference period of one week and that in current daily status approach is determined on the basis of the reference period of one day. Based on the classification of the individuals into various activity categories in the three approaches, labour force indicators like, labour force participation rate (LFPR), worker population ratio (WPR), unemployment rate (UR) are derived in usual status (ps), usual status (ps+ss), current weekly status (CWS) and current daily status (CDS). As in the past, through the employment and unemployment schedule (Schedule 10) of 68th round, NSSO collected data to measure employment and unemployment indicators in terms of usual status (ps), usual status (ps+ss), current weekly status (CWS) and current daily status (CDS).

Contents of this Report
This report contains three chapters, including the present introductory chapter (Chapter One), and three appendices. Chapter Two describes the concepts and definitions of those terms used in the survey in connection with the various items covered in this report. The summary of survey findings of NSS 68th round are presented and discussed in Chapters Three. The detailed tables forming the basis of this report are presented in Appendix A. Appendix B gives a detailed description of the sample design and estimation procedure used for the survey. Appendix C gives a facsimile of the schedule (Schedule 10.0) canvassed in the survey.
In the NSS reports, the estimates of the employment and unemployment characteristics are generally presented as ratios. It may also be noted that as the tables are generally presented as 'per 1000 distribution' or rates 'per 1000', the figures are rounded off. Thus, while using the ratios from the survey results, it is to be noted that the accuracy of these derived aggregates will be limited to the

number of significant digits available in such ratios. The estimates of the employment and unemployment characteristics have been presented in this report for the State of Nagaland. While using the estimates, it may be noted that the sample sizes for the smaller States like Nagaland may not be adequate enough for getting sufficiently reliable estimates for some of the employment and unemployment characteristics.

Appendix A contains the detailed tables of the report. The survey estimates of the aggregates are presented in the margin of the detailed tables and these may be used to combine the estimates of the ratios or to get the ratios with more significant digits. The cell level figures in the detailed tables, when added up, may not exactly be equal to the figure shown against the 'total' column/row due to rounding off and/or presence of non-response cases. If there are no sample households/persons in a particular category, the estimates/estimated proportions of households/persons in that category appear as zero (0) in the detailed tables. Estimated numbers per 1000 are also shown as zero (0), when they are greater than 0 but less than 0.5.

Chapter Two
Concepts and Definitions

2.0 The concepts and definitions of some important terms used in the survey and relevant to this report are explained in the following paragraphs.

2.1 *Household and household size***:** A group of persons who normally lived together and took food from a common kitchen constituted a household. The adverb "normally" means that temporary visitors and guests (whose total period of stay in the household was expected to be less than 6 months) were excluded but temporary stay-aways (whose total period of absence from the household was expected to be less than 6 months) were included. Thus a child residing in a hostel for studies was excluded from the household of his/her parents, but a resident domestic servant or paying guest (but not just a tenant in the house) was included in the employer's/host's household. "Living together" was given more importance than "sharing food from a common kitchen" in drawing the boundaries of a household in case the two criteria were in conflict. However, in the special case of a person taking food with his family but sleeping elsewhere (say, in a shop or a different house) due to shortage of space, the household formed by such a person's family members was taken to include the person also. Each inmate of a hotel, mess, boarding-lodging house, hostel, etc., was considered to be a single-member household. The same principle was applicable for the residential staff of such establishments. However, if a group of persons among them pooled their income for spending, they were treated as forming a single household. A family living in a hotel was treated as a single household. The size of a household is the total number of persons in the household.

2.2 *Age (years)***:** The age in completed years, as on the date of survey, of the household members were recorded.

2.3 *Household type***:** The household type was decided based on the sources of the household's income during the 365 days preceding the date of survey. For this purpose, only the household's income (net income and not gross income) from economic activities was considered; but the incomes of servants and paying guests were not taken into account.
In **rural** areas, a household belonged to any one of the following six household types:
1. self-employed in agriculture
2. self-employed in non-agriculture
3. regular wage/salary earning
4. casual labour in agriculture
5. casual labour in non-agriculture

6. others

For **urban** areas, the household types are:

1. self-employed
2. regular wage/salary earning
3. casual labour
4. others

2.4 *Land owned by the household as on date of survey*: A piece of land was considered as 'owned by the household' if permanent heritable possession with or without the right to transfer the title was vested in a member or members of the household. Land held in owner-like possession say, under perpetual lease, hereditary tenure, long-term lease for 30 years or more, etc., was also considered as land owned.

2.5 *Land possessed by the household as on date of survey*: The area of land possessed included land 'owned', 'leased in' and 'land neither owned nor leased in' (i.e. encroached) by the household but excluded land 'leased out'. For a piece of land under the possession of the household, if the household did not have the title of ownership and also did not have lease agreement for the use of land transacted, either orally or in writing, such land was considered as 'neither owned nor leased in'. In collecting information regarding land possessed, the actual position as obtained on the date of survey was considered. The 'area of land possessed' did not include the area of land owned, leased-in, etc. by the servants/paying guests who were considered as normal members of the household, as per the definition of household taken up for the survey.

2.6 *Land cultivated (including orchard and plantation) during July 2010-June 2011*: Land cultivated (including orchard and plantation) during the agricultural year 2010-2011, i.e., July 2010 to June 2011 was recorded considering cultivation of land from the land 'owned', 'land leased-in' or from 'land neither owned nor leased-in'. Area with field crops and area under orchards and plantations was counted only once in the same year/ season. It may be noted that information on land owned, possessed or cultivated as described above was collected in hectares upto 3 places of decimals.

2.7 *General educational level*: A person who can both read and write a simple message with understanding in at least one language was considered as literate for the purpose of the survey.

For all the individuals who were found to be literate, the general level of education was collected in terms of highest level of education successfully completed by him/her. Highest level of education successfully completed by each member of the household was decided by considering his/ her all general/ technical/ vocational educational level and was recorded in terms of 12 categories viz. *(i) not literate, (ii)* literate without formal schooling*: (a) Education Guarantee Scheme (EGS)/Non-formal Education Courses (NFEC)/ Adult Literacy Centres (AEC), (b) Total*

Literacy Campaign (TLC), (c) others; (iii) literate but below primary, (iv) primary (v) middle, (vi) secondary, (vii) higher secondary, (viii) diploma/certificate course, (ix) graduate, and (x) postgraduate and above. The criterion for deciding primary, middle, secondary, etc. levels were the same as that has been followed in the concerned states/union territories. The category 'diploma or certificate course' meant diploma or certificate courses in general education, technical education or vocational education, which is below graduation level. Diploma or certificate courses in general education, technical education or vocational education, which is equivalent to graduation level, was considered under the category 'graduate'. Similarly, diploma or certificate courses in general education, technical education or vocational education, which is equivalent to post-graduation level and above were considered under the category 'post-graduate and above'.

2.8 *Technical educational level***:** The highest level of technical education successfully completed by each member of the household was recorded in terms of 12 categories viz. *(i) no technical education, (ii) technical degree in agriculture / engineering / technology / medicine etc. (iii)* diploma or certificate below graduate level in*: (a) agriculture, (b) engineering/technology, (c) medicine, (d) crafts, (e) other subjects, and (iv)* diploma or certificate equivalent to graduate and above level in*: (a) agriculture, (b) engineering/technology, (c) medicine, (d) crafts, (e) other subjects*. Technical diploma or certificate in 'other subjects' included diploma or certificate in management, applied arts, etc.

2.9 *Vocational training*: The main objective of vocational education and training is to prepare persons, especially the youth, for the world of work and make them employable for a broad range of occupations in various industries and other economic sectors. It aims at imparting training to persons in very specific fields through providing significant 'hands on' experience in acquiring necessary skill in the specific vocation or trade, which make them employable or create for them opportunities of self-employment. A vocational training was broadly defined as a training, which prepared an individual for a specific vocation or occupation.

2.9.1 *Formal vocational training*: The vocational training that took place in educational and training institutions which followed a structured training programme and led to certificates, diplomas or degrees, recognised by State/Central Government, Public Sector and other reputed concerns was considered as formal vocational training. By structured training programme, it was meant that (i) the training programme had a definite title with prescribed syllabus and curriculum and a specified duration of the training, and (ii) the training had some entry level eligibility in terms of education and age.

2.9.2 Non-formal vocational training*:*
(a) *Hereditary*: The expertise in a vocation or trade is sometimes acquired by the succeeding generations from other members of the households, generally the ancestors, through gradual exposures to such works as are involved in carrying out the profession by their ancestors. The expertise gained through significant 'hands-on' experience enables the individual to take up activities in self-employment capacity or makes him employable. These were considered as nonformal vocational training acquired through 'hereditary' sources.
(b) *Self-learning*: The expertise in a vocation or trade when acquired by a person through his/her own effort, without any training under any person or organisation, was considered as non-formal vocational training acquired through 'self-learning'.
(c) *Learning on the job*: The expertise acquired by a person while in employment (current and/or past), either through informal training by the employer or organisation or through the exposure to the type of job that he/she was performing, was considered as non-formal vocational training acquired through 'learning on the job'.
(d) *Other*: 'Other' sources included cases where the expertise for a vocation or trade was developed even from the household members or ancestors, provided the said vocation or trade was different from the one relating to their ancestors.

2.10 *Economic activity*: The entire spectrum of human activity falls into two categories – economic activities and non-economic activities. Any activity resulting in production of goods and services that add value to national product was considered as an economic activity for the employment and unemployment survey. Such activities included (i) production of all goods and services for market (i.e. for pay or profit) including those of government services, (ii) production of primary commodities for own consumption and (iii) own account production of fixed assets.
2.10.1 The full spectrum of economic activities as defined in the UN system of National Accounts was not covered in the definition of economic activities adopted for the employment and unemployment survey of NSS 68th round. Although production of any good for own consumption is considered as economic activity by UN System of National Accounts, production of only primary goods for own consumption was considered as economic activity by NSSO for the purpose of the survey. While the former considers activities like own account processing of primary products as economic activities, processing of primary products for own consumption was not considered as economic activity in the NSS surveys.
2.10.2 The term 'economic activity' as defined in the employment and unemployment survey of NSS 68th round, therefore, included:
(i) all the market activities performed for pay or profit which result in production of goods and services for exchange.
(ii) of the non-market activities,

(a) all the activities relating to the agriculture, forestry, fishing, mining and quarrying sector (i.e. industry Divisions 01 to 09 of NIC-2008) which result in production of primary goods for own consumption (including free collection of uncultivated crops, forestry, firewood, hunting, fishing, mining, quarrying, etc.) and

(b) activities relating to the own-account production of fixed assets, which include production of fixed assets including construction of own houses, roads, wells, etc., and of machinery, tools, etc., for household enterprise and also construction of any private or community facilities free of charge. A person may be engaged in own account construction in the capacity of either a labourer or a supervisor. Activity status of a person was judged irrespective of the situation whether such activity was carried out illegally in the form of smuggling or not. As per the practice followed in earlier rounds, certain activities like prostitution, begging, etc., which though fetched earnings, were not considered as economic activities.

2.11 *Activity status*: It is the activity situation in which a person was found during a specified reference period with regard to the person's participation in economic and non-economic activities. According to this, a person could be in one or a combination of the following three broad activity statuses during the reference period:
(i) working or being engaged in economic activity (work),
(ii) being not engaged in economic activity (work) but either making tangible efforts to seek 'work' or being available for 'work' if 'work' is available and
(iii) being not engaged in any economic activity (work) and also not available for 'work'.
Broad activity statuses mentioned in (i) and (ii) above are associated with 'being in labour force' and the last with 'not being in the labour force'. Within the labour force, broad activity status (i) and (ii) were associated with 'employment' and 'unemployment', respectively.

2.11.1 Identification of each individual in terms of a unique activity status could pose a problem when more than one of the three broad activity statuses listed above were concurrently obtained for a person during the reference period. In such an eventuality, unique identification under any one of the three broad activity statuses (viz. employed/ unemployed/not in labour force) was done by adopting either *the major time criterion* or *priority criterion.* The former was used for classification of persons according to the usual status approach and the latter for classification of persons according to the current status approach (i.e., current weekly status and current daily status approaches).
Each of the three broad activity statuses was further sub-divided into several detailed activity categories. If a person categorised as engaged in economic activity was found to be pursuing more than one economic activity during the reference period, the appropriate detailed activity in terms of status and industry was

considered as that one corresponding to which relatively long time had been spent. A similar procedure was adopted for assigning detailed activity code for persons categorised as engaged in non-economic activity and pursuing more than one noneconomic activity.

2.11.2 The detailed activity statuses under each of the three broad activity statuses (viz. 'employed', 'unemployed' and 'not in labour force') and the corresponding codes used in the survey are given below:

Code   **Description**

Working (or employed)

Self-employed
11 worked in household enterprises (self-employed) as own-account worker
12 worked in household enterprises (self-employed) as an employer
21 worked in household enterprises (self-employed) as helper

Regular wage/ salaried employee
31 worked as regular wage/salaried employee

Casual labour
41 worked as casual labour in public works other than MGNREG public works
42 worked as casual labour in Mahatma Gandhi NREG public works
51 worked as casual labour in other types of works
61 did not work owing to sickness though there was work in household enterprise
62 did not work owing to other reasons though there was work in household enterprise
71 did not work owing to sickness but had regular salaried/wage employment
72 did not work owing to other reasons but had regular salaried/wage employment

Not working but seeking/available for work (or unemployed)
81 sought work or did not seek but was available for work (for usual status approach)
81 sought work (for current weekly status approach)
82 did not seek but was available for work (for current weekly status approach)
Neither working nor available for work (or not in labour force)
91 attended educational institutions
92 attended to domestic duties only
93 attended to domestic duties and was also engaged in free collection of goods (vegetables, roots, firewood, cattle feed, etc.), sewing, tailoring, weaving, etc. for household use
94 rentiers, pensioners, remittance recipients, etc.
95 not able to work owing to disability

97 others (including beggars, prostitutes, etc.)
98 did not work owing to sickness (for casual workers only)
99 children of age 0-4 years
It may be noted that codes 42, 61, 62, 71, 72, 82 and 98 were applicable for current weekly status and current daily status approaches only. It may also be noted that activity status code 41 in the usual status is used for casual labour in all types of public works, whereas in the current activity status, code 41 is for casual labour in public works other than MGNREG public works and code
42 is for casual labour in MGNREG public works.

2.12 *Workers (or employed)*: Persons who were engaged in any economic activity or who, despite their attachment to economic activity, abstained themselves from work for reason of illness, injury or other physical disability, bad weather, festivals, social or religious functions or other contingencies necessitating temporary absence from work, constituted workers. Unpaid household members who assisted in the operation of an economic activity in the household farm or non-farm activities were also considered as workers. Relevant activity status codes 11 to 72 were assigned for workers. Workers were further categorized as *self-employed (*relevant activity status codes: 11, 12, 21, 61, 62)*, regular wage /salaried employee (*relevant activity status codes: 31, 71, 72)*, and casual labour (*relevant activity status codes: 41, 42 and 51)*.

2.13 *Seeking or available for work (or unemployed)*: Persons who, owing to lack of work, had not worked but either sought work through employment exchanges, intermediaries, friends or relatives or by making applications to prospective employers or expressed their willingness or availability for work under the prevailing conditions of work and remuneration, were considered as those 'seeking or available for work' (or unemployed). Activity status codes 81 or 82 were assigned for unemployed.

2.14 *Labour force*: Persons who were either 'working' (or employed) or 'seeking or available for work' (or unemployed) constituted the labour force. Persons with activity status codes 11 – 82 constituted the labour force.

2.15 *Not in labour force*: Persons who were neither 'working' nor 'seeking or available for work' for various reasons during the reference period were considered as 'not in labour force'. Persons under this category are students, those engaged in domestic duties, rentiers, pensioners, recipients of remittances, those living on alms, infirm or disabled persons, too young persons, prostitutes, etc. and casual labourers not working due to sickness. Activity status codes 91-95, 97, 98 and 99 were assigned for persons belonging to category 'not in labour force'.

2.16 *Self-employed*: Persons who operated their own farm or non-farm enterprises or were engaged independently in a profession or trade on own-account or with one or a few partners were deemed to be self-employed in household enterprises. The essential feature of the selfemployed is that they have *autonomy* (decide how, where and when to produce) and *economic independence* (in respect of choice of market, scale of operation and finance) for carrying out their operation. The remuneration of the self-employed consists of a non-separable combination of two parts: a reward for their labour and profit of their enterprise.

2.16.1 *Categories of self-employed persons*: Self-employed persons were further categorised as follows:

(i) *own-account workers*: Self-employed persons who operated their enterprises on their own account or with one or a few partners and who, during the reference period, by and large, ran their enterprise without hiring any labour was considered as own-account workers. They could, however, have had unpaid helpers to assist them in the activity of the enterprise.

(ii) *employers*: Self-employed persons who worked on their own account or with one or a few partners and, who, by and large, ran their enterprise by hiring labour was considered as employers.

(iii) *helpers in household enterprise*: Self-employed persons who were engaged in their household enterprises, working full or part time and did not receive any regular salary or wages in return for the work performed was considered as helpers in household enterprise. They did not run the household enterprise on their own but assisted the concerned person living in the same household in running the household enterprise.

2.17 *Regular wage/salaried employee*: These were persons who worked in others' farm or nonfarm enterprises (both household and non-household) and, in return, received salary or wages on a regular basis (i.e. not on the basis of daily or periodic renewal of work contract). This category included not only persons getting time wage but also persons receiving piece wage or salary and paid apprentices, both full time and part-time.

2.18 *Casual labour*: A person, who was casually engaged in others' farm or non-farm enterprises (both household and non-household) and, in return, received wages according to the terms of the daily or periodic work contract, was considered as a casual labour.

2.19 *Public works***:** 'Public works' were those activities which were sponsored by Government or Local Bodies, and which cover local area development works like construction of roads, dams, bunds, digging of ponds, etc., as relief measures, or as an outcome of employment generation schemes under the poverty alleviation programmes such as Mahatma Gandhi National

Rural Employment Guarantee (MGNREG) works, Sampoorna Grameen Rozgar Yojana (SGRY), National Food for Work Programme (NFFWP), etc. The coverage of schemes under 'public works' is restricted to those schemes under poverty alleviation programmes, or relief measures through which the Government generated wage employment. The types of works that were generally undertaken through these schemes, were watershed development, drought proofing, land levelling, flood control, laying pipes or cables, sanitation, water harvesting, digging of irrigation canal, development of orchard, road construction, building construction / repair, running crèche, etc. There may be some schemes sponsored by the Government and in operation, which were conceived as self-employment generation schemes. Some such schemes of the Government were Swarnjayanti Gram Swarozgar Yojana (schemes under erstwhile IRDP merged with this), Rural Employment Generation Programme (REGP), Prime Minister's Rozgar Yojana (PMRY), Valmiki Ambedkar Awas Yojana (VAMBAY), etc. Employment generated through these schemes was not considered within the purview of 'public works'. Classification of individuals as 'casual labour in *public works*' required that the work in which they participated was '*public works*' as defined above. To distinguish between *'public works'* and works not classifiable as *'public works'*, some broad characteristics of *'public works'* were identified, viz. the primary objective was generation of wage employment and poverty alleviation, and creation of community asset as an outcome in achieving those main objectives. It is to be noted that for assigning current weekly and current daily activity status codes for the casual labour working in public works, codes 41 and 42 were used as follows:

(i) worked as casual labour in public works other than Mahatma Gandhi National Rural Employment Guarantee (MGNREG) public works – 41

(ii) worked as casual labour in Mahatma Gandhi National Rural Employment Guarantee (MGNREG) public works – 42

In the usual activity status, code 41 was used for casual labour in public works, which included all types of public works and code 42 was not applicable in the usual activity status.

2.20 Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA): The Mahatma Gandhi National Rural Employment Guarantee Act, 2005 (MGNREGA) is an important step towards the realization of the right to work and to enhance the livelihood security of the households in the rural areas of the country. According to this Act, Rural Employment Guarantee Schemes (REGS) are formed by the State Governments. The Scheme provides at least 100 days of guaranteed wage employment in every financial year to every household whose adult members volunteer to do unskilled manual work. Adult means a person who has completed his/ her eighteen years of age. Unskilled manual work means any physical work which any adult person is capable of doing without any special skill/ training. The implementing agency of the scheme may be any

Department of the Central Government or a State Government, a Zila Parishad, Panchayat/ Gram Panchayat or any local authority or Government undertaking or nongovernmental organization authorized by the Central Government or the State Government.

2.21 Different approaches followed to determine activity status: The persons surveyed were classified into various activity categories in three approaches on the basis of activities (economic/non-economic) pursued by them during certain specified reference periods. The three approaches are usual status approach, current weekly status approach and the current daily status approach. Three reference periods used in NSS surveys are (i) one year, (ii) one week and (iii) each day of the reference week. In the usual status approach, the activity status of a person is determined on the basis of the reference period of one year. The activity status of a person in current weekly status approach is determined on the basis of the reference period of one week and that in current daily status approach is determined on the basis of the reference period of one day. The procedures adopted to classify the persons into various activity categories according to the usual status approach, current weekly status approach and current daily status approach are elucidated below.

2.21.1 *Usual principal activity status:* The usual activity status relates to the activity status of a person during the reference period of 365 days preceding the date of survey. The activity status on which a person spent relatively long time (i.e. major time criterion) during the 365 days preceding the date of survey was considered as the *usual principal activity status* of the person. To decide the usual principal activity of a person, first a two stage dichotomous classification was followed for determining the broad usual principal activity status (employed or unemployed or not in labour force) of the person. At the first stage, persons were first categorised as those in the *labour force* (either employed or unemployed) and those *not in the labour force* depending on the major time spent during the 365 days preceding the date of survey. Persons thus adjudged as not belonging to the labour force were assigned the broad activity status 'neither working nor available for work' (*not in the labour force*). At the second stage, for persons belonging to the labour force, the broad activity status of either 'working' (*employed*) or 'not working but seeking and/or available for work' (*unemployed*) was ascertained based on the same criterion viz. relatively long time spent in accordance with either of the two broad statuses within the labour force during the 365 days preceding the date of survey. Within the broad activity status so determined, the detailed activity status of a person pursuing more than one such activity was determined once again on the basis of the relatively long time spent on such activities. In terms of activity status codes, codes 11-51 were assigned to persons classified as workers and codes 91-97 and 99 to those 'not in the labour force'. In

the usual status approach, a single code 81 was assigned to persons seeking or available for work (unemployed persons) while two separate codes 81 (sought work) and 82 (did not seek but was available for work) were assigned to unemployed persons according to current weekly status and current daily status approach.

2.21.2 *Usual subsidiary economic activity status*: A person whose usual principal activity status was determined on the basis of the major time criterion could have pursued some economic activity for a shorter time throughout the reference year of 365 days preceding the date of survey or for a minor period, which is not less than 30 days, during the reference year. The status in which such economic activity was pursued was the subsidiary economic activity status of that person. Activity status codes 11 to 51 only were used for the subsidiary economic activity performed by a person. It may be noted that engagement in work in subsidiary capacity may arise out of the following two situations:

(i) a person may be engaged in a relatively long period during the last 365 days in some economic (non-economic) activity and for a relatively short period (but not simultaneously), which is not less than 30 days (not necessarily for a continuous period), in another economic activity (any economic activity). The economic activity, which was pursued for a relatively short period was considered as his/her subsidiary economic activity.

(ii) a person may be pursuing an economic activity (non-economic activity) almost throughout the year in the principal status and also simultaneously pursuing another economic activity (any economic activity) for a relatively short time in a subsidiary capacity. The economic activity, which was pursued for a relatively short time, was considered as his/her subsidiary economic activity. If a person was categorised as worker according to usual principal status, then the subsidiary economic activity of the person was different from the principal activity either in terms of detailed work activity status or in terms of industry of work at the 2-digit level of NIC-2008.

2.21.3 *Usual activity status considering principal and subsidiary status taken together*: The usual status, determined on the basis of the usual principal activity and usual subsidiary economic activity of a person taken together, is considered as the activity status of the person according to usual status (ps+ss). According to the usual status (ps+ss), workers are those who perform some work activity either in the principal status or in the subsidiary status. Thus, a person who is not a worker in the usual principal status is considered as worker according to the usual status (ps+ss), if the person pursues some subsidiary economic activity for 30 days or more during 365 days preceding the date of survey.

2.21.4 *Current weekly activity status***:** The current weekly activity status of a person is the activity status obtaining for a person during a reference period of 7 days preceding the date of survey. It is decided on the basis of a certain *priority-cum- major time criterion.*

2.21.4.1 According to the *priority criterion*, the status 'working' gets priority over the status not working but seeking or available for work' that, in turn, gets priority over the status 'neither working nor available for work'. A person was considered 'working' (or employed) if he/she, while pursuing any economic activity, had worked for at least one hour on at least one day during the 7 days preceding the date of survey. A person was considered 'seeking or available for work' (or unemployed) if, during the reference week, the person was not classified as employed but he/she made efforts to get work/was available for work at least for one hour on any day during the reference week though not actively seeking work in the belief that no work was available. A person who had neither worked nor was available for work any time during the reference week was considered as engaged in non-economic activities (or not in labour force).

2.21.4.2 After deciding the *broad current weekly activity status* of a person on the *basis of 'priority' criterion*, the *detailed current activity status* was decided *on the basis of 'major time' criterion if that person pursued multiple economic activities*. The current weekly activity status of a person could be any of the valid codes within 11 to 99. Of these codes, 11 to 72 pertained to workers, 81 to 82 for unemployed and 91 to 99 for persons 'not in the labour force'.

2.21.5 *Current daily activity status:* The activity pattern of the population, particularly in the informal sector, is such that during a week, and sometimes, even during a day, a person could pursue more than one activity. Moreover, many people could even undertake both economic and non-economic activities on the same day of a reference week. The current daily activity status of a person was determined for each of the 7 days of the reference week. The activity status of a person on a day was determined on the basis of the activities pursued by him/her *using a priority-cum-major time criterion*. For each day of the reference week, time disposition was recorded for every member of the sample households. These involved recording of different activities pursued by the members along with the time intensity in quantitative terms for each day of the reference week. The different activities were identified and recorded in terms of 'activity status' and 'industry' codes for persons in urban areas and 'activity status', 'industry' and 'operation' codes for persons in rural areas. The description (and codes used) of current daily activity statuses is the same as those of current weekly activity status. The terms 'industry' and 'operation' are explained later. The following points were considered for assigning the time intensity and determining the current daily status of a person:

i) Each day of the reference week was looked upon as comprising either two 'half days' or a 'full day' for assigning the activity status. For recording time disposition for activities pursued by a person in a day, an intensity of 1.0 was given against an activity that was done for 'full day' and an intensity of 0.5 against the activity which was done for 'half day'.

ii) A person was considered 'working' (employed) for the full day if he/she had worked for 4 hours or more during the day.

iii) If a person was engaged in more than one of the economic activities for 4 hours or more on a day, he/she was assigned two out of the various economic activities on which he/she devoted relatively long time on the reference day. In such cases, an intensity of 0.5 was given for each of these two economic activities.

iv) If the person had worked for 1 hour or more but less than 4 hours, he/she was considered 'working' (employed) for half-day and 'seeking or available for work' (unemployed) or 'neither seeking nor available for work' (not in labour force) for the other half of the day depending on whether he was seeking/available for work or not.

v) If a person was not engaged in any 'work' even for 1 hour on a day but was seeking/available for work for 4 hours or more, he was considered 'unemployed' for the entire day. But if he was 'seeking/available for work' for more than 1 hour and less than 4 hours only, he was considered 'unemployed' for half day and 'not in labour force' for the other half of the day.

vi) A person who neither had any 'work' to do nor was available for 'work' even for half a day was considered 'not in labour force' for the entire day and was assigned one or two of the detailed non-economic activity statuses depending upon the activities pursued during the reference day.

2.22 In the employment and unemployment surveys of the quinquennial rounds of NSSO, the current weekly activity status of a person is derived from the intensities assigned for the different activities of a person during 7 days of the reference week.

2.23 *Industry and occupation of the work activity*: For the employed persons, to record the industry of work, 5-digit classification of NIC-2008 was used and to record the type of occupation, 3-digit classification of NCO-2004 was used. To identify certain category of workers under Division 97 (Activities of households as employers of domestic personnel) of NIC-2008, eight additional codes were used in the survey viz., housemaid /servant (97001), cook (97002), gardener (97003), gatekeeper/chowkidar/watchman (97004), governess/baby-sitter (97005), tutor

(97006), driver (97007) and 'others' (97009). Broad structure of NIC-2008 (Sections and Divisions) have been presented at the end of this Chapter in **Annexure I**.

2.24 *Operation*: This was the type of work performed by a person during a reference period. It could be manual or non-manual and could pertain to activities in agricultural or non-agricultural sector. Operation was combined with activity status and industry corresponding to the work performed. Information regarding the type of operation was collected *only for rural areas* and related to *current status only*. The different types of operations came under four categories.

Ploughing, sowing, transplanting, weeding, harvesting and other cultivation activities fell under the category *manual work in cultivation*. Against the category *manual work in other agricultural activities* were the following types: forestry, plantation, animal husbandry, fisheries and other agricultural activities. *Manual work in non-agricultural activities* constituted the third category. The last category viz. *non-manual work* comprised two broad types – (i) in 'cultivation' and (ii) in 'other than cultivation'. It may be noted that for 'regular salaried/wage employees' on leave or on holiday, the 'operation' related to their respective function in the work or job from which he/she was temporarily off. Similarly, for persons categorised as 'self-employed' but not working on a particular day in spite of having work on that day, the operation related to the work that he/she would have done if he/she had not enjoyed leisure on that day.

2.25 Cultivation: All activities relating to production of crops and related ancillary activities were considered as cultivation. Growing of trees, plants or crops as plantation or orchards (such as rubber, cashew, coconut, pepper, coffee, tea etc.) were not considered as cultivation activities for the purpose of this survey. In general, the activities covered under NIC-2008 classes 0111, 0112, 0113, 0114, 0116, 0119 and among class 0128 sub classes 01281, 01282, etc. were considered as cultivation.

2.26 Manual work: A job essentially involving physical labour was considered as manual work. However, jobs essentially involving physical labour but also requiring a certain level of general, professional, scientific or technical education were not to be termed as 'manual work'. On the other hand, jobs not involving much of physical labour and at the same time not requiring much educational (general, scientific, technical or otherwise) background were treated as 'manual work'. Thus, engineers, doctors, dentists, midwives, etc., were not considered manual workers even though their jobs involve some amount of physical labour. But peons, chowkidars, watchman, etc. were considered manual workers even though their work might not involve much physical labour. A few examples of manual workers are cooks, waiters, building caretakers, sweepers, cleaners and related workers, launderers, dry cleaners and pressers, hair dressers, barbers,

beauticians, watchmen, gate keepers, agricultural labourers, plantation labourers and related workers.

2.27 Wage-paid manual labour: A person who did manual work in return for wages in cash or kind or partly in cash and partly in kind (excluding exchange labour) was a wage paid manual labour. Salaries were also counted as wages. A person who was self-employed in manual work was *not treated* as a wage paid manual labour.

2.28 Nominal work: Work done by a person **for 1 - 2 hours in a day** during the reference week was said to be a day with nominal work for the person. In the day-to-day labour time disposition of the reference week, such a day's work was considered as half-day work (and it got half intensity while accounting). Therefore, for a person, number of days with nominal work is a subset of the number of days worked with 0.5 intensity.

2.29 *Wage and salary earnings*: Information on wage and salary earnings was collected separately for each of the wage/salaried work recorded for a person in a day. Here, earnings referred to the wage/salary income (and not total earnings taking into consideration of all other activities done) received/receivable for the wage/salaried work done during the reference week by a wage/salaried employee and casual labourer. The wage/ salary received or receivable may be in cash or kind or partly in cash and partly in kind. While recording the earnings following conventions were followed.

i) The wages in kind were evaluated at the current retail price.

ii) Bonus and perquisites such as free accommodation, reimbursement of expenditure for medical treatment, free telephones, etc. evaluated at the cost of the employer or at retail prices and duly apportioned for the reference week were also included in earnings.

iii) Amount receivable as 'over-time' for the additional work done beyond normal working time was excluded.

It may be noted that in the survey, at most two activities could be recorded for a person in a day. Therefore, it is possible that a person might have carried out two or more wage/salaried activities in a day, but only one activity or two activities at the most, depending upon the time spent on those activities, was recorded. In that case, the wage/salary income only from that activity(s) was collected and recorded separately, and not the total income of the person from all the activities done for the entire day.

2.30 *Present spell of unemployment*: The present spell of unemployment meant the continuous period for which a person remained unemployed starting from the day the person became unemployed to the survey date. For the new entrants into the labour force, the present spell meant the entire length of unemployment till the

date of survey, starting from the day such person joined in the labour force. For those who had any previous employment, the present spell meant the period starting from the day they were seeking or available for work after losing their last employment to the survey date.

2.31 *Approximate number of months without work***:** The months without work were not necessarily continuous. The 'approximate number of months without work' included those months in which a person was either unemployed or was not in the labour force. For deciding the number of months without work, each of the 12 months was considered separately and if, in a month the period without work was reported to be 15 days or more, it was considered as a month without work.

2.32 *Existence of union/association in the activity***:** Union/association meant any registered/recognised body whose membership is open to a section of those engaged in a specific activity or trade and whose main objective is to look into the interests of its members. Thus, besides the usual trade unions, union/association covered the association of owners, self-employed persons, etc.

2.33 Procedure for determining Household principal industry and occupation:
To determine the household principal industry and occupation, the general procedure followed was to list all the occupations pertaining to economic activities pursued by the members of the household excluding those employed by the household and paying guests (who in view of their staying and taking food in the household were considered as its normal members) during the one year period preceding the date of survey, no matter whether such occupations were pursued by the members in their principal or subsidiary (on the basis of earnings) capacity. Out of all the occupations listed, the one which fetched the maximum earnings to the household during the last 365 days preceding the date of survey was considered as the principal household occupation. If one or more members of the household pursued the household occupation in different industries, the particular industry out of all the different industries corresponding to the principal occupation, which fetched the maximum earnings, was considered as the principal industry of the household.

2.34 *Procedure for collecting monthly per capita consumer expenditure (MPCE)***:** Household consumer expenditure was measured as the expenditure incurred by a household on domestic account during a specified period, called reference period. It also included the imputed values of goods and services, which were not purchased but procured otherwise for consumption. In other words, it was the sum total of monetary values of all the items (i.e. goods and services) consumed by the household on domestic account during the reference period. The imputed rent of owner-occupied houses was excluded from consumption expenditure. Any expenditure incurred towards the productive enterprises of the

households was also excluded from the household consumer expenditure. Monthly per capita expenditure (MPCE) was the household consumer expenditure over a period of 30 days divided by household size. For collection of data on total expenditure of the household from employment and unemployment schedule (Schedule 10), a worksheet was used in the Schedule 10 of the 68th round. The approximate value of consumer expenditure obtained through the worksheet was used for studying employment and unemployment characteristics by different levels of living of the household members. The worksheet contained 36 different components of household consumer expenditure. Depending upon the type of item, either of the two reference periods viz. 30 days and 365 days, was used to record consumption of different groups of items. The items of consumption were classified into four groups and three different approaches viz (a) consumption approach, (b) expenditure approach and (c) first-use approach, were followed for defining consumption of items. The different groups were *(i) food (other than 'cooked meals'), pan, tobacco & intoxicants and fuel & light, (ii) cooked meals, miscellaneous goods and services including education, medical, rent, taxes and cess, (iii) clothing and footwear and (iv) durable goods*. The procedures followed for defining consumption of the four groups were *(i) consumption approach, (ii) expenditure approach, (iii) first-use approach and (iv) expenditure approach*, respectively. The definition of household consumer expenditure and the procedure for evaluating that was the same for both Schedule 10 and Schedule 1.0 (Household Consumer Expenditure).

2.35 *Conceptual Framework of Key Employment and Unemployment Indicators***:** From the employment and unemployment surveys of the quinquennial rounds of NSSO, the Key employment and unemployment Indicators viz. LFPR, WPR, PU and UR are derived for all the three approaches adopted in the survey. The definitions of these indicators are as follows:

1. *Labour force participation rate (LFPR):* LFPR is defined as the number of persons/person-days in the labour force (which includes both the employed and unemployed) per 1000 persons /person-days

2. *Worker Population Ratio (WPR):* WPR defined as the number of persons/person-days employed per 1000 persons/person-days.

3. *Proportion Unemployed (PU):* It is defined as the number of persons/person-days unemployed per 1000 persons/person-days.

4. *Unemployment Rate (UR):* UR is defined as the number of persons/person-days unemployed per 1000 persons/person-days in the labour force.

2.35.1 The architecture of key labour force indicators are given below in tabular form:

activity profile		key indicators
activity status (code)	category of persons	
11, 12, 21, 31, 41, 42, 51, 61, 62, 71, 72	Workers	**1. Labour Force Participation Rate (LFPR):** $$\frac{\text{No. of employed persons} + \text{no of unemployed persons}}{\text{total population}}*1000$$ **2. Worker Population Ratio (WPR):** $$\frac{\text{no of employed persons}}{\text{total population}}*1000$$
81, 82	unemployed	**3. Proportion Unemployed (PU):** $$\frac{\text{no of unemployed persons}}{\text{total population}}*1000$$
91, 92 93, 94, 95, 97, 98, 99	not in labour force	**4. Unemployment Rate (UR):** $$\frac{\text{No. of unemployed persons}}{\text{no of employed persons} + \text{no of unemployed persons}}*1000$$
Note: Activity status codes, 42, 61, 62, 71, 72, 82, and 98 are used only in *the current status* (in *CWS* and *CDS*) and the remaining activity status codes are used in both *usual* and in *current status*		

BROAD STRUCTURE of NIC -2008
(SECTIONS AND DIVISIONS)

Section A: Agriculture, forestry and fishing
Division 01: Crop and animal production, hunting and related service activities
Division 02: Forestry and logging
Section B: Mining and quarrying
Division 05: Mining of coal and lignite
Division 06: Extraction of crude petroleum and natural gas
Division 07: Mining of metal ores
Division 08: Other mining and quarrying
Division 09: Mining support service activities
Section C: Manufacturing
Division 10: Manufacture of food products
Division 11: Manufacture of beverages
Division 12: Manufacture of tobacco products
Division 13: Manufacture of textiles
Division 14: Manufacture of wearing apparel
Division 15: Manufacture of leather and related products
Division 16: Manufacture of wood and products of wood and cork, except furniture; manufacture of articles of straw and plaiting materials
Division 17: Manufacture of paper and paper products
Division 18: Printing and reproduction of recorded media
Division 19: Manufacture of coke and refined petroleum products
Division 20: Manufacture of chemicals and chemical products
Division 21: Manufacture of pharmaceuticals, medicinal chemical and botanical products
Division 22: Manufacture of rubber and plastics products
Division 23: Manufacture of other non-metallic mineral products
Division 24: Manufacture of basic metals
Division 25: Manufacture of fabricated metal products, except machinery and equipment
Division 26: Manufacture of computer, electronic and optical products
Division 27: Manufacture of electrical equipment
Division 28: Manufacture of machinery and equipment n.e.c.
Division 29: Manufacture of motor vehicles, trailers and semi-trailers
Division 30: Manufacture of other transport equipment
Division 31: Manufacture of furniture
Division 32: Other manufacturing
Division 33: Repair and installation of machinery and equipment
Section D: Electricity, gas, steam and air conditioning supply
Division 35: Electricity, gas, steam and air conditioning supply

Section E: Water supply; sewerage, waste management and remediation activities

Division 36: Water collection, treatment and supply

Division 37: Sewerage

Division 38: Waste collection, treatment and disposal activities; materials recovery

Division 39: Remediation activities and other waste management services

Section F: Construction

Division 41: Construction of buildings

Division 42: Civil engineering

Division 43: Specialized construction activities

Section G: Wholesale and retail trade; repair of motor vehicles and motorcycles

Division 45: Wholesale and retail trade and repair of motor vehicles and motorcycles

Division 46: Wholesale trade, except of motor vehicles and motorcycles

Division 47: Retail trade, except of motor vehicles and motorcycles

Section H: Transportation and storage

Division 49: Land transport and transport via pipelines

Division 50: Water transport

Division 51: Air transport

Division 52: Warehousing and support activities for transportation

Division 53: Postal and courier activities

Section I: Accommodation and Food service activities

Division 55: Accommodation

Division 56 Food and beverage service activities

Section J: Information and communication

Division 58: Publishing activities

Division 59: Motion picture, video and television programme production, sound recording and music publishing activities

Division 60: Broadcasting and programming activities

Division 61: Telecommunications

Division 62: Computer programming, consultancy and related activities

Division 63: Information service activities

Section K: Financial and insurance activities

Division 64: Financial service activities, except insurance and pension funding

Division 65: Insurance, reinsurance and pension funding, except compulsory social security

Division 66: Other financial activities

Section L: Real estate activities

Division 68: Real estate activities

Section M: Professional, scientific and technical activities

Division 69: Legal and accounting activities

Division 70: Activities of head offices; management consultancy activities

Division 71: Architecture and engineering activities; technical testing and analysis
Division 72: Scientific research and development
Division 73: Advertising and market research
Division 74: Other professional, scientific and technical activities
Division 75: Veterinary activities
Section N: Administrative and support service activities
Division 77: Rental and leasing activities
Division 78: Employment activities
Division 79: Travel agency, tour operator and other reservation service activities
Division 80: Security and investigation activities
Division 81: Services to buildings and landscape activities
Division 82: Office administrative, office support and other business support activities
Section O: Public administration and defence; compulsory social security
Division 84: Public administration and defence; compulsory social security
Section P: Education
Division 85: Education
Section Q: Human health and social work activities
Division 86: Human health activities
Division 87: Residential care activities
Division 88: Social work activities without accommodation
Section R: Arts, entertainment and recreation
Division 90: Creative, arts and entertainment activities
Division 91: Libraries, archives, museums and other cultural activities
Division 92: Gambling and betting activities
Division 93: Sports activities and amusement and recreation activities
Section S: Other service activities
Division 94: Activities of membership organizations
Division 95: Repair of computers and personal and household goods
Division 96: Other personal service activities
Section T: Activities of households as employers; undifferentiated goods and services producing activities of households for own use
Division 97: Activities of households as employers of domestic personnel
Division 98: Undifferentiated goods and services producing activities of private households for own use
Section U: Activities of extraterritorial organizations and bodies
Division 99: Activities of extraterritorial organizations and bodies

Chapter Three
Summary of Survey Findings

The summary of findings of the Employment and Unemployment survey of NSS 68th round conducted during July 2011- June 2012 in Nagaland are presented in this chapter. (

Table 1: Number of Villages, Urban Blocks and Households surveyed.

No. of FSUs Surveyed			No. of Households Surveyed		
Villages(Rural)	Blocks(Urban)	All	Rural	Urban	All
88	120	208	704	960	1664

In the NSS 68th Round conducted during July 2011-June 2012, the survey was spread over 88 rural villages and 120 urban blocks. In the 88 sample villages, 704 households were surveyed and 760 households were surveyed in 120 urban blocks. A total of 1664 households in Nagaland were surveyed in the 68th Round.

Table 2: Number of Persons (Gender-wise) surveyed.

Rural			Urban		
Male	Female	All	Male	Female	All
1703	1493	3196	2367	2127	4494

In the rural sector, out of 3196 persons enumerated 1703 (53.29%) were male and 1493 (46.71%) were female. In the urban blocks, a total of 4494 persons were enumerated out of which 2367 (52.67%) were male and 2127(48 .33%) were female. The total persons enumerated in Nagaland was 7690 out of the total population of 19,90,036 persons as per 2001 Census which accounts for a meagre 0.38% .

Table 3: Number of households with no literate member/female member of age 15 years and above per 1000 households.

Sector	Households with no literate member of age 15+ per 1000 households	
	All member	Female member
Rural	29	43
Urban	8	22
All	21	34

Table 3 shows that out of per thousands households surveyed, 29 households in rural and 8 households in urban have no literate member of age 15 and above in

the 'all member' category households. In the female member households, the figure is 43 and 22 in the rural and urban sector respectively. This clearly indicates that the ratio of illiteracy is higher in the case of female member households in both rural and urban sector.

Table 4: Per 1000 distribution of persons of age 15 years and above by general education level during 2009-10.

Sector	Sex	General education level							
		Not literate	Literate up to primary	Middle	Secondary	Higher secondary	Diploma/ certificate course	Graduate & above	Total (All)
Rural	Male	54	114	203	257	217	13	142	1000
	Female	63	159	215	272	203	7	80	1000
Urban	Male	22	52	140	221	268	29	268	1000
	Female	28	7	160	251	283	26	165	1000

Table 4 depicts per 1000 distribution of persons of age 15 years and above by general education level during 2009-10. The information contained in this table has an important bearing on the present report in analysing the employment and unemployment situation in Nagaland. This is because the higher the educational attainment level (literacy rate), the higher the employability and productivity and vice-versa.

The above table shows that out of per 1000 distribution of persons of age 15 years and above 5.4% of male and 6.3% of female in the rural, and 2.2% of male and 2.8% of female in the urban were illiterate. In both the rural and urban sectors, the illiteracy rate is higher for female. For majority of the population in the rural, the highest educational attainment was up to secondary (25.7% for rural male and 27.2% for rural female), whereas the higher proportion of the population in the urban were getting education up to higher secondary (26.8% male and 28.3% female). A meagre 1.3% of male and 0.7% of female in the rural, and 2.9% of male and 2.6% of female in the urban obtained Diploma or certificate courses. Another glaring feature of the general educational attainment in the State is that only 14.2% of male and 8% of female in the rural, and 26.8% of male and 16.5% of female in the urban were holding degree of graduate and above.

Table 5: Per 1000 distribution of households by principal industry.

Principal household industry	Rural	Urban	Nagaland (Rural + Urban)
Agriculture	547	39	344
Mining & quarrying	0	0	0
Manufacturing	24	19	22
Electricity, gas & water supply	0	2	1
Construction	5	9	6
Trade, hotel & restaurant	137	205	164
Transport, storage & communications	9	34	19
Other Services	270	625	412
All (inc.not reported)	1000	1000	1000

*Note: As per NIC - 2008 which was used in the current survey for recording industry of work for the employed persons, the different industry sections comprised the broad industry divisions mentioned in column 1 of Table 5 are as follows: **agriculture** - section A; **mining & quarrying** - section B; **manufacturing** - section C; **electricity, water, etc. -** sections D & E; construction - section F; **trade, hotel & restaurant** - sections G & I; **transport, storage & communications** –sections H & J; other services –sections K to U.(Refer Chapter 2 ANNEXURE 1).*

Table 5 presents per 1000 distribution of Naga households by principal industry. If one or more members of the household pursued the household occupation in different industries, the particular industry out of all the different industries corresponding to the principal occupation, which fetched the maximum earnings, was considered as the principal industry of the household. Going by this definition, agriculture was the principal industry for 54.7% of the rural households and for negligible 4% of the urban households. This clearly illustrates that more than half of the rural population are dependent on agriculture and other agri-allied activities which fetched them maximum earnings for their livelihood. On the other hand, 'other services' was the principal industry for 62.50% of the urban households. For Nagaland as a whole, 'other services' was the principal industry for 41.2% of households, followed by agriculture (34.4%), and by trade, hotel & restaurant (16.4%).

Table 6: Per 1000 distribution of households by principal occupation.

Broad occupation division (NCO-2004 Division)	Rural	Urban	Nagaland
1	12	49	27
2	11	74	36
3	116	180	142
4	57	131	86
5	196	270	225
6	543	50	346
7	11	48	26
8	33	66	46
9	14	64	34
X	0	0	0
All (inl.n.r)	1000	1000	1000

The occupation divisions of NCO-2004 are: **Division 1:** *Legislators, senior officials and managers,* **Division 2:** *Professionals,* **Division 3:** *Technicians and associate professionals,* **Division 4:** *Clerks,* **Division 5:** *Service workers and shop & market sales workers,* **Division 6**: *Skilled agricultural and fishery workers,* **Division 7:** *Craft and related trades workers,* **Division 8**: *Plant and machine operators and assemblers,* **Division 9**: *Elementary occupations and* **Division X**: *Workers not classified by occupations.*

Table 6 gives per 1000 distribution of households by principal occupation. The principal household occupation is that occupation which fetched the maximum earnings to the household out of all the occupations listed during the last 365 days preceding the date of survey. Accordingly, almost 55% of the rural households belong to Broad Occupation Division (NCO-2004 Division) 6 which means that almost 55% of the rural population were '*skilled agricultural and fishery workers*'. On the contrary, 27% of the urban households were '*Service workers and shop & market sales workers*'. For the state of Nagaland, Division 6 was the principal occupation for 34.6% of the households, followed by Division 5 (for 22.5% of the households), and by Division 3(*Technicians and associate professionals)* for about 14 % of the households.

Table 7 (a): Per 1000 distribution of households by household type (rural).

Household type	Rural
Self-employed in:	
Agriculture	515
Non-agriculture	174
Self-employed	**689**
Regular wage salary earning	242
Casual labour in:	
Agriculture	30
Non-agriculture	1
Casual labour	**31**
Others	38
All	1000

Table 7 (a) shows the per 1000 distribution of households by household type in the rural sector of Nagaland where 68.90% of the households are self-employed, out of which 51.50% are self-employed in agriculture and 17.40% in non-agriculture. The table shows that 24.2% of the households are regular salary wage earners and only about 3% are casual labourers' households.

Table 7 (b): Per 1000 distribution of households by household type (urban).

Household type	Urban
Self-employed	327
Regular wage salary earning	567
Casual labour	24
Others	82
All	1000

Table 7 (b) shows the per 1000 distribution of households by household type in the urban sector of Nagaland where 32.70% of the households are self-employed, 56.70% of the households are regular salary wage earners and only about 2.4% are casual labourers' households.

The two tables clearly indicate that the proportion of households engaged in self employment is higher in rural sector (68.90% of the households) than in the urban (32.70% of the households). On the contrary, higher percentage of the urban households are regular wage salary earners (56.70% of the households) as against 24.2% of the households in the rural sector.

Table 8: Number of households having MGNREG job card per 1000 households, number of job cards per 1000 households and number of households having bank/post office account per 1000 households for decile class of household monthly per capita consumer expenditure (rural).

Decile classes on monthly per capita consumer expenditure	No. of households having MGNREG job card per 1000 households	No. of job cards per 1000 households reported having MGNREG job card	No. of households having bank/post office per 1000 households reported having MGNREG job card
1	2	3	4
0-10	868	1024	644
10-20	745	1163	499
20-30	812	1000	476
30-40	700	1160	415
40-50	864	1107	411
50-60	851	1012	831
60-70	705	1000	735
70-80	693	1093	829
80-90	736	1000	562
90-100	594	1009	770
All classes	**750**	**1053**	**619**

Table 8 reflects that the highest proportion of rural households (86.80%) having MGNREG job cards belongs to the households with lower monthly per capita consumer expenditure (i.e. 0-10 decile class). This clearly explains that the rural households with weaker purchasing power are most actively participating in the MDNREG scheme. On the whole, 75% of the households were reported to having MGNREG job cards during 2011-12. Column 3 shows that per 1000 households were reported to be having 1053 MGNREG job cards which indicates that on an average, every household is having more than one job card.

Table 9: Number of persons of age 18 years and above registered in MGNREG job card per 1000 persons of age 18 years and above and their per 1000 distribution of getting work in MGNREG works during last 365 days (rural).

	Number of persons of age 18 years and above registered in MGNREG job card per 1000 persons of age 18	Per 1000 distribution of persons age 18 years and above registered in MGNREG job card by status of getting job in MGNREG works.			
		Worked	Sough but did not get work	Did not seek work	All (inc.n.r)
Male	512	927	38	35	1000
Female	224	919	38	43	1000
Persons	367	924	38	37	1000

Table 9 gives the gender-wise number of persons of age 18 years and above registered in MGNREG job card per 1000 persons of age 18 years and above and their per 1000 distribution of getting work in MGNREG works during last 365 days (rural). It can be inferred from the table that about 51% and 22% of male and female rural population respectively of age 18 years and above were registered in MGNREG job card per 1000 persons of age 18 years and above. About 92% of the rural population got MRNREG job and actually worked, 3.8% sought but did not get job while 3.7% of the rural population did not seek MGNREG work during the last 365 days.

Estimates of Employment and Unemployment

Three different estimates of Employment and Unemployment are obtained following three different approaches in determining the activity status of a person. The persons surveyed were classified into various activity categories in three approaches on the basis of activities (economic/non-economic) pursued by them during certain specified reference periods. The three approaches are:-
1. **Usual Status (US):** In the usual status approach, the activity status of a person is determined on the basis of the reference period of one year.
2. **Current Weekly Status (CWS):** The activity status of a person in current weekly status approach is determined on the basis of the reference period of one week.
3. **Current Daily Status (CDS):** The activity status of a person in current daily status approach is determined on the basis of the reference period of one day.

Labour Force: Persons who were either 'working' (or employed) or 'seeking or available for work' (or unemployed) constituted the labour force. Labour force,

or in others words, the 'economically active' population, refers to the population which supplies or seeks to supply labour for production and, therefore, includes both 'employed' and 'unemployed' persons. Four different estimates of the labour force have been obtained based on the three approaches (viz. usual status approach, current weekly status approach and current daily status approach) adopted in the survey for classification of the population by activity statuses.
These are:
(i) number of persons in the labour force according to the *usual status (ps)* i.e. by considering usual principal activity only,
(ii) number of persons in the labour force according to the *usual status (ps+ss)* i.e. by considering usual principal and subsidiary activity together,
(iii) number of persons in the labour force according to the *current weekly status*, and
(iv) number of person-days in the labour force according to the *current daily status*.

Table 10: Percentage distribution of labour force according to Usual, Current Weekly and Current Daily Status.

Activity Status	Rural			Urban			State		
	Male	Female	Person	Male	Female	Person	Male	Female	Person
Usual (PS+SS)	44.4	23.6	34.6	44.0	15.9	30.1	44.3	20.7	33.1
Current Weekly	44.2	23.4	34.4	44.0	15.9	30.7	44.1	20.5	32.9
Current Daily	44.2	23.4	34.4	44.0	15.9	30.7	44.1	20.5	32.9

Table 10 shows the percentage distribution of labour force by different approaches. It is observed that the proportion of labour force to total population is much higher for male than female in both rural and urban sectors. According to usual status, while 44.4% of male population were in labour force, only 23.6% of female constitute labour force in rural sector. Likewise in urban sector also 44% of male population were in labour force as against 15.9% of female population.

Employment: Persons who are engaged in any economic activity including those temporarily absent from work constitute workers, and are considered as employed. Four different estimates of the employed have been obtained based on the three approaches (viz. usual status approach, current weekly status approach and current daily status approach) adopted in the survey for classification of the population by activity statuses.
These are:
(i) number of persons employed according to the *usual status* (ps) i.e. by considering usual principal activity only,

(ii) number of persons employed according to the *usual status* (ps+ss) i.e. by considering usual principal and subsidiary activity together,
(iii) number of persons employed according to the *current weekly status*, and
(iv) number of person-days employed according to the *current daily status*.

Table 11: Percentage distribution of persons Employed according to Usual, Current Weekly and Current Daily Status.

Activity Status	Rural			Urban			State		
	Male	Female	Person	Male	Female	Person	Male	Female	Person
Usual (PS+SS)	42.8	22.3	33.1	41.3	130	27.9	42.2	18.7	31.1
Current Weekly	42.8	22.3	33.1	41.3	13.0	27.9	42.2	18.7	31.1
Current Daily	42.8	22.3	33.1	41.3	13.0	27.9	42.2	18.7	31.1

It can be inferred from Table 11 that in all the three approaches, higher proportion of male population was gainfully employed in both rural and urban sectors. In rural sector, 42.8% and 22.3% of male and female respectively were employed. In urban sector, while 41.3% of male labour force was employed, only 13% of female labour force was employed during the same period.

Unemployment: Persons who, owing to lack of work, had not worked but either sought work or expressed their willingness or availability for work under the prevailing conditions of work and remuneration, were considered as those 'seeking or available for work' (or unemployed). As in the case of employed, for unemployed also, four kinds of estimates are obtained following the three different approaches for classification of population by activity statuses.
These are:
(i) number of persons unemployed in the *usual status (ps)*,
(ii) number of persons unemployed in the *usual status (ps+ss)*,
(iii) number of persons unemployed in the *current weekly status*, and
(iv) number of person-days unemployed in the *current daily status*.

Table 12: Percentage distribution of Unemployed persons according to Usual, Current Weekly and Current Daily Status.

Activity Status	Rural			Urban			State		
	Male	Female	Person	Male	Female	Person	Male	Female	Person
Usual (PS+SS)	1.6	1.4	1.5	2.7	3.0	2.8	2.0	2.0	2.0
Current Weekly	1.4	1.2	1.3	2.7	2.9	2.8	1.9	1.8	1.9
Current Daily	1.4	1.2	1.3	2.7	2.9	2.8	1.9	1.8	1.9

It is seen from Table 12 that unemployment rate is significantly higher in urban areas than rural areas of Nagaland according to all the three approaches. To certain extent, the reason for this phenomenon can be attributed to large-scale rural-urban migration due to various 'push' and 'pull' factors. Further in urban sector, the unemployment rate is higher for female than male.

Appendix A
List of Detailed Tables

Appendix B
Sample Design and Estimation Procedure

1. Introduction

1.1 The National Sample Survey (NSS), set up by the Government of India in 1950 to collect socio-economic data employing scientific sampling methods, started its sixty-eighth round from 1st July 2011. The survey will continue up to 30th June 2012.

1.2 **Subject Coverage:** The 68th round (July 2011-June 2012) of NSS is earmarked for surveys on 'Household Consumer Expenditure' and 'Employment and Unemployment'. The last survey on these subjects was conducted in 66th round of NSS (2009-10) which was the eighth quinquennial survey in the series on 'Household consumer expenditure' and 'Employment and Unemployment'. Current survey is similar to a quinquennial survey as far as subjects of enquiry, design, questionnaires and sample sizes are concerned.

2. Outline of Survey Programme

2.1 **Geographical coverage:** The survey covers the whole of the Indian Union *except* (i) interior villages of Nagaland situated beyond five kilometres of the bus route and (ii) villages in Andaman and Nicobar Islands which remain inaccessible throughout the year.

2.2 **Period of survey and work programme:** The period of survey is of one year duration starting on 1st July 2011 and ending on 30th June 2012. The survey period of this round is divided into four sub-rounds of three months' duration each as follows:

sub-round 1	:	July - September 2011
sub-round 2	:	October - December 2011
sub-round 3	:	January - March 2012
sub-round 4	:	April - June 2012

In each of these four sub-rounds equal number of sample villages/ blocks (FSUs) allotted for survey with a view to ensuring uniform spread of sample FSUs over the entire survey period. Attempt will be made to survey each of the FSUs during the sub-round to which it is allotted. *Because of the arduous field conditions, this restriction need not be strictly enforced in Andaman and Nicobar Islands, Lakshadweep and rural areas of Arunachal Pradesh and Nagaland.*

2.3 **Schedules of enquiry:** During this round, the following schedules of enquiry are being canvassed:

Schedule 0.0	:	list of households
Schedule 1.0	:	consumer expenditure
Schedule 10	:	employment and unemployment

Two types of Schedule 1.0 viz. Schedule Type 1 and Schedule Type 2 are being canvassed in this round. Schedule Type 1 and Type 2 are similar to those of NSS 66th round.

2.4 **Participation of States:** In this round all the States and Union Territories except Andaman & Nicobar Islands, Chandigarh, Dadra & Nagar Haveli and Lakshadweep are participating. The following is the matching pattern of the participating States/ UTs.

Nagaland (U)	: triple
Andhra Pradesh, J & K , Manipur , Delhi	: double

Maharashtra (U) & Kerala	: one and half
Gujarat	: half
Remaining States/ UTs	: equal

3 Sample Design

3.1 Outline of sample design: A stratified multi-stage design has been adopted for the 68th round survey. The first stage units (FSU) are the 2001 census villages (Panchayat wards in case of Kerala) in the rural sector and Urban Frame Survey (UFS) blocks in the urban sector. The ultimate stage units (USU) are households in both the sectors. In case of large FSUs, one intermediate stage of sampling is the selection of two hamlet-groups (hgs)/ sub-blocks (sbs) from each rural/ urban FSU.

3.2 Sampling Frame for First Stage Units: *For the rural sector,* the list of 2001 census villages (henceforth the term 'village' would include also Panchayat wards for Kerala) constitutes the sampling frame. *For the urban sector*, the list of UFS blocks (2007-12) is considered as the sampling frame.

3.3 Stratification: Within each district of a State/ UT, generally speaking, two basic strata have been formed: i) rural stratum comprising of all rural areas of the district and (ii) urban stratum comprising of all the urban areas of the district. However, within the urban areas of a district, if there are one or more towns with population 10 lakhs or more as per population census 2001 in a district, each of them forms a separate basic stratum and the remaining urban areas of the district are considered as another basic stratum.

3.4 Sub-stratification:

Rural sector r: If 'r' be the sample size allocated for a rural stratum, the number of sub-strata formed would be 'r/4'. The villages within a district as per frame were first arranged in ascending order of population. Then sub-strata 1 to 'r/4' have been demarcated in such a way that each sub-stratum comprised a group of villages of the arranged frame and have more or less equal population.

Urban sector: If 'u' be the sample size for an urban stratum, 'u/4' number of sub-strata have been formed. In case u/4 is more than 1, implying formation of 2 or more sub-strata, this is done by first arranging the towns in ascending order of total number of households in the town as per UFS phase 2007-12 and then arranging the IV units of each town and blocks within each IV unit in ascending order of their numbers. From this arranged frame of UFS blocks of all the towns/million plus city of a stratum, 'u/4' number of sub- strata formed in such a way that each sub-stratum has more or less equal number of households as per UFS 2007-12.

3.5 Total sample size (FSUs): 12784 FSUs have been allocated for the central sample at all-India level and 14772 FSUs have been allocated for state sample. State-wise allocation of sample FSUs has been given in Appendix Table-1.

3.6 Allocation of total sample to States and UTs: The total number of sample FSUs has allocated to the States and UTs in proportion to population as per census 2001 subject to a

minimum sample allocation to each State/ UT. While doing so, the resource availability in terms of number of field investigators has been kept in view.

3.7 **Allocation of State/ UT level sample to rural and urban sectors:** State/ UT level sample size has been allocated between two sectors in proportion to population as per *census 2001* with double weightage to urban sector. However, if such weighted allocation resulted in too high sample size for the urban sector, the allocation for bigger states like Maharashtra, Tamil Nadu, etc. was restricted to that of the rural sector. A minimum of 16 FSUs (minimum 8 each for rural and urban sector separately) is allocated to each state/ UT.

3.8 **Allocation to strata/ sub-strata:** Within each sector of a State/ UT, the respective sample size has been allocated to the different strata/ sub-strata in proportion to the population as per census 2001. Allocations at stratum level are adjusted to multiples of 4 with a minimum sample size of 4. Allocation for each sub-stratum is 4. Equal number of samples has been allocated among the four sub-rounds.

3.9 **Selection of FSUs:**
For the rural sector, from each stratum/ sub-stratum, required number of sample villages has been selected by probability proportional to size with replacement (PPSWR), size being the population of the village as per Census 2001.

For the urban sector, UFS 2007-12 phase has been used for all towns and cities and FSUs have been selected from each stratum/sub-stratum by using Simple Random Sampling Without Replacement (SRSWOR).

Both rural and urban samples are to be drawn in the form of two independent sub-samples and equal number of samples have been allocated among the four sub rounds.

 3.10 Selection of hamlet-groups/ sub-blocks - important steps

3.10.1 **Criterion for hamlet-group/ sub-block formation:** After identification of the boundaries of the FSU, it is first determined whether listing is to be done in the whole sample FSU or not. In case the population of the selected FSU is found to be 1200 or more, it has to be divided into a suitable number (say, D) of 'hamlet-groups' in the rural sector and 'sub-blocks' in the urban sector by more or less equalising the population as stated below.

approximate present population of the sample FSU	no. of hg's/sb's to be formed
less than 1200 (no hamlet-groups/sub-blocks)	1
1200 to 1799	3
1800 to 2399	4
2400 to 2999	5
3000 to 3599	6
…………..and so on	

For rural areas of Himachal Pradesh, Sikkim, Uttarakhand (except four districts Dehradun (P), Nainital (P), Hardwar and Udham Singh Nagar), Poonch, Rajouri, Udhampur, Doda, Leh (Ladakh), Kargil districts of Jammu and Kashmir and Idukki district of Kerala, the number of hamlet-groups are formed as follows:

approximate present population of the sample village		no. of hg's to be formed
less than 600	(no hamlet-groups)	1
600 to 899		3
900 to 1199		4
1200 to 1499		5
………..and so on		

3.10.2 **Formation and selection of hamlet-groups/ sub-blocks:** In case hamlet-groups/ sub-blocks are formed in the sample FSU, the same is done by more or less equalizing population.

Two hamlet-groups (hg)/ sub-blocks (sb) are selected from a large FSU wherever hamlet-groups/ sub-blocks have been formed in the following manner – one hg/ sb with maximum percentage share of population is always selected and termed as hg/ sb 1; one more hg/ sb is selected from the remaining hg's/ sb's by simple random sampling (SRS) and termed as hg/ sb 2. Listing and selection of the households is done independently in the two selected hamlet-groups/ sub-blocks. The FSUs without hg/ sb formation are treated as sample hg/ sb number 1. It is to be noted that if more than one hg/ sb have same maximum percentage share of population, the one among them which is listed first in block 4.2 of schedule 0.0 is treated as hg/ sb 1.

3.11 **Formation of second stage strata and allocation of households**

3.11.1 Two cut-off points 'A' and 'B' (in Rs.) have been determined from NSS 66th round data for each NSS state-region for urban areas in such a way that top 10% of the population have MPCE more than 'B' and bottom 30% of the population have MPCE less than A.

3.11.2: For both Schedule 1.0 and Schedule 10, households listed in the selected FSU/ hamlet-group/ sub-block are stratified into three second stage strata (SSS). Composition of the SSS and number of households to be surveyed from different SSS for each of the three schedules of enquiry namely, Schedule 1.0 (Type 1), Schedule 1.0 (Type 2) and Schedule 10 are as follows:

SSS	composition of SSS	number of households to be surveyed	
		FSU without hg/sb formation	FSU with hg/sb formation (for each hg/sb)
Rural			

SSS	composition of SSS	number of households to be surveyed	
		FSU without hg/sb formation	FSU with hg/sb formation (for each hg/sb)
SSS 1: relatively affluent households		2	1
SSS 2: of the remaining, households having principal earning from non- agricultural activity		4	2
SSS 3: other households		2	1
Urban			
SSS 1: households having MPCE of top 10% of urban population (MPCE > B)		2	1
SSS 2: households having MPCE of middle 60% of urban population (A ≤ MPCE ≤ B)		4	2
SSS 3: households having MPCE of bottom 30% of urban population (MPCE < A)		2	1

3.12 **Selection of households:** From each SSS the sample households for each of the schedules are selected by SRSWOR. If a household is selected for more than one schedule, only one schedule is canvassed in that household in the priority order of Schedule 1.0 (Type 1), Schedule 1.0 (Type 2) and Schedule 10 and in that case the household would be replaced for the other schedule. If a household is selected for Schedule 1.0 (Type 1) it is not selected for Schedule 1.0 (Type 2) or Schedule 10. Similarly, if a household is not selected for Schedule 1.0 (Type 1) but selected for Schedule 1.0 (Type 2) it is not selected for Schedule 10.

4. **Estimation Procedure**

4.1 **Notations:**

s = subscript for s-th stratum

t = subscript for t-th sub-stratum

m = subscript for sub-sample (m =1, 2)

i = subscript for i-th FSU [village (panchayat ward)/ block]

d = subscript for a hamlet-group/ sub-block (d = 1, 2)

j = subscript for j-th second stage stratum in an FSU/ hg/sb [j = 1, 2 or 3]

k = subscript for k-th sample household under a particular second stage stratum within an FSU/ hg/sb

D = total number of hg's/ sb's formed in the sample FSU

D* = 0 if D = 1

$\quad$ = (D – 1) for FSUs with D > 1

N = total number of FSUs in any urban sub-stratum

Z = total size of a rural sub-stratum (= sum of sizes for all the FSUs of a sub-stratum)

z = size of sample village used for selection.

n = number of sample FSUs surveyed including 'zero cases' but excluding casualty for a particular sub-sample and sub-stratum.

H = total number of households listed in a second-stage stratum of an FSU / hamlet-group or sub-block of sample FSU

h = number of households surveyed in a second-stage stratum of an FSU / hamlet-group or sub-block of sample FSU

x, y = observed value of characteristics x, y under estimation

$\hat{X}$, $\hat{Y}$ = estimate of population total X, Y for the characteristics x, y

Under the above symbols,

$y_{stmidjk}$ = observed value of the characteristic y for the k-th household in the j-th second stage stratum of the d-th hg/ sb (d = 1, 2) of the i-th FSU belonging to the m-th sub-sample for the t-th sub-stratum of s-th stratum.

However, for ease of understanding, a few symbols have been suppressed in following paragraphs where they are obvious.

4.2 Formulae for Estimation of Aggregates for a particular sub-sample and stratum × sub-stratum:

4.2.1 Schedule 0.0:

4.2.1.1 Rural:

(i) For estimating the number of households in a stratum × sub-stratum possessing a characteristic:

$$\hat{Y} = \frac{Z}{n} \sum_{i=1}^{n} \frac{1}{z_i} \left[y_{i1} + D_i^* \times y_{i2} \right]$$

where y_{i1} , y_{i2} are the total number of households possessing the characteristic y in hg's 1 & 2 of the i-th FSU respectively.

(ii) For estimating the number of villages in a stratum × sub-stratum possessing a characteristic:

$$\hat{Y} = \frac{Z}{n} \sum_{i=1}^{n} \frac{1}{z_i} y_i$$

where y_i is taken as 1 for sample villages possessing the characteristic and 0 otherwise.

4.2.1.2 Urban:

(i) For estimating the number of households in a stratum × sub-stratum possessing a characteristic:

$$\hat{Y} = \frac{N}{n} \sum_{i=1}^{n} \left[y_{i1} + D_i^* \times y_{i2} \right]$$

where y_{i1} and y_{i2} are the total number of households possessing the characteristic y belonging to sub-blocks 1 and 2 respectively, of the i-th FSU.

4.2.2 Schedules 1.0 (Type 1) / 1.0 (Type 2) / 10:

4.2.2.1 Rural:

(i) For j-th second stage stratum of a stratum × sub-stratum:

$$\hat{Y}_j = \frac{Z}{n_j} \sum_{i=1}^{n_j} \frac{1}{z_i} \left[\frac{H_{i1j}}{h_{i1j}} \sum_{k=1}^{h_{i1j}} y_{i1jk} + D_i^* \times \frac{H_{i2j}}{h_{i2j}} \sum_{k=1}^{h_{i2j}} y_{i2jk} \right]$$

(ii) For all second-stage strata combined:

$$\hat{Y} = \sum_j \hat{Y}_j$$

(iii) Estimate for a stratum ($\hat{Y}_s$) will be obtained by adding sub-stratum level estimates ($\hat{Y}_{st}$).

4.2.2.2 Urban:

(i) For j-th second stage stratum of a stratum × sub-stratum:

$$\hat{Y}_j = \frac{N}{n_j} \sum_{i=1}^{n_j} \left[\frac{H_{i1j}}{h_{i1j}} \sum_{k=1}^{h_{i1j}} y_{i1jk} + D_i^* \times \frac{H_{i2j}}{h_{i2j}} \sum_{k=1}^{h_{i2j}} y_{i2jk} \right]$$

(ii) For all second-stage strata combined:

$$\hat{Y} = \sum_j \hat{Y}_j$$

(iii) Estimate for a stratum ($\hat{Y}_s$) will be obtained by adding sub-stratum level estimates ($\hat{Y}_{st}$).

4.3 Overall Estimate for Aggregates:

Overall estimate for aggregates for a stratum ($\hat{Y}_s$) based on two sub-samples is obtained as:

$$\hat{Y}_s = \frac{1}{2}\sum_{m=1}^{2}\hat{Y}_{sm}$$

4.4 Overall Estimate of Aggregates at State/UT/all-India level:

The overall estimate $\hat{Y}$ at the State/ UT/ all-India level is obtained by summing the stratum estimates $\hat{Y}_s$ over all strata belonging to the State/ UT/ all-India.

4.5 Estimates of Ratios:

Let $\hat{Y}$ and $\hat{X}$ be the overall estimates of the aggregates Y and X for two characteristics y and x respectively at the State/ UT/ all-India level.

Then the combined ratio estimate ($\hat{R}$) of the ratio ($R = \frac{Y}{X}$) will be obtained as

$$\hat{R} = \frac{\hat{Y}}{\hat{X}}.$$

4.6 Estimates of Error: The estimated variances of the above estimates will be as follows:

4.6.1 For aggregate $\hat{Y}$:

$$V\hat{a}r(\hat{Y}) = \sum_{s} V\hat{a}r(\hat{Y}_s) \quad \text{where} \quad V\hat{a}r(\hat{Y}_s) \text{ is given by}$$

$$V\hat{a}r(\hat{Y}_s) = \sum_{t}\frac{1}{4}\left(\hat{Y}_{st1} - \hat{Y}_{st2}\right)^2 \text{, where } \hat{Y}_{st1} \text{ and } \hat{Y}_{st2} \text{ are the estimates for sub-sample 1 and}$$

sub-sample 2 respectively for stratum 's' and sub-stratum 't'.

4.6.2 For ratio $\hat{R}$:

$$M\hat{S}E(\hat{R}) = \frac{1}{4\hat{X}^2}\sum_{s}\sum_{t}\left[\left(\hat{Y}_{st1} - \hat{Y}_{st2}\right)^2 + \hat{R}^2\left(\hat{X}_{st1} - \hat{X}_{st2}\right)^2 - 2\hat{R}\left(\hat{Y}_{st1} - \hat{Y}_{st2}\right)\left(\hat{X}_{st1} - \hat{X}_{st2}\right)\right]$$

4.6.3 Estimates of Relative Standard Error (RSE):

$$R\hat{S}E(\hat{Y}) = \frac{\sqrt{V\hat{a}r(\hat{Y})}}{\hat{Y}} \times 100$$

$$R\hat{S}E(\hat{R}) = \frac{\sqrt{M\hat{S}E(\hat{R})}}{\hat{R}} \times 100$$

5. **Multipliers**:

The formulae for multipliers at stratum/sub-stratum/second-stage stratum level for a sub-sample and schedule type are given below:

sch type	sector	formula for multipliers	
		hg / sb 1	hg / sb 2
0.0	rural	$\dfrac{Z_{st}}{n_{stm}} \times \dfrac{1}{z_{stmi}}$	$\dfrac{Z_{st}}{n_{stm}} \times \dfrac{1}{z_{stmi}} \times D^{*}_{stmi}$
	Urban	$\dfrac{N_s}{n_{sm}}$	$\dfrac{N_s}{n_{sm}} D^{*}_{smi}$
1.0 (Type 1)/ 1.0 (Type 2)/ 10	rural	$\dfrac{Z_{st}}{n_{stmj}} \times \dfrac{1}{z_{stmi}} \times \dfrac{H_{stmi1j}}{h_{stmi1j}}$	$\dfrac{Z_{st}}{n_{stmj}} \times \dfrac{1}{z_{stmi}} \times D^{*}_{stmi} \times \dfrac{H_{stmi2j}}{h_{stmi2j}}$
	Urban	$\dfrac{N_s}{n_{smj}} \times \dfrac{H_{smi1j}}{h_{smi1j}}$,	$\dfrac{N_s}{n_{smj}} \times D^{*}_{smi} \times \dfrac{H_{smi2j}}{h_{smi2j}}$,
		(j = 1, 2, 3)	

Note: (i) For estimating any characteristic for any domain not specifically considered in sample design, indicator variable may be used.

(ii) Multipliers have to be computed on the basis of information available in the listing schedule irrespective of any misclassification observed between the listing schedule and detailed enquiry schedule.

(iii) For estimating number of villages possessing a characteristic, $D^{*}_{stmi} = 0$ in the relevant multipliers and there will be only one multiplier for the village (see paragraph 6.2.1 in this context).

6. **Treatment for zero cases, casualty cases etc.**:

6.1 While counting the number of FSUs surveyed (n_{sm} or n_{stm}) in a stratum/sub-stratum, all the FSUs with survey codes 1 to 6 in schedule 0.0 will be considered. In addition, if no SSU is

available in the frame for a particular schedule then also that FSU will be treated as surveyed in respect of that schedule. However, if the SSUs of a particular schedule type are available in the frame of the FSU but none of these could be surveyed then that FSU has to be treated as casualty and it will not be treated as surveyed in respect of that schedule.

6.2 *Casualty cases*: FSUs with survey code 7 as per schedule 0.0 are treated as casualties. In addition to this, an FSU, although surveyed, may have to be treated as casualty for a particular schedule type and a particular *second stage stratum* as given in the following para:

6.2.1 FSUs with survey codes 1 or 4 as per schedule 0.0 having number of households in the frame of j-th second stage stratum greater than 0 but number of households surveyed according to data file, considering both hg/sb together, as nil (i.e. $H_{i1j} + H_{i2j} > 0$ but $h_{i1j} + h_{i2j} = 0$) will be taken as casualties for j-th second stage stratum.

All the FSUs with survey codes 1 to 6 as per schedule 0.0 minus the number of casualties as identified above will be taken as the number of surveyed FSUs (n_{stmj}) for that (stratum/sub-stratum) ×(second stage stratum).

When casualty for j-th second stage stratum occurs for a particular hg/sb but not for the other hg/sb, the FSU will not be treated as casualty but some adjustments in the value of H for the other hg/sb will be done as follows:

(i) Suppose for hg/sb 1, $H_{i1j} > 0$ but $h_{i1j} = 0$ while for hg/sb 2, $H_{i2j} > 0$ and $h_{i2j} > 0$. In that case $D_i^* \times H_{i2j}$ will be replaced by $(H_{i1j} + D_i^* \times H_{i2j})$ in the formula for multiplier of hg/sb 2.

(ii) Suppose for hg/sb 1, $H_{i1j} > 0$ and $h_{i1j} > 0$ while for hg/sb 2, $H_{i2j} > 0$ but $h_{i2j} = 0$. In that case H_{i1j} will be replaced by $(H_{i1j} + D_i^* \times H_{i2j})$ in the formula for multiplier of hg/sb 1.

It may be noted that n_{smj} or n_{stmj} would be same for hg/sb 1 & 2 of an FSU.

7. **Treatment in cases of void second-stage strata/sub-strata /strata/NSS region at FSU or household level**

7.1 A stratum/sub-stratum may be void because of the casualty of all the FSUs belonging to the stratum/sub-stratum. This may occur in one sub-sample or in both the sub-samples. If it relates to only one sub-sample, then estimate for the void stratum/sub-stratum may be replaced with the estimate as obtained from the other sub-sample for the same stratum/sub-stratum.

7.2 When a stratum/sub-stratum is void in both the sub-samples, the following procedure is recommended:

Case(I): Stratum/Sub-stratum void cases at FSU levels (i.e. all FSUs having survey code 7):

(i) If a rural sub-stratum is void then it may be merged with the other sub-stratum of the stratum.

(ii) If a rural/urban stratum (district) is void due to all FSUs being casualty, it may be excluded from the coverage of the survey. The state level estimates will be based on the estimates of districts for which estimates are available and remarks to that effect may be added in appropriate places.

Case (II): Stratum/Sub-stratum void case at second stage stratum level (i.e. all the FSUs are casualties for a particular second stage stratum):

An FSU may be a casualty for a particular *second stage stratum* although survey code is not 7. If all the FSUs of a stratum/sub-stratum become casualties in this manner for a particular *second stage stratum*, the stratum/sub-stratum will become void. In such cases, sub-strata will be merged with other sub-strata for all the second stage strata as in *Case (I) above.*

However, if whole district/stratum becomes void in this manner for a particular second stage stratum, adjustment for this type of stratum void case may be done according to the following guidelines.

The adjustment will be made involving other strata/sub-strata (within NSS region) of the State/U.T. Suppose A, B, C and D are the four strata in the State/UT/Region and stratum C is void for j-th *second stage stratum*. If $\hat{Y}_{aj}$, $\hat{Y}_{bj}$ and $\hat{Y}_{dj}$ are the aggregate estimates for the strata/sub-strata A, B and D respectively, then the estimate $\hat{Y}_{cj}$ for stratum/sub-stratum C may be obtained as $\left(\dfrac{\hat{Y}_{aj} + \hat{Y}_{bj} + \hat{Y}_{dj}}{Z_a + Z_b + Z_d} \times Z_c \right)$ where Z_a, Z_b, Z_c and Z_d are the sizes of strata A, B, C and D respectively.

8. **Reference to the values of Z_{st}, N_s, n_{st}, n_s, z_{sti}, D_{sti}, D^*_{sti}, D_{si}, D^*_{si}, H_{sti1j}, h_{sti1j}, H_{sti2j}, h_{sti2j}:**

   (a) Values of Z_{st}, N_{st} and allotted n_{st} for the whole round are given in appendix Table 2 for rural sector and in Table 3 for urban sector.

   (b) n_{st} should not be taken from the tables. The values of n_{stm} for each sub-sample are to be obtained following the guidelines given in para 9 above. It includes uninhibited and zero cases but excludes casualty cases.

   (c) The value of z_{sti} for the samples selected by PPS is to be taken from the column of sample list under the heading "frame population" for rural samples. Value of D_{sti} is to be taken from item 16 of block 1, sch 0.0. D^*_{sti} is to be calculated from the value of D_{sti}.

   (d) Values of H_{sti1j}, H_{sti2j} are to be taken from col.(5), block 6 of sch 0.0 for respective hg/sb.

   (e) The value of h_{sti1j} and h_{sti2j} should not be taken from col (9), block 6 of sch.0.0. The figures should be obtained by counting the number of households in the data file excluding the casualty households.

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Appendix C
Schedule 10 (Employment and Unemployment)