THE ANALYSIS OF THE POPULATION STATISTICS OF NEPAL

HIS MAJESTY'S GOVERNMENT
NATIONAL PLANNING COMMISSION SECRETERIAT
CENTRAL BUREAU OF STATISTICS
Ram Shah Path, Kathmandu, Nepal

THE ANALYSIS OF POPULATION STATISTICS
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FOREWORD

A population census is a complete record of the nation's assets of individuals and their demographic, social, and economic characteristics. Without a complete knowledge based on the actual statistical facts of the population, the planning of the country's physical and economic enhancement would seriously be deficient. The analysis of statistics of the 1971 population census is, therefore, inevitable to turn the abstract figures into live discussion. I do sincerely hope that the present book will shed light on the characteristics of the population of Nepal and will be of use to the planners as well as to the research workers.

Falgun 2033

February 1977

Dr. Badri Prasad Shrestha
Vice-Chairman
National Planning Commission

PREFACE

The Central Bureau of Statistics takes pleasure in presenting this book on the analysis of population statistics as supplementary to the "Population Census 1971, ABSTRACTS". The analysis made in this volume is mainly concerned with the final returns of 1971 census with reference to the demographic changes in the inter-censal period of 1961-1971. It emphasizes the analysis and interpretation of the prevailing trends and characteristics of population change, namely, age structure, mortality, fertility, education and labour force. The resulting analysis has, by outlining inconsistencies in certain aspects of the data collected in both censuses, not only monitored the difficulties usually encountered in a nation-wide census but also, provided the methods applied for eliminating them.

I hope that the present book will help to cover the urgent need of various trends and their far reaching implications on the social and economic aspects of the country. I am also hopeful that the demographic researcher will find answers to many questions that may be raised in relation to the demographic characteristics of the country.

I would like to emphasize that this volume will be the first in a series of reports dealing with demographic conditions in Nepal. The report in current demographic sample survey will also provide supplementary data to fill the gap in our statistics.

I wish to express my special thanks to Mr. A. K. Bourini, UN's Demographic Expert for his painstaking efforts in writing this book and also the United Nations Fund for Population Activities for the valuable assistance in making this volume a success.

Thanks are also due to Dr. Vidya Bir Kansakar, CEDA and Mr. Bhawani Shanker Rajbhanshi, Tribhuwan University, who have gone through the book and given valuable suggestions.

Finally, I would like to extend my appreciation to Mr. Keshab Raj Sharma, Deputy Director, C.B.S., for helping me in editing the book and to Mrs. Sharada Manandhar, Acting Deputy Director, Central Bureau of Statistics (Population Division) for her continuous effort in proof-reading, designing and following-up the book through the press. Also I express my sincere thanks to Mr. Ishwar M. Pradhan and other officials of C.B.S. who are directly or indirectly involved in this performance.

May I request the readers or the users of the statistics to give comments and suggestions, if any, in this work in order to enable us to make improvement in the future.

Falgun 2033

February 1977

Keshar Bahadur Acharya
Acting
Director General
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1. A Historical Prelude

The ancient history of Nepal is assumed to have begun in 750 B.C. and ended in 250 A.D. During that period Kirats ruled the country. But no written record of this is available. Early history of Nepal had witnessed the establishment of a number of beleaguered dynasties and principalities scattered in the fertile valleys of Kathmandu and Pokhara and in the river basins of the Karnali and the Gandaki. Although some others dynasties survived for a short period of time, others ruled for centuries. The Lichhavi dynasty, for instance, lasted over four centuries (464-879 A.D.). Another great dynasty-the Malla-Dynasty-had established itself in Kathmandu valley around the 13th century, and lasted over five hundred years.

The divided and hostile principalities and kingdoms were finally consolidated in 1769 under king Prithivi Narayan Shah and his successors to become the modern nation of Nepal.

Socially and economically, however, the modern era in Nepal's history has started with the revival of the national aspirations of the poor countries in Asia after the Second World War. These aspirations were mainly concer-ned with acquiring independence, and emancipation from the perpetual state of ignorance, poverty and political stress. Failing to democratize the regime and to bring about educational, social and economic reforms in the country, the Rana Regime was finally thrown out by the joint efforts of the King and people of Nepal in 1951.

Within the frame of the open policy with other nations, Nepal has been able to implement four economic development plans, with the cooperation of several countries and International Agencies. The fifth economic development

plan (1975-80) has placed special priority on agricultural development as infrastructure for future industrial development and also has laid emphasis on industrialization of the country than the previous plans.

2. Government and Administration

By the Constitution of 1962, Nepal is a Constitutional Monarchy with a "Panchayat Democratic" system. Legislative power is vested in the king, and the Rastriya Panchayat (The National Parliament) which is the supreme elected body. The Rastriya Panchayat consists of 135 members. Among them 112 members are indirectly elected and the rest is nominated by His Majesty the King. The King appoints Prime Minister from among the members of Rastriya Panchayat, who in turn chooses his ministers and deputy ministers for royal appointment. The Council of Ministers submits legislation to the Rastriya Panchayat for approval, amendment or rejection. A law becomes effective after approval of the Rastriya Pancha-yat and sanctioning by the King.

The Panchayat structure consists of four elected levels: (a) the Village Panchayat at the bottom which has two structures, namely, he village Assembly and the Village Panchayat. (b) The Town Panchayat, which is also an elected body, comprises of a number of elected and nominated members. The criterion used for selecting a town panchayat is mainly concerned with the importance of the town in the administrative, educational and industrial fields, rather than the size of its population. In Kathmandu (the Capital) there are 32 wards. Smaller town may consist of less, but the number of wards should not fall below 9. (c) The District Panchayat, in turn, is elected from the village and town panchayat members. (d) The Rastriya Panchayat (The National Parliament) is the supreme elected body. The Rastriya Panchayat Sadasya (member) is elected for four years period.

In each zone there is a Zonal Commissioner working under the Ministry of Home Affairs, but he is appointed by the King and responsible to him directly. In addition to his functions in maintaining law and order within his jurisdiction, the Zonal Commissioner is given wide authorities over development activities in the fields of education, land reclamation, health programmes and many other economic development projects.

For administrative purposes, Nepal has been divided into 14 zones and 75 districts. Within the district, the town or village panchayat is the smallest administrative unit. The District Administration is headed by a Chief District Officer who belongs to the Ministry of Home Affairs. Like the Zonal Commissioner, but on a smaller scale he is responsible for maintaining order in his district and he is also given authority for coordinating development activities in his area.

The following are the zonal and district divisions of Nepal, as they existed in 1971 and readjusted in 1976.

Zones	Districts
1. Mechi	Jhapa, Ilam, Panchthar, Taplejung
2. Kosi	Morang, Sunsari, Dhankuta, Tehrathum, Sankhuwasabha, Bhojpur
3. Sagarmatha	Saptari, Siraha, Udayapur, Khotang, Okhaldhunga, Solukhumbu
4. Janakpur	Dhankuta, Mahottari, Sarlahi, Sindhuli, Ramechhap, Dolakha
5. Bagmati	KavrePalanchok, Lalitpur, Bhaktapur, Kathmandu, SindhuPalchok, Nuwakot, Rasuwa, Dhading
6. Narayani	Rautahat, Bara, Parsa, Makwanpur, Chitwan,
7. Gandaki	Gorkha, Tanahun, Syangja, Lamjung, Kaski, Manang
8. Lumbini	Nawalparasi, Rupandehi, Palpa, Gulmi, Kapilbastu, Arghakhanchi
9. Dhaulagiri	Baglung, Myagdi, Mustang, Parbat
10. Rapti	Rukum, Rolpa, Pyuthan, Sallyan, Dangdeokhuri,
11. Karnali	Mugu, Jumla, Humla, Dolpa, Kalikot
12. Bheri	Banke, Bardiya, Surkhet, Jajarkot, Dailekh
13. Seti	Kailali, Achham, Doti, Bajura, Bajhang
14. Mahakali	Kanchanpur, Dadeldhura, Baitadi, Darchula

3. Nepal's Economic Resources

The main economic resources of Nepal are agriculture and agricultural products including a considerable wealth of timber.* Cottage industry, comprising brass, copper and wood-carving crafts plus weaving and

* *Agriculture alone counts 66.5 percent of Nepal's GDP*

carpet industries, is the second important item in Nepal's GDP. Various consumer industries such as sugar soap, cigarettes, liquor and brewing have already been established. Cereals, jute and sugar, are the main items of Nepal's external trade. Cement and other building materials are also produced locally to substitute the imported building materials.

Mineral resources have not yet been fully explored in the country although primary geological surveys have shown that iron ore, copper and even gold deposits have been found or suspected at several places. The exploitation of these mineral resources, however, is impeded by many factors, the most important ones being the lack of the technical knowledge, a nation-wide road network and the huge amount of capital needed for their discovery and processing.

Though Nepal is a Hindu state, it is a land of religious tolerance where the Hindus, the Buddhists and the Muslims live together with no interference from the state and the people of rival religious faiths.

Nepal is a center of great significance in the rise and spread of two great religions, namely, Hinduism and Buddhism. The historical heritage has been endowed with the Holy shrines of Pashupatinath in Kathmandu, and Janaki temple in Janakpur, for the Hindus, and the place of birth of Lord Buddha in Lumbini, for the Buddhists. These are attractions for pilgrims and tourists not only from the countries of the followers of these religions, but also from countries all over the world. The Himalayas with their (awe-inspiring) scenery are also playing an important role in stimulating the tourism industry in the country. The number of tourists from Europe and the United States is increasing very rapidly. Although the number of tourists has been doubled between 1968-70, the tourism potentials have not yet been tapped.

4. Planning and Organization of the Census

(a) The legal provision for conducting periodic population censuses was made available in the Statistical Act 2015 dated 18 Marga 2015, of which clause number (4) has left the decision for compiling statistics on any topic to a written order, from His Majesty's Government. For each

census conducted in Nepal by the Central Bureau of Statistics, a special Notice was issued in the Official Gazette defining the census organization, the responsibilities of the governmental and private institutions*. They were to cooperate in an utmost and helpful manner with the Central Bureau of Statistics in providing all possible assistance to the Statistical Officers deputed by the C.B.S. for conducting the census.

Section (4) of the Statistical Act (2015) provides that "….HMG through a written Notice can order the compilation of data on any affair …… to specify the schedules for the compilation of necessary information …… and appoint or nominate authorized officers for the purpose of collecting such data ……"

The Act obligates the individuals of any community under a written request to supply any information or data under their possession as specified in the order.

On the other hand, the Act has strictly guaranteed the confidentiality of all information provided to the officers, under section 8 ("…… the information collected under sections 3, 4, 5, 6 and 7, regarding the individual family, household or company or parts thereof, should not be divulged, directly or indirectly, to any person except the Director or the Officers of Department without a written approval of the person concerned").

This status closely follows the United Nation's recommendation for census legislation as set out in "Principles and Recommendations for National Population Censuses". (ST/STAT/SER.M/44) which state:

"Legal authority for the census is required for fixing primary administrative responsibility, for obtaining the necessary funds, for determining the general scope and timing o the census and for placing a legal obligation upon the public ……".

"The principle of conceptual and organizational flexibility should be observed in drafting the census legislation. Thus, the inclusion of too rigid provisions regarding the type of data to be collected, or the structure and relationships of the various parts of the census organization are undesirable ……".†

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* 1961 and 1971 Census Notices are presented in appendices I and II

† Para 42.43 pp. 11.

(b) Preparation and Administration

In the census of 1971, the 14 administrative zones of the kingdom were further divided into 17 census areas with a view to effect more efficient supervision and control of the field work, particularly in the rugged and remote zones of Karnali and Dhaulagiri, and also to ensure smooth and efficient enumeration. The subdivisions of zones into 75 districts were kept intact.

In each of the 17 census areas, an officer from the C.B.S. was appoin-ted to direct and conduct the census operations in that area, and was assisted by one non-gazetted Class I official, and other subordinates. Similarly, in each of the 75 districts, one non-gazetted Class I personnel was appointed as a supervisor of the field work. A number of 8-10 panchayat was assigned to each Kharidar (non-gazetted Class II) to carry out the preliminary household count in the specific household schedule. The household list has provided the frame for the individual enumeration.

With the cooperation of Home Ministry a list of all town and village panchayat had been prepared, and all names were arranged alphabeti-cally district wise for the purpose of coding.

Two sets of maps were prepared in collaboration with the concerned department. The first set including maps for zones to be used by zonal officers and the second set on district level to be used by district supervisors.

All houses in town panchayats and only in big village panchayats were numbered six months before the census operation. In town pan-chayats each town was divided into blocks corresponding to some extent to the wards division and within each block houses were given two num-bers. The first denotes the house serial number in the block and the second denotes the block's number.

All preparatory work for the census was done by the C.B.S. officials. The Director was personally involved in supervising the field work of his officers and subordinates. This included flow o documents and transportation of personnel and materials. Altogether total of about

12,500 supervisors and enumerators were employed temporarily.*

(c) Recruitment and Training of Personnel

Due to the fact that there exists a large number of linguistic and tribal communities, it was felt more practical to recruit and train local people in each enumeration area, than to recruit personnel at the center, and send them later to the field.

The Zonal Officers, their assistants, and a large number of Kharidars were all recruited at the center and trained rigorously, and the census schedule was pre-tested in two village panchayats and an urban sector.

Further, the zonal officers established 17 training centers in the census areas to train the appointed 12,000 enumerators.

> It should be noted that due to the volume of work, the dispersion of localities and the low rate of literacy, the minimum qualification required for recruiting an enumerator were his abilities to read and write.

(d) The Household List and the Census Schedule:

The main purpose of the household listing was to prepare a list of all families living in various ward of each village panchayat. Equally intended was the use of the household list for further demographic investigation and sample surveys. The household list was used to check the accuracy and validity of the individual questionnaire.

The household list contained the following items:

Form No. 1

1. Zone
2. District
3. Town/Village Panchayat
4. Ward No.
5. Name of the Enumerator
6. Name of the Supervisor
7. Date of Survey
8. Date of Supervision

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* See appendix III, for census organization.

Section 2 - Household List											
Household No.	Family No.	Family Serial No.	Family Members				Name of the Head of the Household	Events During Last Year				Disable person	Mental Deficency	Signature of Respondent
				Total	Male	Female		Male Divorces during Last Year	Male Marriages during Last Year	No. of deaths	Absent (6) Months and More			

The household list was prepared by the Kharidars and kept in the district census office for further check with the individual forms filled-in by the enumerators. Any discrepancy between the two schedules was to be verified on the spot by the census supervisor.

The census questionnaire is the ultimate field document from which all data are compiled. Needless to say that the simpler is the questionnaire designed the greater will be the level of accuracy and easier the counting procedures and coding and editing of the items.

The questionnaire used in 1971 census was pre-coded. The purpose of pre-coding was initially to minimize the answers to be written so that further editing and coding processes would also be minimized.

The questionnaire of 1971 census contained the following items:

a. Names and Cast of Family Members
b. Relationship with the Head of the Household
c. Sex

d. Age
e. Place of Birth
f. Citizenship
g. Religion
h. Mother Tongue
i. Marital Status (Single, Married, Divorced, Widowed)
j. Number of Children ever born during Life Time
k. Number of Children still alive
l. Births occurring during the Last Year
m. Literacy (Literate or Illiterate)
n. School Enrolment
o. Years of Schooling Completed
p. Economic Activity (Economically Active or Inactive)
q. Economic Status (Employer, Employee ……etc.)
r. Status of the Unemployed (Student, Housewife, Old, T.B. Patient, Leper Disabled ……etc.)

(e) The Count: De-Jure Distribution

The individual questionnaire was filled-in by the enumerators who were mostly secretaries of village panchayat or panchayat members and school teachers. The census was conducted in two phases. In the first phase the Kharidars filled-in the household schedule. This phase lasted for about 45 days. The actual count took 15 days in which the enumerators filled-in the individual schedule. On the last day, 22nd of June which was observed as the C-day, the supervisors and the enumerators together went around the enumeration unit (the village panchayat) making final adjustments by adding births and deducting deaths occurring during the enumeration period. The census was conducted in a modified "de jure" basis. That is to say, efforts were being made to record persons by their usual residence. The enumerators were remunerated according to the number of persons counted at five paisa per person.*

In order to decide "the place of residence", a person was regarded as permanent resident of the place where he was found on the census day, if he was staying there for the last 6 months continuously, otherwise

* One Rupee equals 100 paisa 1/10 Dollar.

he would be counted in his previous place of residence. The inmates of a prison, the students in a hostel and armed forces in their barracks, were counted as the residents of the places where they were found. Homeless people such as beggars, sages, hermits and persons alike without any fixed household were enumerated wherever found.

Diplomatic and missions personnel, though residing in Nepal at the time of the census, were excluded from count. The member and staff of the Nepalese delegations abroad were included from their usual place of residence.

(f) Checking, Editing and Coding

A primary check was done by the supervisors on the spot in order to tally the household schedule with the census questionnaire. Further editing and coding procedures were completed by the supervisors in the office.

It was expected that a considerable proportion of unknown category will come about particularly regarding age, economic status, and other items. Regarding age some method was elaborated in pointing out a direct relationship between age and certain major events occurring during the last six or seven decades from which the enumerator, if the respondent fails to estimate his age, could deduce the respondent's approximate age. It was thought that this method would ultimately give a better estimate of ages, instead of obtaining a very big category of unknown ages. Admittedly, this procedure had, to some extent given the enumerator, the liberty to estimate the respondent's age within the limits of a wide range, particularly, adult ages.

(g) Data Processing

Just after the field work was completed an IBM Computer Model 1401, was made available to the C.B.S. on hire basis. Mr. John Adams from USAID was assigned to process the Nepal's census data in Kathmandu. All tabulations were produced in two volumes, and the works were completed in nearly one and half year.

(h) The Census Publicity

The Central Bureau of Statistic had launched a nationwide

publicity campaign through all possible mass-media available in the country including radio, daily newspapers, leaflets and posters to raise awareness and spread cognizance among the people of the census objectives and to assess the importance of the public cooperation for providing accurate and bonafide information. The statistical officers were instructed to explain to the villagers in public meetings, the purposes and objectives of the census.

5. 1961 Census Method

Since no post-enumeration administrative report for 1961 census had been written, it would be useful before analyzing the returns of the last two censuses, to give a short description of the administration and methodology of that census.

In 1961 Nepal was divided into 10 census regions corresponding to the geographical features of the country* and 55 districts. For the enumeration purposes the country was divided into 18 census zones, which further were divided into 102 sub-zones comprising 456 census areas. The enumeration area was the village and the number of villages amounted to 28 thousand.

A Section Officer was deputed to each census zone, where he had been assisted by a number of supervisors according to the number of sub-zones in his area. The supervisors who were recruited from local people in each district had been given theoretical and practical training at the same district. For the whole operation 15,933 enumerators took part in the enumeration.

The enumeration had been carried out on two stages. In the first stage the supervisors were instructed to prepare a household list comprising the name of the head of the households, the number of family members by sex, and the name of the village and the serial number of the

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* Four regions in the mountains and the hills (Eastern Hills, Western Hills, Far Western Hills and Kathmandu Valley) Three in Inner Terai (Eastern Inner Terai, Central Inner Terai and Western Inner Terai), and Three in the Terai (Eastern Terai, Western Terai and Far Western Terai).

household. This stage was completed between 12-19 May 1961. The second stage was the actual enumeration which took place from June 4 to June 21, 1961. The household list for each village was used as guidance to the enumerator.

The 1961 census was carried out on "de jure" basis. The number of persons who were absent from home during the enumeration amounted to 386,824 persons, of which, 58,354 were absent from home but present in the country during the enumeration. The foreigners who were residing in the country had been excluded from the court.

The census was processed manually. Millions of individual items had been verified, edited, coded and processed. This process was completed in four and half years.

6. The Census findings and their conformity with the UN's Recommendations

Presented in appendix (IV) are the tabulations covered by 1961 and 1971 censuses. Generally speaking, the UN's Recommendation for population and Housing Censuses have considered that the "..... topics to be covered in a census should be determined upon balance consideration of (a) the needs of the country (national as well as local) to be served by the census data, (b) achievement of the maximum degree of international comparability, both within regions and on a world-wide basis, (c) the probable willingness and ability of respondents to give adequate information on the topics, and (d) the total national resources available for enumeration, processing, tabulation and publication which will determine the over-all feasible scope of the census.* Thus it would be necessary to avoid topics which are too sensitive and may touch the social life of the family and may be considered difficult to be answered by the respondents, such as number of insane in the family or number of lepers.

The list of the UN's Recommendations for topics to be investigated and tabulated included two categories of tabulations, namely, the "Recommended" and the "other useful" topics.

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* Ibid part V, para A pp,. 37 ff.

Those topics which are very essential for national and international comparability, and were further included in the Regional Programme of the ESCAP region for 1976 censuses are: the distribution of the population by place of usual residence, by place of birth, total population, the population distribution by locality and rural-urban residence. It includes also the personal and household characteristics, i.e. age, sex, relationship to the head of the household, marital status, children born alive, children still living, literacy, school attendance, educational attainment, language, religion, and household composition. Of the economic characteristics the following topics have been considered essential for national and international comparability: type of activity, occupation, industry and economic status.

A close investigation of 1961 and 1971 census tabulations would clearly reveal that, all recommended topics have been well covered by both censuses, except that two types of information were not provided by 1961 census: first, the number of children still living by age of mother and secondly the number of students enrolled in schools at the date of the census.

Regarding 1971 census, detailed information on all topics have been given on each one of the 16 Town Panchayats comprising the urban area. For the derivation of rural-urban differences, one should add all figures given for the 16 Town Panchayats on every topic, and then reduce the results from topics on total population to arrive at classifications by rural area, while the tabulations by urban and rural areas could have been made available if, additional efforts had been made.

Ecologically, Nepal can be divided into three main areas namely, the mountains, hills and plains. The demographic composition, social and marital habits, and economic levels differ substantially from one area to the other. Also, the linguistic and ethnic composition differs from the population of Tibeto-Burman origin in the mountains to the population of Indo-Aryan origin in the Terai. In 1961 census this ecological composition have been taken into consideration in all tabulations, meanwhile, the 1971 census tabulations were mainly confined to the new

administrative division of the country. For the national comparability it would thus be extremely difficult to re-classify all tables given on the 75 districts by mountains, hills and terai in 1971 census, therefore, it was unavoidably necessary when comparing 1961 and 1971 census returns to select certain districts from 1971 census rather than to hold the comparison on total area basis.

It is of special interest to note that both censuses have given detailed information on the inactive population by cause of disability, such as leprosy, insanity, chronic disease and imprisonment. In the absence of health and mortality statistics for Nepal, it might have appeared useful to collect information on the disabled persons, lepers and persons impeded by chronic diseases such as tuberculosis, or the post-effect of smallpox, particularly, for disclosing the reason why a person is economically inactive. Sickness or disability information, in this case, would be collected for the population 10 years of age and over, while such information will not be available for about 35 per cent of the population below that age. However, it should be borne in mind that, whatever, the justifications for collecting this type of data, the results would be highly biased.

7. Experience Gained

The cumulative experience of past censuses in a country can be of great help in the preparation of a new census. Every census should provide additional experience which can be used for formulating and improving methods and techniques to be used in the undertaking of subsequent censuses aiming at obtaining more comprehensive and accurate data. The population and housing censuses are usually taken every ten years. Within such a long period, changes in upper echelon, and qualified statisticians who participated in the census operation, may unavoidably take place. Therefore, a post-enumeration report describing methodology, difficulties encountered in the field and treatment of omissions and vague entries is of prime importance not only for the analysis of the census concerned, but also as a guideline for other censuses. Complete records of field reports, training courses, instructions for the enumeration, editing, verification, coding and processing should be kept at the census office and they should be arranged in such a manner that information on any aspect of the census operation can be found easily.

To what extent these rules have been followed in taking 1971 census? And, moreover, what was the experience gained from 1971 census and what are the prospective for 1981 census?

On the department level, the Central Bureau of Statistics has gained enormous experience regarding the planning, organization and administration of census operations. The 1971 census has added a considerable volume of detailed statistics on the population distribution by zones, districts and towns and villages and on the personal educational and economic characteristics of the population. Various types of classifications and coding systems specifically prepared for the use of the computer are available at the C.B.S. Other census materials which are very important for the census operations such as maps, lists of villages and towns, census schedules and instructions were kept at the department. On the individual level all section officers who had participated in the census operation have gained experience in the preparation, training of personnel and conducting the enumeration.

The electronic processing of the data came about with the initiation of 1971 census. The application of modern techniques to the statistical data collected allowed the C.B.S. to establish a continuous data processing operation on agriculture, population, cottage industry and foreign trade etc.

II-Differences in Administrative Divisions And Census Areas between 1961 and 1971 Censuses

For purposes of administration, Nepal was divided in 1961 into 10 identified geographic regions and 55 administrative districts. The main geographic regions were the following:

1. Eastern Hills
2. East Inner Terai
3. Eastern Terai
4. Kathmandu Valley
5. Western Hills
6. Far western Hills
7. Central Inner Terai
8. Western Terai
9. Western Inner Terai
10. Far Western Terai

Taking into consideration the representation of the different physical features of the country, the new economic-administrative division has

rested upon dividing the country into four developing regions, 14 zones and 75 districts aiming at maintaining economic integration between the mountains, hills and terai. The Eastern Development Region which comprised 10 districts in 1961 was further divided into 3 zones and 16 districts. The Tehrathum district for instance which comprised the far eastern mountain region and a part of the eastern hills was further divided into Sankhuwasabha, Taplejung and Tehrathum districts and Biratnagar district was divided into Morang and Sunsari districts.

Similarly, changes in the Central, Western and Far Western Region in district boundaries have taken place. Baglung and Jumla districts in the Far West which together covered an area of 26,656 sq. km. were further divided into 6 districts. Sallyan district on the other hand which covered 8,368 sq. km. in 1961 was restricted to a very small district in Rapti zone, covering only 1876 sq. km.

Regarding the rugged topography of the area and the lack of sufficient network of roads, the new administrative division has, to a large extent, facilitated administration.

Changes on district and village size and boundaries have made comparison of changes in population size and characteristics rather difficult. Therefore, the analysis was mainly concerned in studying the demographic characteristics of the population of Nepal by administrative zones of 1971 census, and held whenever possible comparisons among development regions, between 1961 and 1971 censuses. However, when the data permitted comparisons were made between 1961 and 1971 census to outline differences by geographic regions.

PART – I

1- Brief Outline of the Geographic Location and Physical Features of Nepal

1.1 The Geographic Structure

1. Situated in the heart of Asia and landlocked between tow big neighbours namely, India in the south and China in the north, the independent Hindu Kingdom of Nepal covers an area of 56,136 sq. miles (145,391 sq. km.). Shaped as a rectangle with an average length (east-west) of 500 miles (800 km.) and breadth (north-south) of 110 miles (175 km.), Nepal is located between longitudes 80°4', to 88°12' east and latitude 26°22' to 30°27' north.

The outstanding geographical feature of the country is delineated by a unique topographical structure composed of a slope which rises from elevation below, 1,000 ft. (300 meters) in the Terai Region near the Indian borders to about 6,000 ft. (1800 meters) in the Chure range on the fringe of the mountain area. Afterwards, the rugged surface rises precipitously towards the highest peaks in the world, the Himalayan range, where nearly 50 peaks are above 23,000 ft. (7,000 meters) height.*

2. Thus, forming a gigantic staircase with rugged topography and peaks varying from 6,000-29,000 (1,800-8,840 meters) above sea-level, Nepal has wide variety of terrains, valleys and river basins dispersed from east to west through the successive ranges of mountains, which stand parallel to each other. These valleys and basins, together with the Terai (plains) are intensively cultivated with a wide variety of cereals and vegetables and form the backbone of the agricultural economy of Nepal.

* The highest peak is the well-known Sagarmatha (Everest) 29,028 ft.

3. Considering the physical lay-out, the geographic structure of Nepal can be studied through two types of classifications:

(a) According to altitude, the country can be divided into three parallel ranges of mountains that traverse the country from east to west. These ranges of mountains are the following:

(i) The Himalayan range which rises between 16,000 ft. (5,000 meters) and 29,028 ft. (8,848 meters) above the sea level includes the main Himalayas and Inner Himalayas (which extends north of the main Himalayas towards the Tibetan Plateau). This range which is disjuncted by several passes and deep river gorges in characterized by a perpetual polar climate above 17,000 ft. (5,200 meters). Almost all rivers in Nepal originate from this region either by melting glaciers or by springs. They then flow south towards Terai.

(ii) The Mahabharat Lekh with elevations ranging from 5,000 – 10,000 ft. (1,500 – 3,000 meters) between this range and the Himalayan range in the north spreads the mountain area or the midland of Nepal, including the fertile valleys and basins of Kathmandu, Pokhara, Salyantar, Karputar, Rumjatar, Tumlingtar, Serabesi and Rampur Phant of Palpa. This region is also called the Phar zone which comprises a 40-60 miles (60-100 km.) broad complex of hills and valleys.

(iii) The Chure range which raises abruptly from the Terai lowlands varies in height from 2,500 to 5,000 ft. (750-1,500 meters) with some elevations exceeding 6,000 ft. (1,800 meters). The Mahabharat and Chure ranges are separated by wide valleys called the Inner-Terai. The Inner Terai which is formed by alluvial soil brought down by the rivers and streams running from the Mahabharat range vary from 20-40 miles (30-60 km.) long and 8-10 miles (13-16 km.) wide. Intensive rice-farming in this region is facilitated by a very fertile soil and plenteous water resources.

In Complete contrast to the rugged topography of the mountain area, the Terai of Nepal which is an extension of the Gangetic plains o India forms a low land belt. It varies between 25-35 miles (40-55 km.) in width and stretches from the far west to

the Far East. The Terai region comprises about 60 percent of the cultivated land in Nepal. These alluvial plains have been formed by the big rivers Karnali, Gandaki, Bagmati and Kosi and their tributaries.

(b) The second alternative classifications correspond to the hydrographic patterns. In this respect three river systems located in western, central and eastern Nepal can be distinguished. Each system is mainly composed of a net work of rivers and tributaries which finally converge in a major outlet in the Terai. The three river system of Nepal are the following:

(i) The Karnali river system which drains more than one third of Nepal west of Dhaulagiri and Rapti zones, originates from Tibet and is subordinated by Humla-Karnali, Mugu-Karnali, Tila Nadi, Seti, Buri Ganga and Bheri rivers. The river crosses the two barriers of Mahabharat Lekh and Chure through narrow gorge at Chisapani to pour finally into the Terai plains.

(ii) The Gandaki system in central Nepal drains Gandaki, Lumbini, Narayani zones and the western part of Bagmati zone. The main tributaries in this system are the Kali Gandaki, Bari Gad, Seti, Marsyangdi, Darondi, Buri Gandaki and Trisuli Gandaki rivers. The waters combined in this system make their way to the plains through Mahabharat Lekh at Deoghat and enters the Ganges, crossing Chitwan district.

(iii) The Kosi river system is draining eastern Nepal. Like the other two systems, Kosi river has several major tributaries, namely, Indrawati, Sunkosi, Tamakosi, Likhu Khola, Dudhkosi, Arun and Tamor rivers. The combined waters of the major streams join near the Chatra gorge to enter the Terai in the name of Saptakosi River, which is the biggest among all the rivers of Nepal.

In addition to these river systems, water resources in Nepal stem from hundreds of rivers and streams that do not join the above mentioned system. A large number of lakes and pools are scattered about Nepal from east to west formed either by the

melted glaciers, landslides, or man-made lakes, such as Fewatal Lake in the Pokhara valley, Mahendra Lake in Jumla, and Phoksundo in Dolpa.

(4) Due to the steepness of the Himalayan range where almost all big rivers in Nepal originate, some rivers have ploughed their courses through very deep gorges, and still vehemently participate in land erosion, particularly when they become turbulent during the monsoon.

On the whole Nepal has the biggest water potentialities in the world. Extensive irrigation and hydro-power generation are very important factors in national economy of Nepal. However, a number of irrigation barrages have been erected on the river outlets in the Terai, but only a small number of hydro-power stations have been installed since the beginning of the first economic development plan in 1956-61. Kosi, Trisuli, Fewatal and Panauti are now generating altogether 43,000 kW. The fourth economic plan (1970-1975) has contemplated further utilization of water resources by constructing dams on Sunkosi, Kankai, Babai and Kulekhani rivers, at a cost of more than Rupees 400 million to generate about 60,000 kW.

1. 2 Climate and Rainfall

1. Climatically Nepal can be divided into three types :

(a) *The Alpine Climate* predominating the Himalayas and Inner Himalayas is a dry arid climate with long and cold to severe winters and short cool summers with permanent frost. Snow above 5,000 meters is perpetual. Below the frozen peaks, the average rainfall is about 20 inches.

(b) *The Temperate Climate* covers the midland between the Mahabharat range and the Himalayas. The temperature in this area varies according to different altitudes, between 32°F in winter to 100°F in summer. Temperature seldom falls below freezing point.

(c) *The Sub-tropical Climate* is dominating the rest of Nepal, namely, the Terai and Inner-Terai and the lower foothills. The climate in this area is hot and humid during the rainy season with a temperature above 100°F and during winter season the minimum temperature is 50°F.

2. The rain pattern which has certain economic and demographic impacts on the configuration of life in Nepal has three dimensions. The monsoon occurs between mid-June and mid-September blowing westward from the Indian Ocean Burdened with moisture. The eastern, midland and southern parts of Nepal, usually receive an average rainfall between 65-90 inches.* The average rainfall decreases to minimum 25 inches in the western Nepal and mountain ranges owing to their location in the shadow of the monsoon. The highlands rainfall varies from 20-40 inches. The dry west is on the edge of the monsoon belt, but it does receive some rain in the winter season due to the westerly Mediterranean wind.

3. The climatic factors have a direct effect on the economy, population distribution, and the mode of life in Nepal. The distribution of the population is closely associated with rainfall, temperature and the existence of cultivable land. Moreover these factors have direct bearing on the internal movement of the population from the alpine cold climate in the north to the moderate midlands in the south.**

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* The reported average rainfall in 1965-1969 was: Ilam 67", Dhankuta 33", Chatra 87", Namche Bazar 52", Beni Bazar 52", Udaipur Garhi 78", Lahan 57", Sindhuli Garhi 97", Kathmandu 52", Surkhet 75", Jumla 25", and Dhangarhi 55".

Source: C.B.S., Statistical Pocket Book, 1974, Table 12, p. 17.

* The regional distribution of the population is discussed in Part II.

2 - A Brief Outline of the History of Census Undertaking in Nepal, 1911-1971

1. Census undertaking is not a recent endeavour in the administrative process of Nepal. Though the country has accumulated experience and established census traditions, in the modern sense, through the first scientific census conducted in 1952/54 and censuses carried out thereafter, the first population count had, in fact, taken place in 1911. Afterwards, censuses were taken roughly ever ten years.

Most probably, following the footsteps of the British Administration in India, Nepal had witnessed under the Rana Administration (1846-1950) four population counts. However, there is evidence that these types of censuses had taken place even before the takeover of Jung Bahadur, the first Prime Minister (1846-1877). These kinds of censuses if they really did exist, would certainly have been no more than head counts, anciently used to be taken for taxation and other administrative purposes.

2. Three epochs in the history of population counts in Nepal regarding coverage, accuracy, methodology and tabulation can be distinguished:

(a) The population counts which had been conducted before 1941 under the Rana regime, though they used a sort of census schedule where items on the name of the head of the household, age of persons by sex, occupation, ability to work, number of livestock and means of transportation had been filled-in, the final results were merely aggregates, that is, head counts only. Four censuses between 1911 and 1941 had been carried out through the landlord (Zamindari) system. The schedules were distributed to the Jimmawals and Patwaris (the landlord agents who were responsible for collecting the land revenue), who by their won means, used to carry out this task with every one in his jurisdiction. However, it is beyond any doubt, that none of these censuses, due to the apparent weakness of the system and supervision, can be considered as complete or accurate.

(b) The second stage in the development of population statistics is discerned by the introduction of scientific approach regarding the need and importance of demographic data for the economic, social and educational planning. Modern techniques in data collection using internationally accepted definitions, concepts and worldwide comparable classifications has emerged.

The 1952/54 census was taken in two parts of the country separated by two years span. First, the eastern part was counted in May 1952 except Mahottari district, which has been counted simultaneously in May 1954 with the western part.

In spite of the difficulties concerning the lack of equipment of any kind, transportation and the acute circumstances the census encountered, this work is, impartially, an outstanding landmark which denoted only a stubborn devotion for acquiring population data. The 1961 census came about after two years of establishing the Department of Statistics and before the landlord system was completely abolished. The C.B.S. took the advantage of recruiting the Mukhiyas and Patwaris to act as enumerators or to assist the field supervisors in 1952/54 as well as in 1961, but this time under close supervision. Both censuses had been tabulated by hand. Sorting and tabulating millions of individual items was a very long and cumbersome process. This operation alone lasted over 2 years in 1952/54 census, and about four and a half years in 1961 census.

(c) The third epoch has been profoundly distinguished by a drastic change aiming at modernizing the country through accelerating the growth of the economy by social, economic and industrial planning. The demand for more comprehensive data on population, agriculture and industries for the purpose of framing a nation-wide economic development plan became apparently outstanding. The application of modern statistical techniques in collecting and tabulating population data became an urgent necessity. The installation of a modern computer has given C.B.S. the advantages of tabulating information collected on the census schedule in a fairly detailed range over a very short period of time.

In accordance with previous censuses, 1971 census has given detailed information on:

1. Population distribution by localities
2. Ethnic and social composition of the population
3. Fertility and marital status
4. Educational characteristics
5. Economic characteristics by major occupation groups and by industry
6. Detailed information on the characteristics of urban population concerning social, economic, educational characteristics and fertility.

3. Population size given by subsequent censuses, were as follows:

Year	Population in (000)	Average Annual Rate of Growth
1911	5,639	-
1920	5,574	-0.1
1930	5,533	-0.1
1941	6,284	1.2
1952/54	8,257*	2.3
1961	9,413*	1.6
1971	11,556*	2.1

* Excluding Nepalese residing abroad.

Between 1911 and 1920, it should be noted, that there was a decline in total population of one percent, whereas if the growth rate was not negative, the population size at least should be constant. Most likely the worldwide occurrence of influenza epidemic in 1918 which had swept Nepal and tolled a large number of the population and the recruitment of Nepali men in the Allied Armies in the First world war and their heavy casualty have contributed to this decline. "It is not certain that this accounts for all of the decline, however, particularly since individuals serving with foreign armies should have been included in the enumeration of 1920. It is most probable that there was considerable under enumeration in 1920 as compared with 1911".* The 1930 census, one should say was no more accurate than 1920.

* Department of Statistics, Census of Population – Nepal, 1952/54 p. VII.

The annual rate of increase during 1930-1940 was 1.2 percent. The effect of men out-migration in 1920 and 1941 census seems to be exaggerated. The census reports of 1911, 1920, 1930 and 1941 were not published for public use but for the use of intellectual nobilities of the Government and since there was no attempt at preserving the census records, they were lost after their use.

The apparent increase in 1952/54 census over 1941, though sometimes justified by the mass return of men serving in foreign armies, apparently reflects progress in census taking.

Various parameters of the 1961 age structure support the recorded growth rate between 1952/54-1961. An estimated crude birth rate around 41 per thousand and crude death rate about 25 per thousand for the same period, would yield the same recorded rate of growth. On the assumption that fertility is constant and mortality is declining, the rate of growth 2.0 between 1961-1971 seems reasonable.

4. The 1971 census has given all the very detailed and comprehensive data required from a modern census. The number of population by wards in nearly 4,000 village panchayats furnished the bases for drawing in a scientific manner, the sample of the demographic survey and can further be used in drawing other samples for social, health and educational surveys.

PART – II

Regional Distribution of the Population of Nepal, Density and Ethnic Composition

2.1 Regional Distribution of the Population and Population Density

1. The data which the subsequent population censuses supply on the regional distribution of the population and its social, ethnic and economic characteristic, reflect in many ways, the political past and migratory movement of the country. This is manifested in the presence of different heterogeneous races, cultures, languages and dialects and religious diversities. Although Nepal has never been invaded or dominated by a foreign power, the country had witnessed, in the historic past, two major migratory movements, out of which the different races co-exist to form the present people of Nepal. The first migratory movement came from Tibet. The Mongolian Tibetans came from the Inner-Himalaya to inhabit the uplands and the slopes of the Himalaya range, from which they gradually traversed to mid-lands and Kathmandu and Pokhara valleys. Being yak, sheep and goat breeders by the nature of their land, the Tibetans scarcely move except seasonally to places with dominantly high temperatures especially the Terai. The second migratory movement which started as early as the first or second century A.D. and lasted for about 18 centuries (and still influences to a minor extent some parts of southern Nepal) came in subsequent waves, originally from India, and particularly from the neighbouring Bihar Uttar Pradesh Provinces. This obligatory migration has partly been brought about by invasions from the powerful enemies and by the natural calamities such as floods and famines concomitantly outburst northern India. On the other hand, the harassment of Muslim rulers of India in the Medieval Ages had obliged a large number of Indian Hindus to seek refuge in the

far north. The Indian migrants have settled in different parts of Nepal from the far west to the Far East, with higher concentration in the fertile valleys and plains especially in the Terai. They coexisted with the indigenous people and the Tibetans. Gradually, but very slowly, integration and assimilation of various races began to take place after the unification of the country in one independent state in 1768 under King Prithivi Narayan Shah.

2. Adverse migratory streams have recently taken place. It was initially stimulated by the fragmentation of land holding by heritage, shortage of cultivated land and lack of job opportunities, and secondly by recruitment opportunities in the allied armies. This out-migration started in the second half of the nineteenth century reached its climax in the World War I and II. About 200,000 of the Gorkhas had been reported joining the allied armies in the First World War alone. The net effect of out-migration which was characterized mainly by the trend of individual male migration resulted in shortage of number of men in total population and it was more pronounced in the age group 15-50 as well.

3. The land area of the Kingdom of Nepal is 56,136 sq. miles (145,391 sq. km.) of which about 16 percent or 8,082 sq. miles (23,263 sq. km.) is the arid rocky area of the Himalaya range. The economic structure of Nepal being still exclusively dominated by agriculture, has deeply affected the population distribution. It has been largely determined by natural conditions, i.e. climate, rainfall, temperature and topography. On the basis of these factors, the distribution and density of the population of Nepal can be analyzed in terms of two classifications: (a) by development region* which corresponds to the drainage basins of the three river systems and (b) by the physio-geographic or ecological composition which divides the country into Mountains, Hills and Terai.

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* Nepal has been divided in April 1972 into four development regions:

(a) The Eastern Development Region comprises Mechi, Kosi and Sagarmatha Zones.

(b) The Central Development Region comprises Bagmati, Narayani and Janakpur Zones.

(c) The Western Development Region comprises Gandaki, Lumbini and Dhaulagiri Zones.

(d) The Far Western Development Region comprises Rapti, Bheri, Karnali, Seti and Mahakali Zones

Table 2.1 – The Distribution of the Population of Nepal by Development Region and Sub-region 1952/54, 1961 and 1971 Censuses

Regions	1952/54		1961		1971	
	Persons	%	Persons	%	Persons	%
1. Eastern Region	**1,930,508**	**23.44**	**2,273,496**	**24.16**	**2,797,500**	**24.21**
Hills & Mountains	1,104,540	13.41	1,317,750	13.40	1,409,942	12.20
Terai	825,968	10.03	955,746	10.16	1,387,558	12.01
Perent in Terai	—0—	42.80	—0—	42.00	—0—	49.60
2. Central Region	**2,685,164**	**32.60**	**3,072,596**	**32.64**	**3,865,753**	**33.45**
Hills & Mountains	1,296,205	15.74	1,747,178	18.56	2,095,517	18.13
Terai	1,388,959	16.86	1,325,418	14.08	1,770,236	15.32
Perent in Terai	—0—	51.73	—0—	43.14	—0—	45.79
3. Westen Region	**1,779,191**	**21.62**	**1,998,663**	**21.23**	**2,465,540**	**21.34**
Hills & Mountains	1,414,613	17.19	1,580,482	16.79	1,870,430	16.19
Terai	364,578	4.43	418,181	4.44	595,110	5.15
Perent in Terai	—0—	20.49	—0—	20.92	—0—	24.14
4. Far Wstern Region	**1,840,216**	**22.34**	**2,068,241**	**21.97**	**2,427,190**	**21.00**
Hills & Mountains	1,515,712	18.40	1,698,083	18.04	1,834,128	15.87
Terai	324,504	3.94	370,158	3.93	593,062	5.13
Perent in Terai	—0—	17.63	—0—	17.90	—0—	24.43
5. Nepal	**8,235,079**	**100.00**	**9,412,996**	**100.00**	**11,555,983**	**100.00**
Hills & Mountains	5,331,070	64.74	6,343,493	67.39	7,210,017	62.39
Terai	2,904,009	35.26	3,069,503	32.61	4,345,966	37.61

Source: 1952/54, 1961 and 1971 Censuses.

4. Table 2.1 shows the percentage distribution of the population in four Development Regions in the last three censuses. In terms of population proportion in each development region to total population, it seems that this proportion has remained almost constant over the period 1952-1971. Most likely, reshuffling of the population has taken a vertical dimension i.e. from Mountains to Hills and from Hills to Terai, rather than horizontal traverse across the regions. In absolute numbers, the Terai Region has gained between 1961-71 about 1,276,500 persons. Assuming that the annual population growth rate is 2 percent, half of this figure, or 604,000 persons increased due to natural growth and 672,500 persons due to migration. On the other hand, using the same assumption, the Hills and Mountains population would have amounted to 7,732,683 in 1971. But counting only 7,210,017 denotes a net movement of 522,666 persons. Since information on out-migration is lacking, it is very difficult to ascertain that this figure represents the net movement from the Hills to the Terai exclusively, particularly, because the Terai is open to a free movement of persons to and from India.

5. While comprising only 19.4 of total area, the Central Region supports one third of total population. The Central Terai which forms 33 percent of total Central Region area, and 27.3 percent of total Terai area, supports little less than one half of total population in the central region. Table 2.2 shows that the Central Region has the highest density (355 persons per sq. mile) among all regions rising by nearly 26 percent from 1961 to 1971. Average density in the Central Terai was 491 persons per sq. mile in 1971, against 368 persons per sq. mile in 1961. the eradication of malaria in the infected districts (Chitwan and Makawanpur districts in Narayani zone), and the construction of the roads across the Mahabharat and the Terai belt to India have played a principle role in the rehabilitation of people in the Terai and in marketing the Terai production of cereals in the metropolitan city of Kathmandu, as well as, allowing the export of these products to the Indian markets and abroad. In the Eastern Development Region differences in density between the Terai and Hills and Mountains, are greater

Table 2.2 – Population Distribution by Development and Geographic Regions (1952/54, 1961 and 1971)

Regions and Sub-region	Area in sq. km.*	Total Population			Density Sq/Km.		
		1952/54	1961	1971	1952/54	1961	1971
1. Eastern Dev. Region	**(27,993.55)**	**1,930,508**	**2,273,496**	**2,797,500**	**(69.0)**	**(81.2)**	**(99.9)**
a) Hills & Mountains	(20,962.01)	1,104,540	1,317,750	1,409,942	(52.7)	(62.9)	(67.3)
b)Terai	(7,031.54)	825,968	955,746	1,387,558	(117.5)	(135.9)	(197.3)
2. Central Dev. Region	**(28,199.09)**	**2,685,164**	**3,072,596**	**3,865,753**	**(95.2)**	**(109.0)**	**(137.1)**
a) Hills & Mountains	(18,863.49)	1,296,205	1,747,178	2,095,517	(68.7)	(92.6)	(111.1)
b)Terai	(9,335.60)	1,382,959	1,325,418	1,770,236	(148.1)	(142.6)	(189.6)
3. Westen Dev. Region	**(36,506.98)**	**1,779,191**	**1,998,663**	**2,465,540**	**(48.7)**	**(54.7)**	**(67.5)**
a) Hills & Mountains	(32,528.74)	1,414,613	1,580,482	1,870,430	(43.5)	(48.6)	(57.5)
b)Terai	(3,978.24)	364,578	418,181	595,110	(91.6)	(105.1)	(149.5)
4. Far Wstern Dev. Region	**(52.691.79)**	**1,840,216**	**2,068,241**	**2,427,190**	**(34.9)**	**(39.3)**	**(46.1)**
a) Hills & Mountains	(38,890.61)	1,515,712	1,698,083	1,834,128	(39.0)	(43.7)	(47.2)
b)Terai	(13,801.18)	324,504	370,158	593,062	(23.3)	(26.8)	(43.0)
5. Nepal	**(145,391.41)**	**8,235,079**	**9,412,996**	**11,555,983**	**(56.6)**	**(64.7)**	**(79.5)**
a) Hills & Mountains	(111,244.85)	5,331,070	6,343,493	72,101,017	(47.9)	(57.0)	(64.8)
b)Terai	(34,146.56)	2,904,009	3,069,503	4,345,966	(85.0)	(89.9)	(127.3)

* *Source:* Central Bureau of Statistics

than in any other region. Density in the Eastern Terai is three times higher than density in the Hills and Mountains because the Eastern Terai is the most fertile area in Nepal. It increased by 45 percent in the intercensal period (from 352 persons/sq. mile to 511 persons/sq. mile). As compared to the Terai of the east and centre, the far western Terai is densely covered with forests and the area has not received a comparatively large number of migrants from the hills and mountains which are also sparsely populated. With contrast to density in the other three regions, density in the far western Terai is lower than density in the Hills and Mountains of the same region.

6. The Mountains and Hills regions covering 76.5 percent of Nepal's total area are inhabited by 63 percent of the total population with an average density rising steadily from 146.7 persons/sq. mile in 1952/54 census to 167.7 persons/sq. mile in 1961 and to 206 persons/sq. mile in 1971 with a net increase equal to 38 persons/sq. mile in the last ten years. The inter-regional differences in density indicate a pattern which is exclusively associated with the rainfall pattern and subsequently with the fertility of the soil, and to a large extent with communications. In the Eastern and Central part o Nepal where the average annual rainfall ranges from (1600-1800 mm.) they have high average density of 259 and 355 persons/sq. mile respectively. Among all Mountain and Hill regions the central hills where the Kathmandu Valley is situated, have attracted more people to inhabit this area. It has the highest average density of 287 persons/sq. mile.

7. Density declines westward with the decreasing strength of the monsoon rain. The Western Region which counts 25 percent of total area has almost half the density of the Central Region. The Mountain and Hill area which covers 89 percent of the western region comprises a vast rugged arid and forest land with little agricultural potentialities. The narrow belt of the Terai in this region which covers 1,536 sq. miles has a density of 387 persons/sq. mile. It is 260 percent higher than the density in the mountain and hill of the same region. The far western region which gets small

amount of rain from the monsoon with an average annual rainfall of (770 mm.) is dry, rugged, sparsely populated (119 person/sq. mile), is the least economically developed area in Nepal and has very little, economic advantages of communications, production and marketing capacity.

8. Nevertheless, density based on total area or even on settled areas is a very crude measure of crowdedness or dispersion, for it does not account either for regional differences in the cultivated area and the fertility of the soil or for non-agricultural income possibilities. The influence of natural factors on the population distribution in Nepal is, therefore, better reflected by the number of inhabitants per cultivated unit. However, density per cultivated hectare, as shown in table 2.3 reflects a completely contrasting picture. The stress on cultivated land in what may be considered as sparsely populated area has adversely turned it into very densely populated area, due to the limitations of cultivable land. The cultivated area in the far west (119 persons/sq. mile) turned to be highly burdened by a density of 8.68 persons per cultivated hectare, while the Eastern Region which, in terms of total area is highly populated, has less density of 5.84 persons per cultivated hectare. On the whole, the cultivated area has been estimated at 1,980,000 hectare or only 13.6 percent of total area. About 71 percent or 1,401,000 hectare of the cultivated land lies in the Terai and Inner Terai Regions. When average density is expressed in terms of cultivated land only, density (5.84 persons/hectare) turns out to be seven times higher than average density (0.79 person/ hectare for total area). Proportion of cultivated land substantially varies from one region to another. The inter-regional differences become more pronounced among geographic regions and smaller administrative units. In the broad classification into Mountains, Hills and Terai, the proportions of cultivated area were 4.9 percent, 30.3 percent and 64.8 percent respectively. Among the administrative zones, the highest proportions of cultivated land have been recorded in Janakpur and Narayani zones in the Central Terai (30.3 percent each). In the western part of the country, Karnali and Dhaulagiri zones have the least proportions of land use. The

Table 2.3 – The Distribution of the Population of Nepal in 1971 by Development Region and Sub-region and Density in Cultivated Land

Zones	Persons 1971	Area in (000) ha.	Cultivated Area in (000) ha.	Proportion of Cultivated to Total Area	Persons per (ha.) in Total Area	Persons per (ha.) in Cultivated Area
Nepal	**11,555,983**	**14,539.19**	**1,980.2**	**13.6**	**0.79**	**5.84**
Eastern Dev. Region	**2,797,500**	**2,799.36**	**615.7**	**22.0**	**1.00**	**4.54**
1. Mechi	617,760	721.06	129.0	17.9	0.86	4.79
2. Kosi	866,260	813.55	201.8	24.8	1.06	4.29
3. Sagarmatha	1,313,480	1,264.75	284.9	22.5	1.03	4.61
Central Dev. Region	**3,865,753**	**2,819.91**	**637.4**	**22.6**	**1.37**	**6.06**
1. Janakpur	1,265,755	915.00	277.1	30.3	1.38	4.57
2. Bagmati	1,496,971	1,067.82	106.6	10.0	1.40	14.04
3. Narayani	1,103,027	837.09	253.7	30.3	1.32	4.35
Westen Dev. Region	**2,465,540**	**3,650.70**	**347.5**	**9.5**	**0.68**	**7.10**
1. Gandaki	1,023,110	1,212.37	82.9	6.8	0.84	12.34
2. Lumbini	1,165,701	897.09	238.4	26.6	1.30	4.89
3. Dhaulagiri	276,729	1,541.24	26.2	1.7	0.18	10.56
Far Wstern Dev. Region	**2,427,190**	**5,269.22**	**379.6**	**7.2**	**0.46**	**8.68**
1. Rapti	705,813	950.47	88.0	9.3	0.74	8.02
2. Karnali	188,012	1,341.00	18.2	1.4	0.14	10.33
3. Bheri	575,071	1,052.91	128.5	12.2	0.55	4.48
4. Seti	597,124	1,248.84	99.2	7.9	0.48	6.02
5. Mahakali	361,170	675.97	45.7	6.8	0.53	7.90

* Estimates based on Cadastral survey conducted in 1961.

Source: Ministry of Food and Agriculture, Agricultural Statistics of Nepal, Table 6, P.15

proportions of cultivated area were 1.4 percent and 1.7 percent respectively.

9. For many years to come, agriculture will remain the major determinant of the gross national product and the main sector of employment for the increasing labour force in Nepal. The growing international restriction to migration would, in the foreseen future, lessen the magnitude of out-migration from Nepal; labour force has found up till now in work abroad an outlet to the imbalanced man/land ratio. Yet, problems facing the efforts aiming at accelerating the growth of Nepal's national income are perceived in the agricultural sector. The productivity of land is low. Expansion of agricultural land through deforestation and settlement is going on haphazardly in the Terai area. Population density in the Mountains has reached a critical point, beyond which, the use of land for agricultural purposes would lead to deforestation and deterioration of the soil. The cultivation of paddy-which is highly water absorbent-on the mountain slopes, has, in some areas, lead to serious soil erosion and deforestation.

10. Compared with other Asian countries, Nepal with an average density of 79.5 persons per sq. km. table (2.4) appears to be fairly densely populated country. India and Sri Lanka have, however, much higher densities. Countries less dependent on agriculute, though every densly populated have much higer per capita income. In fact, taking into account the exploited and the amenable expense in agriculture, one should say, that there is little room for agricultural expansion in Nepal. Of the total area 40 percent is unusable being either too high rocky mountain, or too steep uncultivable slopes. Another 30 percent is covered by forests. Perspective increase in agriculture is focused upon the rational use and scientific reclamation of the Terai belt.

Table 2.4 – Population, Area and Density in Nepal and Selected Countries

Country	Year	Population	Area Sq. Km.	Density Per sq.km.	Per Capita Inacome US $
Nepal	1971	11,556	145,391	79.5	70
India	1971	547,950	3,280,483	172.0	86
Japan	1970	103,720	369,915	287.0	1,900
Sri Lanka	1971	12,711	65,610	199.0	160
Thailand	1970	34,152	514,000	710.0	181
Belgium	1970	9,651	30,513	318.0	2,726
France	1968	49,779	547,026	95.0	2,606
Italy	1971	53,770	301,225	180.0	1,723
England & Wales	1971	48,594	151,126	324.0	2,249
U.S.A.	1970	203,235	9,363,123	22.0	4,573

Source: UN's Demographic Year Book, 1972.

2.2 The Distribution of the Population of Nepal by Size of Locality

2. There is no reason to believe that the volume and course of internal migration has eminently affected the rural-urban distribution of the population since 1952/54 census. The one way pattern o internal migration from the hills to the Terai has always been in search of amenable land in the Terai rather than the urban areas. Urban settlements which obviously reflect differences in ways of life, standard of living and higher educational attainment are not too far ahead of rural areas in many other aspects. The rural sector being highly illiterate has no surplus of educated or skilled labour to dispatch to the city, where certain technical qualifications are usually needed. The great variety of jobs in the cities, better prospects for economic advancement, and the desire for social and economic independence, is strong inducement for young educated or trained persons to leave the country-side, especially if land is short or fragmented and the population pressure is increasing rapidly. But in fact, these incentives are attracting

only a negligible proportion of the population to migrate to the city. It attracts only those who have acquired certain standard of education or technical abilities. Finally, expansion in the secondary and tertiary sectors was comparatively too small to act as a stimuli for a discernible rural to urban migration.

3. Table 2.5 shows that the proportion of population living in urban settlement has remained approximately constant over the past decade. While urban sector has increased by 37 percent between 1961 and 1971, the rural sector increased by 22 percent in the same period. The classification of settlement into rural and urban seems to be arbitrary rather than based on clear definition. The criterion used in classifying settlements into urban centers (Nagar Panchayat) or rural settlement (Village Panchayat) is based on a combination of certain characteristics like the town being a trading centre, educational and administrative centre rather than the population size. Shiva gang for instance, with a population of 17,891 was considered as village panchayat, while Tansen with a population of 6,334 was considered as town panchayat.

Table 2.5 – Distribution of the Population of Nepal by Rural-Urban residence in 1961 and 1971

Census		Localities*	Population	Percent
1971	Rural	3,915	11,094,045	96.0
	Urban	16	461,938	4.0
	Total	3,931	11,555,983	100.0
1961	Rural	28,446	9,076,774	96.4
	Urban	16	336,222	3.6
	Total	28,462	9,412,996	100.0

* In 1961 census the village was considered as the enumeration area, and villages amounted to 28,446. After 1961 the Panchayat System was introduced. Basically, the Panchayat System is an electoral system based on grouping the population in the adjacent villages and hamlets to form one village panchayat. Thus number of localities has been reduced to 3,931 locality in 1971 census.

4. Taking into consideration the occupational structure of the labour force in the 16 Town Panchayats comprising the urban sector and regarding only those towns where more than 35 percent of the labour force are engaged in activities other than agriculture, the size of the urban population will be reduced to 360,450 persons or only 3 percent of total population.*

5. Another important aspect of the population distribution by size of locality is, the population dispersion over a very wide area in small localities. Table 2.6 shows that 83 percent of the population are living in localities with a population less than 5,000. The population dispersion is in fact more outstanding than this table suggests. In the Terai area, houses are notably clustered, while in the midlands and mountains, the population outside towns is scattered over a very vast area. Even in the same village some wards may occupy a considerably big area where one would find houses remotely scattered over the ward boundaries. Dispersion of the people in small localities over a very wide and rugged area unavoidably caused certain social and economic difficulties for the population and for the administration as well. It either implies excessive costs for constructing roads and other infra-structures, especially schools, public health clinics, or slackening the economic advancement of the dispersed populations, particularly, those who live in the remote precipitous west. Apparently, population dispersion and isolation of small size settlements has created a self-sufficient agricultural subsistence economy closed to many social and economic changes. It prevented transfer of goods and services from one part of the country to the other.

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* Proportions of the labour force engaged in agriculture in town Panchayats were: Bhadrapur (20 p.c.), Bhairahawa (46 p.c.), Bhaktapur (66 p.c.), Biratnagar (20 p.c.), Birgunj (14 p.c.), Butwal (31 p.c.), Dharan (36 p.c.), Hetauda (58 p.c.), Ilam (71 p.c.), Janakpur (37 p.c.), Kathmandu (15 p.c.), Lalitpur (36 p.c.), Nepalgunj (30 p.c.), Pokhara (64 p.c.), Rajbiraj (18 p.c.) and Tansen (18 p.c.)

Table 2.6 – The Distribution of the Population of Nepal in 1971 Census by Size of Locality

Size of Locality	Number	Population	Percent	%Accumulated
100,000 & More	1	150,402	1.30	100.00
50,000 - 99,999	1	59,049	0.51	98.70
20,000 - 49,999	5	149,849	1.30	98.19
10,000 - 19,999	17	223,136	1.93	96.89
5,000 - 9,999	229	1,387,840	12.01	94.96
4,000 - 4,999	327	1,442,740	12.48	82.95
3,000 - 3,999	790	2,701,908	23.38	70.47
2,000 - 2,999	1,584	3,926,758	33.98	47.09
1,000 - 1,999	974	1,437,103	12.44	13.11
500 - 999	91	72,263	0.63	0.67
Less than 500	12	4,935	0.04	0.04
Total	3,931	11,555,983	100.00	-

Source: 1971 Census, Vol. 1, Table 4.

2.3 Racial and Ethnic Composition of the Population of Nepal

1. As it has been stated earlier in this part, the mountainous nature of Nepal has provided shelter and security for a large number of migrants from different places in the south and north of Nepal. The successive waves of migrants, comprising different races, and representing separate ethnic, cultural and linguistic backgrounds have settled down in different places all over Nepal. Remaining isolated for centuries, each community, which have preserved their own traditions, culture and language, evolved relevant ecological adaptations to the altitude, climate and topography of the territory they occupy. Apparently, the influences of quite diverse climatic and environmental conditions among the mountains, hills and Terai and between the east and west of Nepal, the low rate of literacy, the lack of communications and the feudal system which had, for a long time, been dominating Nepal, were the main factors

contributing to the survival of the manifold languages and dialects of minor communities and to the slowness of the cultural assimilation of the country. However, it is most probable that the caste system has also played a major role in this respect. With the vigorous endeavour at modernizing the country, a national approach is apt to replace the regional, linguistic, religious or ethnic identification.

2. Racially speaking, the people of Nepal have originated from three racial branches or sub-families:

(a) The Mongoloid or the Tibeto-Burman Sub-family

Chronologically, the mongoloid people had established themselves in the Sub-Himalayan region long before the arrival of the Indo-Aryan people. There is a striking similarity in physical structure of small groups of the mongoloid peoples with people living in the hills and plain of Kathmandu Valley. Most probably, migration of the mongoloid to the mid-lands and inter-marriage with the indigenous people might have brought about this resemblance. Under this broad sub-family is listed a number of clans including the Tamangs, Gurungs, Limbus, Rai-Kiratis, Magars, Tharus, Sunwars, Sherpas and Bhotes. The population of this race is spread on the highlands from the far west where the Bhotes live in Jumla, Humla and Mugu districts to the centre where the Gurungs, Magars and Tamangs had established themselves in Kaski and Syangja districts and on the Far East Mid-lands in Taplejung, Dhankuta and Tehrathum districts, the Sherpas and Rai-Kiratis live. The Newars who are a mixture of Tibeto-Nepali and speak Tibeto-Burman (The Newari) belong to this race. Relatively small in numbers (only 4 percent of total population) the Newars preserved their culture, art and language, and were highly influential in the political and economic life of Nepal. Being craftsmen and traders, they spread in all direction, but still Kathmandu Valley is the place where the bulk of Newars are living now where some of them are practicing agriculture as their main source of living. Their presence on this region has declined from 55 percent of total population in Kathmandu Valley in 1952/54 to 46 percent in 1971.

It is not certain whether the decline of the Newar proportion was brought by out-migration of the Newars to other parts of Nepal or it was caused by in-migration to this area by other races or due to the adoption of Nepali as mother tongue. The census figures for 1952/54, 1961 and 1971 indicate that most of the ethnic groups of the hills are replacing their traditional mother tongue with Nepali. The magnitude of the adaptation of Nepalese by these ethnic groups increases with the degree of isolation from their original homes. The 1971 census has revealed that the biggest clan in the Tibeto-Burman sub-family is the Tamangs (555,056) followed by the Tharus (495,881 persons), the Newars (454,979 persons), the Magars (388,383 persons) and the Gurungs (171,609 persons). The Tamangs have spread also eastward to the hills and central Terai. The majority of this clan is tenant farmers, porters, home-servants and wood cutters. The Magars who are of the Tibeto-Burman stock have adopted Hinduism, and abandoned their Tibeto-Burman language to the Nepali. Their main districts are Khotang, Okhaldhunga in the east and Rolpa, Baglung, Pyuthan, Sallyan and Rukum in the western hills. The Magars are mostly farmers, but comparatively large proportions of them are craftsmen. The Tharus clan which is the second Biggest Clan in Tibeto-Burman stock lives on the fringe of the Chure range in the inner Terai. They spread from Jhapa and Udayapur districts in the east to Nawalparasi, Rupandehi, Kapilvastu to Banke and Kailali districts in the Far Western Chure. The Tharus are exclusively farmers.

(b) The Indo-Aryan Branch

The Indo-Aryan people of Nepal belong to the Chetris-Brahmin and some other occupational castes*. The Chhetris (or the Kshatriyas) to whom the military traditions of the people of Nepal is attributed, arrived in Kathmandu valley earlier than the Brahmins. Among the four races of which the Nepali people are composed, the Indo-Aryan race exceeds 80 percent of total population. Under this branch lie a number of sub-branches, clans,

* Chhetris are the warrior and the Brahmins are priests.

castes and tribes, including the Nepali, Maithili, Abadhi, Bhojpuri, Rajbanshi and the Urdu speaking Muslims. Predominantly the caste system has played a very important role in governing the social and political life of the people of Nepal. According to the Hindu traditions, the society is divided into four castes, namely, the Brahmin, the Kshatriya, the Vaisya and the Sudra. Each caste has a distinguished social position and traditional province of occupation. The Brahmins (the priests) are placed in the highest position, their observations are mainly confined to the intellectual functions and religious teachings. The responsibility of defending the country against any adversary is laid down upon the shoulders of the Chhetris or the Kshatriyas. Tilling, trading, craftsmanship and other production activities are the main fields of the Vaisya. On the lowest scale come the Sudra who usually takes the menial jobs in the society such as sweeping and cleaning. Only with some deviations in the occupational classification of the society and title of castes, the Buddhist system is almost similar to Hinduism. Two great civilizations have converged on the land of Nepal where they mutually affected each other's philosophical backgrounds and values.

(c) The Austro-Asiatic Branch

This sub-family comprises only two small communities namely, the Satar (18,840 persons) and the Santhali (10,645 persons) according to 1961 census figures. In 1971 they have been classified under the category "other linguistic groups". The populations of these two communities are concentrated in Jhapa and Morang districts in the Far Eastern Terai.

3. The population composition by religion has not revealed a multitude of faiths. Although Hinduism and Buddhism are fraternally acquiesced and both people sometime worship the same idol in the same temple each according to his own rituals, both religions have established deeply rooted differences. Hindus are the (Shiva Margis or) the followers of God Shiva and Buddhists are the (Buddha Margis or) the followers of Lord Buddha. While Buddhists

believe in one Lord (Buddha), the Hindus are trinity believers in Brahma, Vishnu and Maheswar. They also worship number of Gods and Goddesses such as Parvati, Durga and Bhairava. Close investigation into the relationship between these two big religions has displayed that a normal shift from Buddhism to Hinduism or *vice versa* is quite tolerable without raising prejudice even among the same family members.

The following table shows the number of persons by religion according to the last three censuses:

Religion	**1952/54**	**%**	**1961**	**%**	**1971**	**%**
Hindus	7,318,932	(88.9)	8,254,403	(87.7)	10,330,009	(89.4)
Buddhists	707,104	(8.6)	870,991	(9.3)	866,411	(7.5)
Muslims	208,899	(2.5)	280,597	(3.0)	351,186	(3.0)
Christians	-	-	458	-	2,541	0
Jain*	684	-	831	-	5,836	0
Unstated	-	-	5,716	(0.1)	-	(0.1)
Total	8,235,079	100.00	9,412,996	100.00	11,555,983	100.00

Obviously, the indigenous people are the followers either of Hinduism or Buddhism. The minority of Christians comprises the Nepalese of Indian origin who converted to Christianity. Hinduism and Buddhism, as two religions amount to 97 percent of total population. The biggest and the solely Muslim minority cover the remaining 3 percent. Most of the followers of Islam belong to the Sunna sect. Muslims of Nepal were the descendants of those Muslim merchants who came to this country in the middle ages from Indian Sub-continent. Their main settlements are in the Terai belt with a small proportion in Kathmandu district.

Finally it should not be ascertained that people of the Tibetan origin are Buddhists and people of the Indo-Aryan origin are by nature Hindus. The Newars for instance, who belong to the

* Jains are puritan Hindus who strictly prohibit the killing of animal, insect or any living creature. They are strict vegetarians.

Tibeto-Burman stock have embraced either Hindusim or Buddhism as their religion. The Tharus, who are one of the aboriginal tribes of Nepal, but were classified under the Tibeto-Burman sub-family, have also adopted Hinduism. Similarly, the Magars who belong to the Tibeto-Burman stock have adopted Hinduism. The Magars gradually abandoned the Tibeto-Burman language. Their present mother tongue is Nepali now.

4. The linguistic composition of the population of Nepal seems to be rather ambiguous. The classification of mother tongue was not always the same in 1952/54, 1961 and 1971 censuses. Failing to consider a clear-cut division between a language and a dialect, the collected information has shown considerable discrepancies between the three censuses for certain languages. While information on 35 languages has primarily been collected in 1952/54 census, only 24 languages were tabulated. Similarly, 1961 census has collected information on 52 languages and later was reduced in tabulation to 36. The 1971 census included tabulation on 17 languages leaving an unstated residual of 487,060 persons.**

The main objective of collecting data on the linguistic composition of the population in census is, to obtain a supplementary indicator of ethnic origin. For this purpose, the classification of persons by mother tongue, or the language spoken by the person at home, or the language of the parents, could be more accurate than the classification of persons by language used in their daily activities. When so many diversities of languages do exist in the country it would be more interesting to know the current ability of the individuals to speak languages other than their mother tongue*. This kind of investigation yield useful data on the linguistic skills of the population.

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* For the complete lists See Appendix V.

** 1952/54 census has given two classifications of persons first by mother tongue and second by secondary languages (Table 12, p. 47).

Table 2.7. Number of Persons and Proportions by Mother Tongue Reported in 1952/54, 1961 and 1971 Censuses

	Language	1952/54	%	1961	%	1971	%
1.	Nepali	4,013,667	48.74	4,796,528	50.96	6,060,758	52.45
2.	Maithili & Dialects	918,211	11.15	1,130,402	12.01	1,327,242	11.49
3.	Bhojpuri	16,335	0.20	577,357	6.13	806,480	6.98
4.	Tamang	494,745	6.01	528,812	5.62	555,056	4.80
5.	Abadhi	N.A.	-	447,090	4.75	316,950	2.74
6.	Tharu	359,594	4.37	406,907	4.32	495,881	4.29
7.	Newari	383,184	4.65	377,727	4.01	454,979	3.94
8.	Magar	273,780	3.32	254,675	2.71	288,383	2.50
9.	Rai	236,049	2.87	239,749	2.54	232,264	2.01
10.	Gurung	162,192	1.97	157,778	1.68	171,609	1.48
11.	Limbu	145,511	1.77	138,705	1.47	170,787	1.48
12.	Bhote Sherpa	70,132	0.85	84,229	0.89	79,218	0.69
13.	Morang & Dialects	106,569	1.29	83,986	0.89	N.A.	-
14.	Hindi	80,181	0.97	2,867	0.03	N.A.	-
15.	Rajbansi	35,543	0.43	55,803	0.59	55,124	0.48
16.	Urdu	32,545	0.39	2,650	0.03	N.A.	-
17.	Sunwar	17,299	0.21	13,362	0.14	20,380	0.18
18.	Satar	16,751	0.20	18,840	0.20	20,660	0.18
19.	Chepang	14,261	0.17	9,247	0.10	N.A.	-
20.	Thami	10,240	0.12	9,049	0.10	N.A.	-
21.	Danuwar	N.A.	-	11,624	0.12	9,959	0.09
22.	Santhali	N.A.	-	10,645	0.11	3,193	0.03
23.	Other Languages & Dialects	848,390	10.30	54,964	0.58	487,060	4.21
Total		**8,235,079**	**100.00**	**9,412,996**	**100.00**	**11,555,983**	**100.00**

Source: 1961 Census, Vol. 2, Table 8 and 1971 Census Vol. 1, Table 14.

Table 2.8 – Number of Persons by Mother Tongue in 1952/54, 1961 and 1971 Censuses and Intercensal Change in Percentage

Languages	1952/54	1961	1971	1952/54 -1961	1961-1971
1. Nepali	4,013,567	4,796,528	6,060,758	19.5	26.4
2. Maithili*	918,211	1,130,402	1,327,242	23.1	17.4
3. Bhojpuri	16,335	577,357	806,480	3534.4	39.7
4. Tamang	494,745	528,812	555,056	6.9	5.0
5. Abadhi	N.A.	447,090	316,950	N.A.	29.1
6. Tharu	359,594	406,907	495,881	13.2	-21.9
7. Newari	383,184	377,727	454,979	-1.4	20.4
8. Magar	273,780	254,675	288,383	-7.0	13.2
9. Rai	236,049	239,749	232,264	1.6	-3.1
10. Gurung	162,192	157,778	171,609	-2.7	8.8
11. Limbu	145,511	138,705	170,787	-4.7	23.1
12. Bhote Sherpa	70,132	84,229	79,218	20.1	-6.0
13. Morang & Dialects	106,569	83,986	N.A.	-11.8	N.A.
14. Hindi	80,181	2,867	N.A.	-96.4	N.A.
15. Rajbansi	35,543	55,803	55,124	57.0	-1.2
16. Urdu	32,545	2,650	N.A.	-91.9	N.A.
17. Sunwar	17,299	13,362	20,380	-23.0	52.5
18. Satar	16,751	18,840	20,660	12.5	9.7
19. Chepang	14,261	9,247	N.A.	-35.2	N.A.
20. Thami	10,240	9,049	N.A.	N.A.	N.A.
21. Danuwar	N.A.	11,624	9,959	N.A.	N.A.
22. Santhali	N.A.	10,645	3,193	N.A.	N.A.
23. Others	848,390	54,964	487,060	93.5	886.1
Total Nepal	8,235,097	9,412,996	11,555,983	—	—

* Maithili and Maithili Pradesh dialects

Source: 1961 Census, Vol. 2, Table 8. and 1971 Census, Vol. 1, Table 14.

5. Within the frame of demographic analysis, although this report is dealing with the different aspects of the population, it is out of our main field to discuss the sophisticated linguistic matters. But from the statistical point of view, it seems quite evident that the figures (presented in table 2.7) on the number of persons by mother tongue vary for certain groups, considerably from one census to the other. The Abadhi language, for instance, might had been included in the unknown or other language category in 1952/54 censuses, while this language is spoken by 447,907 persons I 1961 and 316,950 persons in 1971. Similarly the Morang and Hindi languages which are spoken by large communities in 1952 and 1961 censuses have disappeared in 1971 classification. Overlapping, particularly among languages sharing common ancestral descent is a strong possibility for causing these differences in the presentation of the linguistic composition. Hindi, for example, has been the rallying points of Maithili, Bhojpuri and Abadhi the languages predominantly spoken in the Terai. Most probably transfer of persons across Hindi to Maithili, Bhojpuri and Abadhi or their dialect is the accep-table explanation for the decline in Hindi speaking persons from 80,181 persons in 1952/54 to 2,867 in 1961.

6. Table 2.7 shows that of all the 35 languages listed in 1961 census there are 11 languages spoken by only 1 percent of the total population. However, for both the Indo-Aryan and the Tibeto-Burman languages, Sanskrit has played the role of Latin in the Eastern Hemisphere. Ancient Buddhist and Hindu religious textbooks were invariably written in Sanskrit. The Nepali language which is now ranking in the first place as a *lingua franca* is the language of the Gorkha conquerors which became the official language of the nation. It is a unifying language that has emphasized its importance through chain or developments. After the conquest of Kathmandu Valley by the Gorkha King, Nepali or the *khas kura* language, which for some time was known as *parbatiya*, has replaced the Newari language in the valley. The original home of the Nepali is western Nepal. The Nepali language which uses the Sanskrit scripts was made compulsory by law in administration and education in 1905 by Prime Minister Chandra SamSher Rana. As the national

Table 2.9 – Distribution of Population by Region and Major Languages in 1952/54, 1961 and 1971 Censuses and proportion of Population by Languages

Regions	Year	Total Population	L A N G U A G E S					
			Nepali		Maithili		Bhojpuri	
			P	L	P	L	P	L
1. Eastern Hills	1952/54	1708816	(51.2)	(21.8)	(0.0)	(0.0)	(0.0)	(0.0)
	1961	1886722	(57.3)	(22.5)	(0.0)	(0.0)	(0.0)	(0.0)
	1971	2036240	(59.3)	(19.9)	(0.0)	(0.1)	(0.0)	(0.0)
2. Kathmandu Valley	1952/54	410871	(39.3)	(4.0)	(0.0)	(0.0)	(0.0)	(0.0)
	1961	459990	(41.3)	(3.9)	(0.0)	(0.0)	(0.0)	(0.0)
	1971	618911	(45.7)	(4.7)	(0.0)	(0.0)	(0.0)	(0.0)
3. Eastern & East Inner Terai	1952/54	1991649	(9.4)	(4.6)	(46.1)	(100.0)	(0.1)	(100.0)
	1961	2406948	(10.3)	(5.2)	(47.0)	(100.0)	(23.9)	(99.9)
	1971	3234181	(16.5)	(8.8)	(40.9)	(99.7)	(21.2)	(85.1)
4. Central Terai	1952/54	239677	(37.9)	(2.3)	(0.0)	(0.0)	(0.0)	(0.0)
	1961	244236	(46.9)	(2.4)	(0.0)	(0.0)	(0.0)	(0.0)
	1971	493958	(45.9)	(3.7)	(0.1)	(0.0)	(2.9)	(1.8)
5. West, Mid-West & Far Western Terai	1952/54	672683	(7.0)	(1.2)	(0.0)	(0.0)	(0.0)	(0.0)
	1961	770515	(8.1)	(1.2)	(0.0)	(0.0)	(0.0)	(0.0)
	1971	1041624	(22.3)	(3.8)	(0.0)	(0.1)	(10.1)	(13.0)
6. Western Hills	1952/54	3211383	(83.6)	(66.1)	(0.0)	(0.0)	(0.0)	(0.0)
	1961	3644585	(85.1)	(64.6)	(0.0)	(0.0)	(0.0)	(0.0)
	1971	4131069	(86.5)	(59.0)	(0.0)	(0.1)	(0.0)	(0.1)

P denotes proportion of language speaking population to total population of area.
L denotes proportion of total persons speaking the language.
Source : Ibid.

Table 2.9 – Distribution of Population by Region and Major Languages in 1952/54, 1961 and 1971 Censuses and proportion of Population by Languages

Regions	Year	Total Population	LANGUAGES							
			Tamang		Abadhi*		Tharu		Newari	
			P	L	P	L	P	L	P	L
1. Eastern Hills	1952/54	1708816	14.0	48.5	0.0	0.0	0.0	0.0	4.5	20.0
	1961	1886722	12.9	47.1	0.0	0.0	0.0	0.0	3.4	16.9
	1971	2036240	11.7	42.9	0.0	0.1	0.0	0.0	4.0	17.0
2. Kathmandu	1952/54	410871	4.7	4.0	0.0	0.0	0.0	0.0	55.0	58.9
Valley	1961	459990	5.0	4.5	0.0	0.0	0.0	0.0	52.1	63.4
	1971	618911	6.5	7.2	0.0	0.0	0.0	0.0	46.2	62.9
3. Eastern and	1952/54	1991649	2.2	8.8	0.0	0.0	1.7	9.7	0.6	3.0
East Inner Terai	1961	2406948	1.7	8.0	0.0	0.1	4.1	24.6	0.7	4.5
	1971	3234181	2.1	12.2	0.1	0.8	3.0	19.5	0.7	4.8
4. Central Terai	1952/54	239677	33.1	16.0	0.0	0.0	11.7	7.8	5.2	3.3
	1961	244236	31.4	14.8	0.0	0.0	10.0	6.0	5.5	3.6
	1971	493958	16.4	14.6	7.2	11.2	12.5	12.4	4.0	4.4
5. West, Mid-West	1952/54	672683	0.0	0.0	0.0	0.0	40.0	74.8	0.4	0.7
& Far Western	1961	770515	0.0	0.0	58.0	99.9	33.0	62.4	0.3	0.7
Terai	1971	1041624	0.0	0.0	26.7	87.5	32.2	67.5	0.4	0.9
6. Western Hills	1952/54	3211383	3.5	22.7	0.0	0.0	0.4	7.7	1.7	14.1
	1961	3644585	3.5	24.4	0.0	0.0	0.8	7.0	1.1	10.9
	1971	4131069	3.1	23.0	0.0	0.2	0.1	0.5	1.0	9.2

* abadhi has been categorized in 1952/54 census under Eastern Terai dialects.
Pdenotes proportion of language speaking population to total population of area.
Ldenotes proportion of total persons speaking the language.
Source: Ibid.

language of the country, Nepali has been increasing gaining a higher position, either in total persons who have reported Nepali as their mother tongue, or in the proportion of people who can speak it as a secondary language.

7. Among all languages other than Nepali thee are only few languages which have either a writing system or a written literature. Languages spoken by small communities have been introduced in Nepal through the comparatively recent migratory movements to the Terai. Some languages spoken by small communities in the high lands have to extent, lost their ties with their background linguistic roots. Illiteracy and isolation of these communities have reduced their languages to merely spoken languages or dialects with no hope of survival. Among the Indo-Aryan linguistic sub-family, Maithili, Bhojppur, Abadhi and Tharu are the leading languages next to Nepali. They are predominantly spoken by the inhabitants of the Terai and Inner Terai. Each one of these languages is spoken by a community out-numbering 100,000 and excepting Tharu has its won scripts and literature. Linguistically, socially and culturally these languages have deep roots in the social background of the Indian Provinces adjacent to the Terai.

8. Maithili, Bhojpuri, Abadhi and Tharu are spoken by 27.2 percent of total population in 1961. This proportion turned out to be 25.5 percent in 1971. Newari which is spoken by 4 percent of total population has played an important role in the literacy life of Nepal it is spoken in almost every district. The Newari speaking population forms the majority of Kathmandu Valley inhabitants. The proportion of Newari speaking population to total population in Kathmandu Valley decreased from 55 percent in 1952/54 to 52 percent in 1961 and to 46 percent in 1971. While other languages have shown relatively stable dominancy in certain regions such as Maithili and Bhojpuri, the Newari speakers, table (2.9) are dispersed in almost all regions of Nepal. A systematic rising trend in proportion of population speaking Nepali has been reveled by table (2.9). In Kathmandu Valley, although only 4.7 percent of the Nepali speaking population is represented,

the proportion of Nepali speakers to total population of this region has increased from 39.3 percent in 1952/54 to 45.7 in 1971. In the western hills, the origin of the Nepali language, the proportion of Nepali speakers has risen from 83.6 percent in 1952/54 to 86.5 percent in 1971.

9. The second sub-family of languages is represented by languages of Tibeto-Burman origin. This group includes the Magar, Gurung, and Tamang, the Rai and Limbu languages and the Bhote Sherpas. The proportion of Tibeto-Burman language speakers has declined from 14.9 to 13.0 percent between 1961 and 1971. Except in the western and far western Terai, the Tamang community which is occupying the first position among the Tibeto-Burman group resembles in their dispersion the Newars. Their presence in the eastern hills has declined from 14.0 percent of the total population in this area in 1952/54 to 11.7 percent in 1971. Evidently some of the Tamangs have migrated to Kathmandu Valley and Inner Terai. In the central Terai, the Tamang have been counted as 33 percent of total population of this region in 1961. Most probably the migration o other groups to this region has given decline to this proportion to 16.4 percent in 1971.

10. The Magar and Gurung languages are together spoken by almost half a million people or approximately 4.0 percent of total population. Except for few languages. There are hardly any oppor-tunities for some linguistic groups to learn their languages at school. For these languages which have no traditional literature, the link is missed between the people and their linguistic origin. Nevertheless, some groups who have no scripts for their language have adopted the Nepali scripts.

PART III

The Age and Sex Composition of the Population of Nepal

3.1 The population census is a complete count of all individuals present or residing in a precisely defined territory, where the characteristics of every individual are recorded separately, at a certain point of time. Almost all countries are conducting their population censuses at decennial intervals. Due to the high costs of census undertaking; only very few countries are conducting their censuses every five years. However, a new trend has emerged to replace the five years period census by and intercensal sample survey, which gives with a great precision, the characteristics of the population of a complete census.

It should be pointed out that, successive population censuses, taken at fairly regular intervals, permit a detailed and systematic comparison o population change in size, geographic distribution, fertility and mortality trends and other demographic characteristics.

Changes in administrative boundaries and dissimilarities in definitions may raise certain diversities and problems in comparing two censuses, therefore, adjustments should be made in the population distribution to make one census comparable to the other.

2. Before investigating the accuracy of data, it should be emphasized that the population age structure is the most important variable in the study of the manifold aspects of population change such as mortality, fertility and neutrality trends in the country. The estimation of potential labour force, and the estimation of

school age population, depends to a large extent upon the age structure of the population.

The relative proportions of males and females, and the proportion of various age groups to total population at given time, are generally the result of the preceding ten decades of births deaths and migration. It is salient that the larger the proportion of women in the reproductive age (15-50 years)-other things being equal-the larger the number of births is expected to occur every year. While fertility remains constant at high level and mortality declines substantially particularly at the lower age groups, the population age structure tends to have a wide base of children and young population at age groups 0-4 and 5-9. On the other extreme of the age structure, if the people at age 60 and over have experienced a very high mortality risk in the past, this age group will comprise only a very tiny proportion of total population. Moreover, since the risk of dying varies with ages the number of deaths will be the larger the higher the percentage of those persons who are exposed to a comparatively high risk of mortality, mainly infants and old people.

3. The accuracy of census data, either in coverage or in quality, varies from one country to another. Many factors are interrelated among themselves in producing biased statistics. The most important factor correlated to biased data is the low educational attainment of the population. Notably, the literate people are more inclined to respond to the census interview more accurately than the illiterates. Internationally, or unintentionally the illiterate people may give false statements on their age, occupation, number of children ..... etc.

Other factors are equally essential in their influence on data collection such as the geographic structure of the country, the availability of roads, communications and the timing of the census operation.

Admittedly, the census is a huge operation in which a very large number of administrators, supervisors, enumerators and

coders and many other persons are employed. The achievements of this operation depend, to a very large extent, upon the efficiency of the organization in preparing the plan and personnel up to the very efficient level needed in data collection. The quality of training received by the personnel and their understanding of the whole procedure is reflected in the data collected in the field.

3.2 The Population Age Structure of Nepal

1. In the absence of vital statistics which provide the basis elements for checking the accuracy of age reporting, the analysis will be confined to the comparison of the age structure of 1961 and 1971 censuses. Both censuses, which contemplate the prevalence of equally high fertility and high mortality levels, will be examined in turn for profiling the inconsistencies in age reporting and accordingly the methods used in reducing irregularities in the data will be described.

2. The first prominent feature of all population censuses of Nepal including 1952/54 census is the outstanding under-enumeration of the age group 0-4 and heaping in reporting age by single years at ages ending I zero and five. This phenomenon is very common not only in the consecutive censuses of Nepal, but also in all developing countries. The second aspect is the severe distortion in the age structure as a result of age miss-statement which leads to the shift of people from one age group to the higher or lower age groups. Subsequently, the systematic decline in numbers, as well as proportions from the lower age groups to the higher age groups, was upset by the apparent concentration in certain age groups.

Distinction should be made between the above-mentioned two types of errors in age reporting. Age shifting implies a biased error in recording ages, and very often occurs at older ages where social status and age are highly correlated. Age heaping, on the other hand, is an un-biased compensating error caused normally by rounding ages to digits ending in zero and five or to a less extent to digits ending in even numbers.

Table 3.1 – The Distribution of the Population of Nepal by Age and Sex (1961 Census)

Age Group	Both Sexes	Males	Females	Males (Percent)	Females (Percent)	Sex Ratio
0-4	1,337,708	660,342	677,366	14.24	14.18	97.5
5-9	1,355,231	687,329	667,902	14.82	13.98	102.9
10-14	1,060,126	563,605	496,521	12.16	10.39	113.5
15-19	807,844	407,809	400,035	8.80	8.37	101.9
20-24	788,582	365,615	422,967	7.89	8.85	86.4
25-29	813,215	386,196	427,019	8.33	8.94	90.4
30-34	706,637	335,733	370,904	7.24	7.77	90.5
35-39	584,304	297,755	286,549	6.42	6.00	103.9
40-44	470,708	221,551	249,157	4.78	5.22	88.9
45-49	384,619	193,673	190,946	4.18	4.00	101.4
50-54	356,005	170,479	185,526	3.68	3.88	91.9
55-59	226,529	113,151	113,378	2.44	2.37	99.8
60-64	231,265	102,945	128,320	2.22	2.69	80.2
65-69	106,854	51,327	55,527	1.11	1.16	92.4
70 & Over	151,227	68,150	83,077	1.47	1.74	82.0
Unknown	32,142	10,373	21,769	0.22	0.46	47.6
Total Nepal	**9,412,996**	**4,636,033**	**4,776,963**	**100.00**	**100.00**	**97.0**

Source: 1961 Population Census, Part I, Vol. I, Table 1.

Table 3.2 – The Distribution of the Population of Nepal by Age and Sex, 1961 Census, Adjusted for Unknown Ages

Age Group	Both Sexes	Males	Females	Males (Percent)	Females (Percent)	Sex Ratio
0-4	1,342,289	661,822	680,467	14.28	14.24	97.2
5-9	1,359,830	688,870	670,960	14.86	14.05	102.7
10-14	1,063,664	564,869	498,795	12.18	10.44	113.2
15-19	810,590	408,723	401,867	8.81	8.41	101.7
20-24	791,340	366,436	424,904	7.90	8.89	86.2
25-29	816,035	387,061	428,974	8.35	8.98	90.2
30-34	709,088	336,486	372,602	7.26	7.80	90.3
35-39	586,283	298,423	287,860	6.44	6.03	103.7
40-44	472,345	222,048	250,297	4.79	5.24	88.9
45-49	385,927	194,107	191,820	4.19	4.02	101.1
50-54	357,236	170,861	186,375	3.68	3.90	91.7
55-59	227,302	113,405	113,897	2.45	2.38	99.6
60-64	232,083	103,176	128,907	2.23	2.70	80.0
65-69	107,224	51,443	55,781	1.11	1.17	92.2
70 & Over	151,760	68,303	83,457	1.47	1.75	81.8
Total Nepal	**9,412,996**	**4,636,033**	**4,776,963**	**100.00**	**100.00**	**97.0**

The possibility of recording erroneous ages is a general flaw of censuses. The errors become more serious when age is classified by single years and less serious, but still erratic, when classified in five year age groups and the least if age is classified in broader age groups.

3. Let us consider first the age structure of 1961 and then we will examine 1971 census. Afterwards, the sex composition will be discussed accordingly.

Table (3.1) presents the age and sex composition of the population in 1961. The first adjustment was made by distributing the "unknown" which amounted to 32,142 persons of which 10,373 were males and 21,769 were females, proportionally to age distribution. The result is given in table (3.2). The second step was to adjust for under-enumeration in the age group 0-4. The excess of persons in the age group 5-9 over persons in the age group 0-4 in the last three censuses, as shown in the following table, was the result of age shifting from lower ages to exact age 5, and the under-reporting of children newly born and in their early ages.

Age Group	1952/54		1961		1971	
	Males	Females	Males	Females	Males	Females
0-4	539,826	549,106	660,342	677,366	790,598	843,512
5-9	579,574	563,214	687,329	667,902	885,801	857,452
5-9/0-4	1.07	1.03	1.04	0.99	1.12	1.02

Evidently, this table shows that in all censuses males were typically less reported in the age group 0-4 than females. Actually, the male age group 0-4 in 1971 census has been much affected by under-reporting and shifting from lower ages to exact age 5 than in the other two censuses, table (3.3).

Behind the under-reporting of children stand some social factors which predominantly have affected the number of children under 5 in all districts. These factors are the following:

Table 3.3 – The Distribution of the Population of Nepal by Age and Sex (1971 Census)

Age Group	Both Sexes	Males	Females	Males (Percent)	Females (Percent)	Sex Ratio
0-4	1,634,110	790,598	843,512	13.59	14.68	93.7
5-9	1,743,253	885,801	857,452	15.23	14.94	103.3
10-14	1,297,215	703,023	594,192	12.09	10.36	118.3
15-19	1,047,459	547,493	499,966	9.41	8.71	109.5
20-24	969,675	466,022	503,653	8.01	8.78	92.9
25-29	930,287	456,297	473,990	7.84	8.26	96.5
30-34	811,401	385,696	425,705	6.63	7.42	90.6
35-39	744,788	386,381	358,407	6.64	6.25	107.8
40-44	609,461	301,998	307,463	5.19	5.36	98.2
45-49	461,098	245,521	215,577	4.22	3.76	11.9
50-54	400,834	204,304	196,530	3.51	3.42	103.9
55-59	257,699	132,983	124,716	2.29	2.17	106.6
60-64	294,230	138,441	155,789	2.38	2.71	88.9
65-69	142,763	71,427	71,336	1.23	1.24	100.1
70 & Over	211,711	101,218	110,493	1.74	1.93	91.6
Total Nepal	**11,555,984**	**5,817,203**	**5,738,781**	**100.00**	**100.00**	**101.4**

Source: 1971 Population Census Vol. I, Table 6.

(a) A newly born child according to Hindu tradition would be given a name only after nine days of its birth in a religious ceremony. During this period-which may be extended to several months-the child would not be considered as a regular member o the household.

(b) During the first one or two years of his life, or more precisely during lactation, a child might be considered of less significance as a member o the household and generally his name will be dropped out by the head of the household in the interview.

(c) A male child in almost all agrarian societies, (where infant deaths are very frequent), is considered as a valuable asset to his parents and if he survives, is a guarantee for their old age. "To drive out the evil eye", the mother may not disclose in an interview the right number of male children she has.

A close investigation of the population age structure of 1971 by single years of age (figures 3.1 and 3.2) shows that shifting of females from ages 3 and 4 to exact age 5 is less frequent than for males in the same ages.

By examining the age groups 5-9, 10-14 ……55-59, in 1961 census for males and females table (3.2), inconsistencies become quite apparent in the age groups 15-19, 20-24, and 25-29 in both sexes. The shift from one age group to the lower of higher age groups is the result of under or over-estimation of age. Experience has shown that this pattern of age-shifting is probably due to the fact that during the enumeration, the age entered on the interview schedule is often an estimate made by the interviewer himself. When the recorded age is supplied by the respondent, the age distribution tends to be less distorted.

At older ages (60 and over) age-shifting becomes more apparent. A considerable shift has occurred not only from the lower and higher age groups to exact age 60 but also from the two adjacent age groups 50-54, 55-59 and 65-69 and 70 and over.

4. In order to outline the magnitude of errors in age reporting in both censuses, the age ratios (3.4) have been calculated.

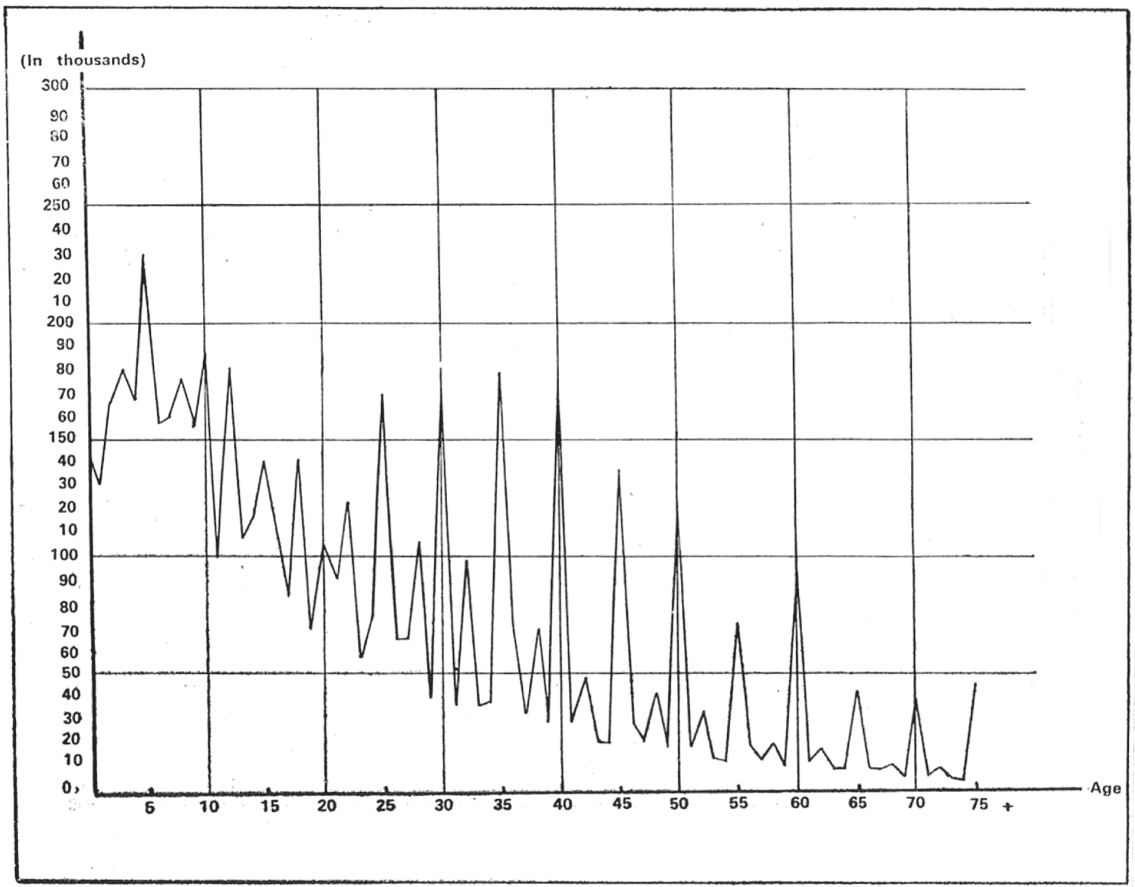

Figure (3.1)— Males 1971 by Single Age

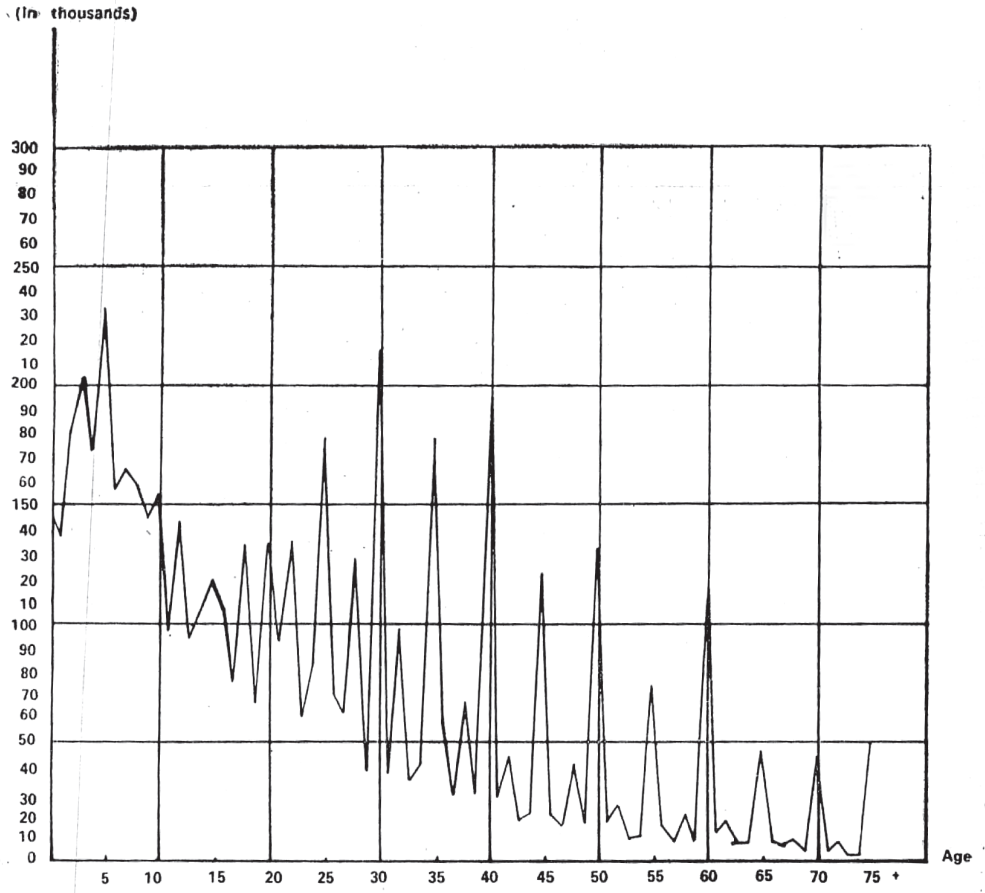

Figure (3.2) Females (1971) by Single Age

The age ratio may be defined as the ratio of the population in a given age group to one-third of the sum of the population in the age group itself and the preceding and the following age group multiplied by 100.

If there were no extreme fluctuations in past births, deaths, or migration, the three age groups should form a nearly linear series, and then age ratio should approximate to 100. Very high positive or negative deviations from 100 denote inconsistency with the normal systematic decline in age group proportions. The summation of all deviations, irrespective of signs, divided by the number of age groups, indicates the overall accuracy of age reporting.

Table 3.4 – Calculation of the Age Ratio* for 1961 and 1971 Population Structures (Deviations only from 100)

	1961		1971	
Age Group	**Males**	**Females**	**Males**	**Females**
5-9	7.9	8.8	11.9	12.1
10-14	-1.9	-4.8	-1.3	-8.7
15-19	-8.5	-9.1	-4.3	-6.1
20-24	-5.4	1.5	-4.9	2.3
25-29	6.5	4.9	4.7	1.3
30-34	-1.2	2.6	-5.8	1.5
35-39	4.4	-5.2	7.9	-1.5
40-44	-6.8	2.9	-3.0	4.6
45-49	-0.8	8.4	-2.0	-10.0
50-54	7.2	13.6	5.2	9.8
55-59	-12.2	-20.4	-16.1	-21.6
60-64	14.8	29.5	21.2	32.8
Total	76.6	111.7	88.0	111.0
Mean Deviation	**6.4**	**9.3**	**7.3**	**9.3**

$$*\text{Age Ratio} = \frac{N}{\frac{N_{-1} + N + N_{+1}}{3}} \times 100$$

Where N Population is the age group

$N_{-1,}$ N_{+1} Population in the preceding, and subsequent age groups

Referring to table (3.4) the age groups 10-14 and 15-19 were under-reported in both sexes. As for females the age ratio deviations were higher than the male age ratios in 1961 and 1971 censuses. Most likely, under-reporting of these age groups is the result of shifting the females from age groups 10-14 and 15-19 to age groups 20-24 and 25-29. This shift is explained by the biased estimate of age by the interviewers. Prevalence of early marriage among females associated with the number of children the women have had, were used by the enumerator as a guide mark to estimate their ages causing a net upward transfer of ages 15-19 and 20-24 across age groups 25-29 and 30-35*.

The overall mean deviation in age ratios for females was approximately the same in both censuses, meanwhile, the overall deviation in age ratios for males was much higher (6.4) in 1961 and (7.3) scores in 1971 census.

6. The single year age distribution which is presented in (table 3.5) and illustrated by the graphs in figures (3.1) and (3.2) gives a clear indication, not only about the digital preference to ages ending in "0" and "5" but also the tendency of reporting ages in figures ending in even numbers. The age ratios for exact age 5 were 125.9 for males as against 123.9 for females. More concentrated digital preference was observed in exact age 40 where the age ratios scored 224 and 234 for males and females respectively.

Since the accuracy of age reporting varies with age, it is expected that younger generations tend to report their ages in close approximation to the actual ages. On the other hand the old genera-tions, due to the high rate of illiteracy among them and lapse of memory, tend to give only rough estimates of their ages. The age

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* This trend is quite similar to the results of censuses and surveys carried out in Tropical African Countries where the errors have been attributed to the tendency among the enumerators to age those who are already married or mothers in their teen ages on the assumption of higher "typical" age at marriage than actually prevails.

ratio for exact age 60 was the highest among all ages. The scores were 242 and 254 for males and females.

In general, the erroneous age structure, as far as 1971 census is concerned, might be the outcome of the following factors:

(a) The biased age reporting has been found with the respondents. This type of error is not unexpected in a country where only a small fraction of the people is literate.

(b) It would be necessary to point out that in 1971 census more than 12,000 enumerators were recruited to carry out the census operation. The minimum educational qualifications required for recruitment were the ability to read and write. Despite the fact that more than 17 training centers had been established for training the supervisors and enumerators, the educational level of the enumerators was extremely low, thus, it would not be consistent to believe that this caliber of enumerators had received the necessary training and the efficient supervision to enable them to fill a preceded questionnaire properly.

Table 3.5 – The Distribution of the Population of Nepal by Single Years of Age and Sex (1971)

AgeBoth Sexes	Males	Females	
All Ages	11,555,983	5,817,202	5,738,781
Under 1 Year	290,901	144,437	146,464
1	268,417	131,444	136,973
2	348,848	166,935	181,913
3	385,795	181,378	204,417
4	340,149	166,404	173,745
0-4	1,634,110	790,598	843,512
5	468,027	235,247	232,780
6	316,015	158,954	157,061
7	325,711	160,534	165,177
8	332,701	176,077	156,624
9	300,799	154,989	145,810

5-9	1,743,253	885,801	857,452
10	343,972	189,375	154,597
11	206,188	108,789	97,399
12	323,470	181,262	142,208
13	199,767	105,962	93,805
14	223,818	117,635	106,183
10-14	1,297,215	703,023	594,192
15	258,516	140,521	117,995
16	226,353	119,705	106,648
17	152,749	76,817	75,932
18	275,644	141,762	133,882
19	134,197	68,688	65,509
15-19	1,047,459	547,493	499,966
20	248,374	115,033	133,341
21	182,990	91,394	91,596
22	265,359	129,930	135,429
23	120,726	56,262	64,464
24	155,226	73,403	81,823
20-24	969,675	466,022	503,653
25	347,528	170,262	177,266
26	136,767	65,809	70,958
27	127,239	64,197	63,042
28	241,299	116,151	125,148
29	77,452	39,878	37,574
25-29	930,287	456,297	473,990
30	393,009	177,370	215,639
31	75,472	37,627	37,845
32	194,278	97,345	96,933
33	70,852	36,043	34,809
34	77,790	37,311	40,479
30-34	811,401	385,696	425,705
35	360,336	183,687	176,649
36	129,778	71,438	58,340
37	61,062	33,393	27,669
38	134,993	67,990	67,003
39	58,619	29,873	28,746

35-39	744,788	386,381	358,407
40	375,345	178,301	197,044
41	57,109	30,546	26,563
42	92,809	48,676	44,133
43	40,810	21,761	19,049
44	43,388	22,714	20,674
40-44	609,461	301,998	307,463
45	259,640	136,972	122,668
46	48,929	27,563	21,366
47	35,753	20,380	15,373
48	84,482	43,501	40,981
49	32,294	17,105	15,189
45-49	461,098	245,521	215,577
50	256,428	124,971	131,457
51	34,984	19,476	15,508
52	62,085	33,879	28,206
53	23,711	13,492	10,219
54	23,626	12,486	11,140
50-54	400,834	204,304	196,530
55	144,651	71,927	72,724
56	34,505	19,362	15,143
57	22,018	12,488	9,530
58	38,265	19,830	18,435
59	18,260	9,376	8,884
55-59	257,699	132,983	124,716
60	206,770	92,399	114,371
61	24,360	12,583	11,777
62	31,673	16,137	15,536
63	16,338	9,092	7,246
64	15,089	8,230	6,859
60-64	294,230	138,441	155,789
65	87,356	41,310	46,046
66	15,900	9,033	6,867
67	12,801	7,073	5,728
68	18,540	9,922	8,618
69	8,166	4,089	4,077

65-69	142,763	71,427	71,336
70	80,169	35,804	44,365
71	8,688	4,591	4,097
72	16,235	8,656	7,579
73	6,373	3,690	2,683
74	5,238	3,056	2,182
70-74	116,703	55,797	60,906
75 & Over	95,007	45,420	49,587

Source: C.B.S., Data Processing Section

(d) It is against the Hindu tradition (although the trend is somewhat diminishing) for a woman to display the name and age of her husband.* If this was the case, the enumerator has had no choice but to estimate the ages of some of the household members.

(e) Where ages were *unknown*, the editors in the office were allowed to estimate ages taking into consideration the husband's age or number of children, or any other indicator that could lead to an estimate of age. Moreover, those ages which could not be estimated have been distributed in an unknown way**.

3. 3 Reduction of Errors in the Age Structure

1. The manipulation of age miss-statement should differ according to the variations in the accuracy of age reporting in each segment of the population age structure. Mathematical graduation of the data seems to be applicable only when minor errors do exist. If the age structure is severely distorted other methods of graduation should be applied.

For adjusting the data we divided the age structure into three groups: the population 0-4, the age groups 5-9, ... 55-59 and the age groups above 60.

* Name of the head of the household was first recorded on the household list with the help of the Pradhan Panch (Chief of the Village Panchayat).

** "Unknown" category does not exist in 1971 census.

The first step was taken in applying different mathematical methods of graduation to age groups 5-59 including Newton's formula, Carrier-Farrag formula and the moving average methods. But since the data were highly distorted, it was found that he quadratic re-orientation of data was not leveling out inconsistencies in the age structure at certain age groups. Therefore, another procedure using the graphical method of graduation namely, the oblique axis ogive has proved to be more suitable for reducing the errors.*

While the male age structure of 1961 has responded fairly to mathematical graduation, the female age structure, which is suffering from high concentration in age group 10-14, and extraordinary net transfer to age group 25-29, remains unadjustable by mathematical procedures. The situation is completely contrasted in 1971 census. The female age structure was more amenable to the mathematical methods.

2. The male and female age groups 0-4 in 1961 census have been adjusted by reversing the corrected male and female age groups 10-14 in 1971 census assuming a level of mortality that corresponds to 35 years of expectation of life at birth.**Thus, under-reporting in age groups 0-4 in 1961 census amounted to 37 percent and 31 percent for males and females respectively.

3. For adjusting the age groups 0-4 in 1971 census the following procedure have been applied:

(a) First of all, the age specific fertility rates have been obtained by correcting the fertility schedule using the information in 1971 census on the number of children ever born and the

---

* The properties of the ogive permit the adjustment of errors in the age structure without basic changes in the data and reallocation of errors.

** Lower and higher levels have given either very low or very high number of persons in age group 0-4 as compared with the age group 5-9

number of birth occurred in the year preceding 1971 census by Brass' method.

(b) To obtain the expected number of births in the five years period prior to 1971, the average number of females in their reproductive ages 15-49 for the period 1966 was calculated.

(c) We multiplied the estimated number of women in 1966 by the corrected age specific fertility rates to obtain the expected annual number of births which amounted to 497,676. The expected annual number of births was multiplied by five to estimate the number of births during the period 1966-1971. The result was divided by a sex ratio equal to 106:100 for estimating male and female births.

(d) Once more, assuming a mortality level equal to 35 years expectation of life at birth, the numbers of male and female births were multiplied by the corresponding survivorship ratios from birth to age 0-4 to obtain the corrected age groups 0-4 in 1971 census*.

4. All age groups above are 60 have been left unadjusted. The adjusted age distributions for 1961 are given in tables (3.6) and (3.7) respectively.

3.4 The Population Pyramid

Graphical presentation of 1961 and 1971 age structures before and after adjustment is given in figures (3.3) and (3.4). The bars represent the age group ratios of the basic data, while the slope lines represent the ratios of the smoothed age structure.

3.5 The Sex Composition of the Population

1. The second component in the study of age structure is the sex composition. The sex ratio as an indicator of the equilibrium between sexes in the society may be defined as the number of males

* See table (3.8)

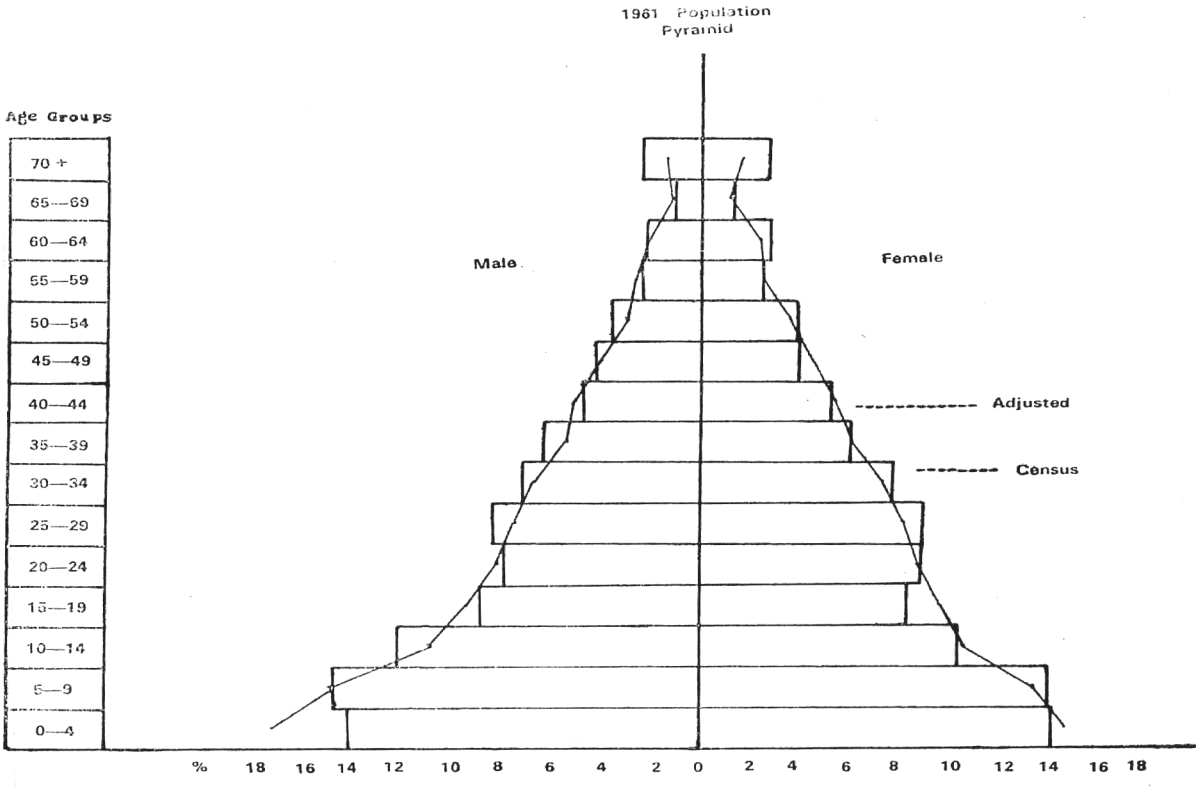
1961 Population Pyramid
Age Groups
70 +
65—69
60—64
55—59
50—54
45—49
40—44
35—39
30—34
25—29
20—24
15—19
10—14
5—9
0—4
Male
Female
Adjusted
Census
% 18 16 14 12 10 8 6 4 2 0 2 4 6 8 10 12 14 16 18

Figure (3.3)

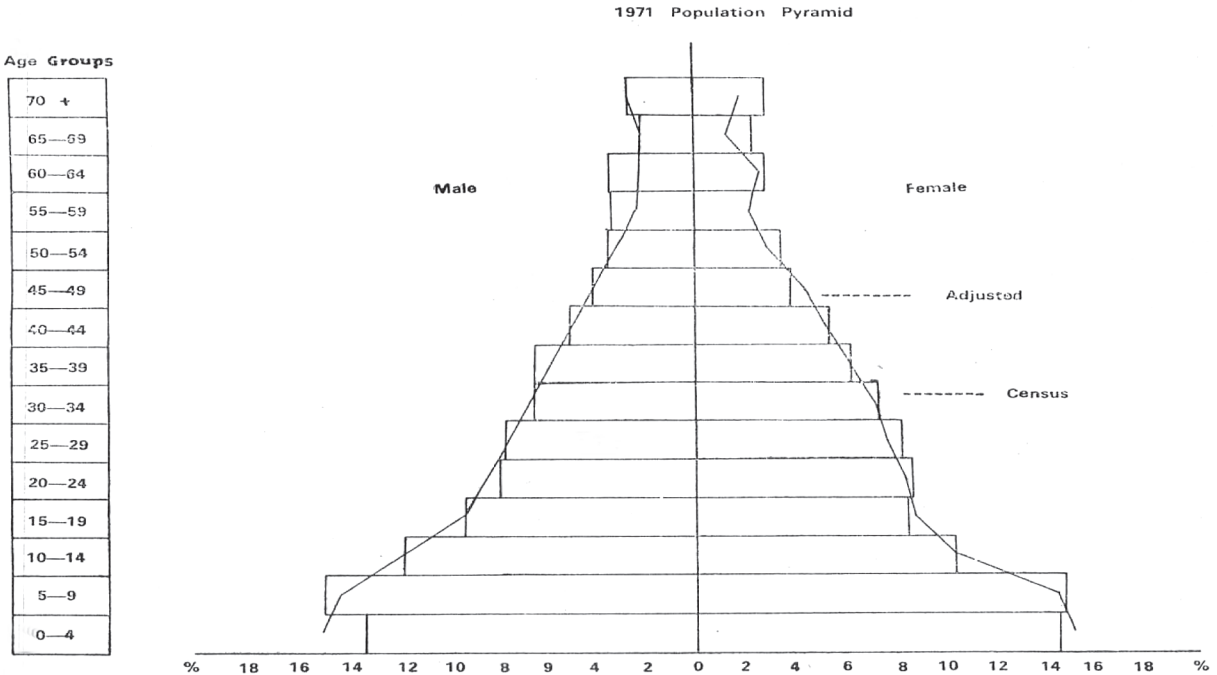
1971 Population Pyramid
Age Groups
70 +
65—69
60—64
55—59
50—54
45—49
40—44
35—39
30—34
25—29
20—24
15—19
10—14
5—9
0—4
Male
Female
Adjusted
Census
% 18 16 14 12 10 8 9 4 2 0 2 4 6 8 10 12 14 16 18 %

Figure (3.4)

Table 3.6 – The Distribution of the Population of Nepal by Age and Sex, 1961 Census (Adjusted for Miss-statement of Age and Under-enumeration of Age Group 0-4)

Age Group	Both Sexes	Males	Females	Percent Males	Percent Females	Sex Ratio
0-4	1,539,763	834,440	705,323	17.36	14.69	118.30
5-9	1,360,191	715,178	645,013	14.88	13.43	110.90
10-14	1,031,497	521,742	509,755	10.85	10.62	102.40
15-19	916,429	451,523	464,906	9.39	9.68	97.10
20-24	816,231	390,453	425,778	8.12	8.87	91.70
25-29	755,020	360,063	394,957	7.49	8.22	91.20
30-34	669,391	319,547	349,844	6.65	7.29	91.30
35-39	550,038	260,329	289,709	5.41	6.03	89.90
40-44	511,365	254,068	257,297	5.28	5.36	98.70
45-49	407,923	198,111	209,812	4.12	4.37	94.40
50-54	316,286	147,870	168,416	3.08	3.51	87.80
55-59	245,271	131,405	113,866	2.73	2.37	115.40
60-64	231,081	103,176	127,905	2.15	2.66	80.70
65-69	107,224	51,443	55,781	1.07	1.16	92.20
70 & Over	151,760	68,303	83,457	1.42	1.74	81.80
All Nepal	**9,609,470**	**4,807,651**	**4,801,819**	**100.00**	**100.00**	**100.10**

Table 3.7 – The Distribution of the Population of Nepal by Age and Sex, 1971 Census (Adjusted for Miss-statement of Age and Under-enumeration of Age Group 0-4)

Age Group	Both Sexes	Males	Females	Percent Males	Percent Females	Sex Ratio
0-4	1,804,133	910,209	893,924	15.33	15.45	101.80
5-9	1,722,250	864,798	857,452	14.57	14.81	100.90
10-14	1,318,307	715,115	603,192	12.05	10.42	118.60
15-19	1,067,368	551,402	515,966	9.29	8.91	106.90
20-24	998,586	495,933	502,653	8.35	8.68	98.70
25-29	912,266	457,388	454,878	7.70	7.86	100.60
30-34	829,510	408,693	420,817	6.88	7.27	97.10
35-39	708,791	346,384	362,407	5.84	6.26	95.60
40-44	595,807	293,004	302,803	4.94	5.23	96.80
45-49	502,752	245,515	257,237	4.14	4.44	95.40
50-54	345,818	191,294	154,524	3.22	2.67	123.80
55-59	270,715	144,993	125,722	2.44	2.17	115.30
60-64	295,230	139,441	155,789	2.35	2.69	89.50
65-69	142,763	71,427	71,336	1.20	1.23	100.10
70 & Over	211,711	101,218	110,493	1.70	1.91	91.60
All Nepal	**11,726,007**	**5,936,814**	**5,789,193**	**100.00**	**100.00**	**102.50**

Table 3.8 – Adjustment of Age Group 0-4 in 1971 Population Census

Age Group	Women 1961	Women 1971	Women Average 1966	A.S.F.R.	Expected Births
15-19	464,906	515,966	490,436	0.07444	36,508
20-24	425,778	502,653	464,215	0.26714	124,010
25-29	394,957	454,878	424,918	0.31037	131,882
30-34	349,844	420,817	385,330	0.26134	100,702
35-39	289,709	362,407	326,058	0.19623	63,982
40-44	257,297	302,803	280,050	0.10873	30,450
45-49	209,812	257,237	233,524	0.04343	10,142
					497,676

Number of Births 1966-1971 = 497,676 X 5 = 2,488,380

Number of Males 1966-1971 = 2,488,380 X 106 (Sex Ratio)
206

= 2,488,380 X 0.515 = 1,281,516

Number of Females 1966-1971 = 2,488,380-1,281,516 = 1,206,864

Male survivorship ratio B(0-4) $\dot{e}35 = 0.71026$

Female " " " $\dot{e}35 = 0.74070$

1,281,516 X 0.71026 = 901,209

1,206,864 X 0.74070 = 893,924

in total population, or in a certain age group, divided by total females, or number of females in the same age group multiplied by 100. A sex ratio over 100 denotes the excess of males over females, and a sex ratio below 100 denotes the excess of females over males. The sex ratios of 1961 and 1971 censuses suggest that Nepal has for a long time experienced a continuous stream of out-migration on the male side. Migration starts at approximately age 15 and continues up to age 50 where a return back to the country at this age is probably only a recent occurrence.

2. The sex ratios revealed by figures (3.5) and (3.6) denote an excess of females in the working ages 15-50. This pattern indicates that out-migration in Nepal is typical of the individual type rather than the family type where all dependents used to follow the head of the family after securing a convenient job in the place of desination. Normally, females out-number males at all ages over 60, due to the male pattern of mortality. The prominent excess of females over males in these age groups in 1961 confirms the incidence of out-flow of men, particularly, the Gorkha warriors in the Second World War.

3. 6 The Median Age of the Population

1. The median age serves to describe a population as "young" or "old" or "ageing". Three categories of the world population have been observed in the process of ageing. First, those countries with a median age less than 20 years are considered to be young populations. Second, those countries with a median age range between 20 and 30 years are in the intermediate position. Third is the old population with a median age over 30 years.

2. The following tables shows the median age of the population of Nepal in 1961 and 1971 censuses as calculated from the basic and corrected data:

Median Age in Nepal

	1961 Census			1971 Census		
Data	**Both Sexes**	**Male**	**Female**	**Both Sexes**	**Male**	
Female						
Census	22.3	22.4	24.1	22.8	22.3	23.2
Corrected	22.3	21.3	23.4	22.3	21.8	22.7

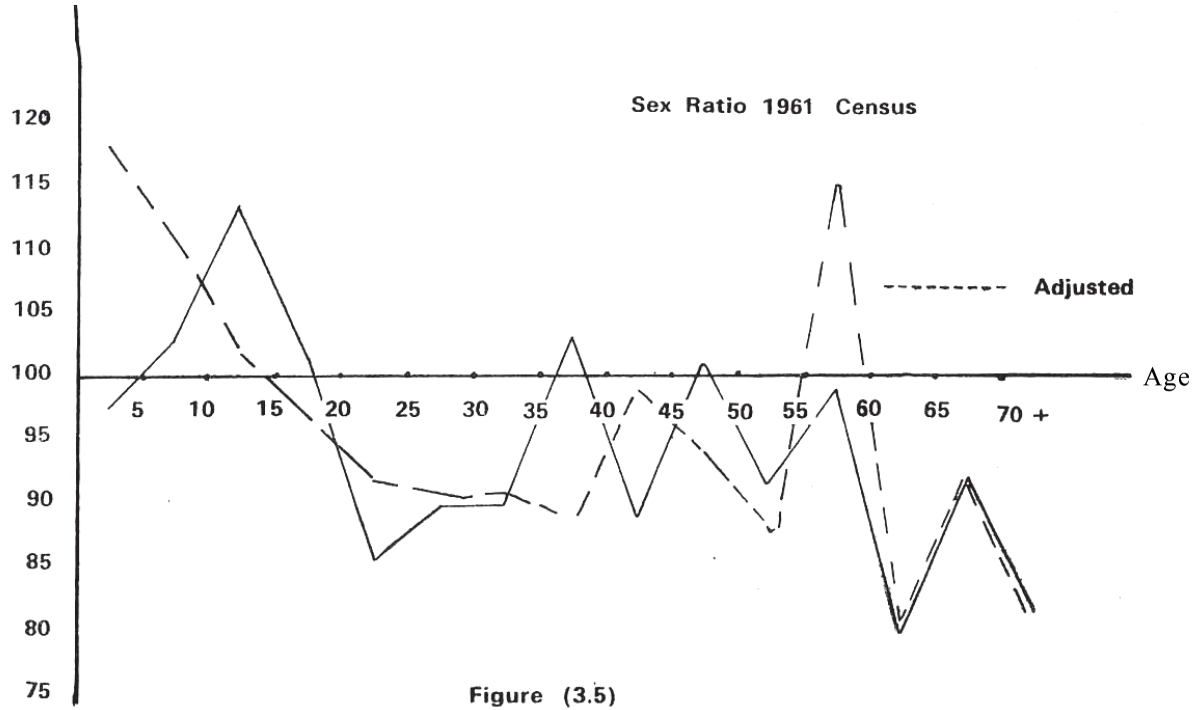
Sex Ratio 1961 Census
120
115
110
105
100
95
90
85
80
75
Adjusted
Age
5
10
15
20
25
30
35
40
45
50
55
60
65
70 +

Figure (3.5)

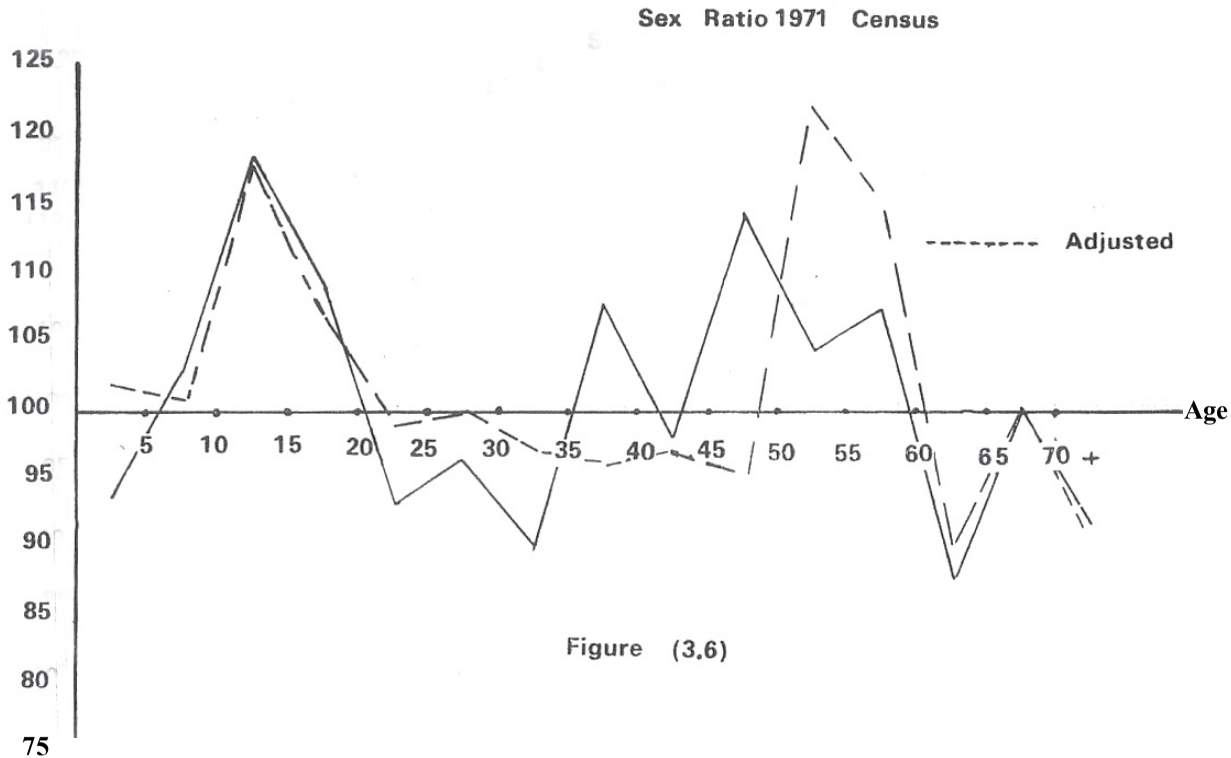
Sex Ratio 1971 Census
125
120
115
110
105
100
95
90
85
80
75
Adjusted
Age
5
10
15
20
25
30
35
40
45
50
55
60
65
70 +

Figure (3.6)

The median age of the smoothed data for males and females is less by almost one year as compared with the median age calculated before adjustment. However, the median age of the population of Nepal, which lies in the intermediate range 20-30 years, in comparatively higher than the median age in other develop-ing countries, in which mortality has been declining substantially in the last two decades, particularly infant mortality which is more sensitive to improvement in social and economic conditions.

The median age in India was 20.5 (1966), in Taiwan 17.5 (1956), in Venezuela 17.8 (1961) and in Syria 17.2 (1961). The high median age in Nepal indicates that lower ages particularly infants have not yet experienced the low mortality rate pertaining to other developing countries. A drop in the mortality level, especially among infant, in the foreseen future as a natural response to improving health conditions would bring about a decline in the median age if fertility remains constant, placing Nepal in the young population category.

3. 6 Regional Differences in Age and Sex Distributions

1. Regional and inter-group differences in age and sex distribution by administrative divisions, economic development regions and mode of living, reflect to some extent the past trend of the fertility and mortality patterns, and the internal as well as the external movement of the population. Main gainers in the exchange of people are normally the urban areas where the Government activities, trade, industry and health and social services are concentrated. Obviously, the rural to urban movement has significant effect on the population growth in the urban sector. The main stimulant of the internal movement of the population of Nepal was land potentialities in the Terai belt. Intensive agriculture in this area (especially in those areas where effective eradication of malaria had taken place) and reclamation of new lands have attracted investors, farmers and seasonal farm workers not only from the Hills to the Terai, but also from the neighbouring Indian states. Table (3.9) shows the distribution of the population by

broad age groups and sex ratio by administrative zones. The population proportion under 15 years of age in Bagmati, Gandaki, Dhaulagiri, Karnali, Seti and Mahakali zones was below the average as compared to the zones located in the Terai belt.*

2. The sex ratio for different zones as shown in table (3.9) shows that two separate categories of zones can be distinguished, as far as the excess of males over females is concerned. The first category comprises those zones situated in the north and zones with a tiny proportion of plains. The excess of females over males in these zones was caused by the out-migration of males either outside the country or to the Terai area. The sex ratios in the age group 15-59 in these zones were 987 males per 1,000 females in Sagarmatha, 904 in Gandaki, 998 in Dhaulagiri, 956 in Rapti and 971 in Seti. The excess of males over females in the second category, namely, zones comprising a considerable proportion of the plains in quite obvious. In Janakpur, Lumbini and Kosi zones where the Terai forms 35.0 percent, 44.3 percent and 38.7 percent of total respectively, the sex ratio for total population amounted to 1,008 males per 1,000 females, 1,011, and 1,038 respectively. In Narayani the sex ratio amounted to 1,015 males per 1,000 females, in Lumbini 1,011 and in Mahakali 1,038†, the differences in age composition and sex ratio become less eminent with the exception of the western region.

3. The mountain area, which includes the Himalaya chain from the far west in Humla district, to the Far East in Taplejung district, has only very limited cultivable land. Sheep and yak grazing is the main occupation of the mountain people besides cottage industries including wood works and carpet industries.

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* Most probably deviations of proportion under 15 by zones are attributed to under-enumeration in this age group especially in the mountain zones.

† Taking into consideration the classification by development region table (3.10).

Table 3.9 – Age Distribution and Sex Ratio of the Population of Nepal by Administrative Divisions, 1971 Census

	Zone	% of Total Population in age group			Males per 1000 Females in	
		Under 15 years	15-59 years	60 years and over	Total Population	Age Group 15-59
1.	Mechi	42.8	52.4	4.8	1,060	1,068
2.	Kosi	42.4	52.3	5.3	1,038	1,062
3.	Sagarmatha	41.1	53.2	5.7	995	987
4.	Janakpur	40.9	53.7	5.4	1,008	991
5.	Bagmati	39.0	54.8	6.2	1,038	1,042
6.	Narayani	39.7	55.1	5.2	1,057	1,063
7.	Gandaki	39.8	53.4	6.8	949	904
8.	Lumbini	40.0	53.9	6.1	1,011	998
9.	Dhaulagiri	39.2	54.1	6.7	961	998
10.	Rapti	42.3	53.0	4.7	969	956
11.	Karnali	37.5	57.3	5.2	1,051	1,041
12.	Bheri	41.4	54.3	4.3	1,043	1,058
13.	Seti	38.9	55.9	5.2	994	971
14.	Mahakali	39.5	55.2	5.3	1,028	1,021
All	Nepal*	40.4	54.0	5.6	1,014	1,007

Although sparsely populated, the mountain area does not necessarily reflect an entirely barren land without agricultural and non-agricultural possibilities. Cultivation of land is possible in some parts up to 16,000 ft. elevation. Density in this area is far below densities in the Hills or the Terai. It counts almost one-fifth of average density in Nepal. High tendency of male out-migration in the eastern region of the mountain area particularly in Taplejung, Sankhuwasabha, Solukhumbu and Dolakha districts is reflected by the extraordinary shortage in male numbers. This area has experienced the out-flow of migrants in two directions. The first is an internal migratory movement from the mountains to the

* Before Adjustment

hills and the Terai, and the second is an international movement across the eastern borders towards Sikkim and Bhutan**.

In the far western mountains in Mustang, Dolpa, Mugu and Humla districts where the main activities of the population besides sheep and yak grazing and the cottage industries are the cultivation of high altitude wheat and other cereals, the soil is less fertile than any other area in Nepal. Sex ratio in the western mountains is considerably higher than sex ratio in the eastern mountains.

4. In the Terai, the picture is contrasting. The excess of males over females is remarkably predominant in all districts. Table (3.10) shows that sex ratio in the Terai region is much higher than the total population sex ratio. The economic structure, the water resources, and the fertile land permit the cultivation of a wide variety of crops, such as paddy, maize, wheat, millet, sugarcane, vegetables and tobacco. Forming the backbone of the agricultural economy of Nepal, the Terai has provided employment and attracted migrants from higher elevations. Taking into account the overall sex ratio which was 1,014 males per 1,000 females, the figures presented in table (3.10) indicate that almost every district in the Terai has received migrants either from upland or across the Indian borders.

The eradication of malaria and the expansion of cultivated land, along with the growing jute and tobacco industries, trading centers, and other industries, have progressively been attracting labour forces from other parts of the country. In districts like Chitwan and Kanchanpur, where effective eradication of malaria has taken place, the annual population growth rate between (1961-1971) was 10.4 and 13.8 percent respectively. To the extent the data on age structure are correct, the population age structure in the Terai shows higher percentage of age group 0-14 and lower percentage of the population over age 60.

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* It was estimated that Nepali Migrants to Sikkim alone are more than 200,000.

Table 3.10 – Age and Sex Distribution of the Population of Nepal by Development Region, Selected Districts and Selected Urban Areas, 1971 Census

Areas	Percent of Total Population in age group						Males per 1000 Females in	
					60 years		Total	Age Group
	Under 15 years		15-59 years		and over	Populaiton		15-59
Regions:	(a) Regions*							
Taplejung	42.6	(2.2)	51.5	(-2.5)	5.9	(0.3)	994	985
Dolakha	39.9	(-0.5)	53.5	(-0.5)	6.6	(1.0)	928	871
Manang	34.8	(-5.6)	59.3	(5.3)	5.9	(0.3)	1105	1165
Mugu	37.0	(-3.4)	57.7	(3.7)	5.	(-0.3)	1062	1041
Humla	35.2	(-5.2)	58.3	(4.3)	6.5	(0.9)	1087	1111
Terai:	(c) Selected Terai Districts							
Jhapa	3.3	(-0.7)	3.6	(-2.0)	1157	1262		
Saptari	40.9	(0.5)	54.2	(0.2)	4.9	(-0.7)	1029	1041
Sarlahi	40.8	(0.4)	54.4	(0.4)	4.8	(-0.8)	1035	1032
Chitawan	44.6	(4.6)	51.2	(-2.8)	4.2	(-1.4)	1058	1107
Banke	37.3	(-3.1)	57.2	(3.2)	5.5	(-0.1)	1126	1161
	(d) Selected Urban Places							
Kathmandu Districts	37.3	(-3.1)	56.8	(2.8)	5.9	(0.4)	1083	1119
Kathmandu (City)	35.0	(-5.4)	59.5	(5.5)	5.5	(-0.1)	1182	1290
Lalitpur (City)	37.5	(-2.9)	55.9	(1.9)	6.6	(1.0)	1059	1085
Bhaktapur (City)	38.2	(-2.2)	55.1	(1.1)	6.7	(1.1)	1081	1127

* Figures in brackets denote deviations from total.

5. Precipitation of urban settlements growth is a general phenomenon in developing as well as developed countries.* Urban-rural differences in socio-economic conditions in developing countries are well established. The central government activities, universities, technical institutions, health facilities and better living conditions are to a great extent concentrated in urban areas, while the rural sector is actually receiving only rudimentary services and facilities.

Taking into account the first three urban centers in Nepal namely, Kathmandu city, Lalitpur and Bhaktapur, the annual rate of increase in these cities in the inter censal period 1961-71 was unexpectedly low (2.2 percent in Kathmandu, 1.0 I Lalitpur and -0.85 in Bhaktapur). The prevalence of high sex ratio in Bhaktapur suggests that out-migration from this city has taken a family pattern rather than individual pattern. Kathmandu city, on the other hand, has not received a major migratory movement similar to other capitals in the developing countries. The excess of males over females in the age group 15-59 is probably due to the existence of the academic and technical institutions on one hand, and to a small influx of skilled and semi-skilled labour on the other. The rural to urban migration in Nepal has not yet been effective due to the following reasons: (a) the powerful attraction of land and other natural resources which determined the trend of internal migration from the areas where land is rather scarce to the Terai are still at their peak (b) the secondary and tertiary sectors of the national economy have not yet made enough progress which can carry a tangible effect on reshuffling a considerable number of workers in agriculture to urban activities (c) the mobility of labour is entirely characterized by the agrarian economy of the country, and the cultivated land around the urban settlements is very limited (d) the rural to urban movement is normally associated with the increase in the level of education or technical abilities

* Urban centers in developing countries have witnessed in the last two decades, a rate of growth ranging from 4-8 percentage per annum.

among the new generations in the rural sector. Education in the rural area is lagging far behind the level of which a surplus of educated and technically trained persons can be created.

6. On the whole, Nepal has been gaining in the period 1961-1971 a surplus of males from a sex ratio below one hundred in 1961 to an increase of 2.5 percent in male over female population. In areas where land was insufficient to cover the needs of the increasing population and moreover, if land was fragmented through successive inheritances out-migration has been working as an outlet for the population pressure on agricultural resources and unemployment. With the increasing momentum in economic development inward migratory movement of the Nepalese residing abroad cannot be ruled out.

7. Finally, a close comparison of the age and sex composition of the population of Nepal with other age and sex structure in selected developing countries has revealed a very close similarity to the age structures of India and Sri Lanka, table (3.11). The recent achievements of controlling mortality in countries of West Asia like Iran, Iraq and Pakistan have considerably raised the proportion of population under age (15). The current high mortality in Nepal has kept the age structure almost stable.

It should be outlined, however, that while the age structures in the first group of countries presented in table (3.11) are the outcome of predominantly high fertility and high mortality levels. The age structure in the second group represents the developed countries having passed the demographic transition from high fertility and low mortality conditions to low fertility and low mortality levels, with growing ageing symptoms. The proportion o population in the age group 0-14 in the developed societies counts only 20.25 percent of total population. This proportion is almost half the corresponding proportion in the developing countries. The proportion of population over 60 years of age is remarkably higher in the developed countries. Nevertheless, the young age structure implies excessive expenditures for administration on the socio-economic infrastructure, especially, schools, public health clinics, maternal

and post-natal services and child welfare centers. These expenditure and bound to compete with financial allocations aiming at developing the material well-being of the country.

Table 3.11 – Age and Sex Distribution of the Population of Nepal Compared with Selected Asian and European Countries

Country	% of Total Population in age group				Males per 1000 Females in Age Group 15-59
	Under 15 years	15-59 Age	60 years and over	Total population	
Nepal (1971)*	**41.3**	53.2	5.5	**1,025**	**1,012**
India (1971)	41.8	**52.2**	**6.0**	1,075	1,076
Pakistan (1968)	45.9	48.4	5.7	1,097	1,067
Iran (1971)	47.1	48.1	4.8	1,067	1,074
Sri Lanka (1963)	**41.5**	**52.7**	**5.8**	1,082	**1,106**
Iraq (1965)	47.9	45.3	6.8	1,039	1,017
France (1968)	23.7	57.5	18.8	950	1,015
Japan (1970)	23.9	65.4	10.7	964	962
Sweden (1970)	20.8	59.5	19.7	998	1,033

Source : The UN's Demographic Year Book 1972.
* Adjusted Age Structure

3.6 Mortality Level and Trend in Nepal

1. The basic components of population change are fertility, mortality and migration. The net balance of these three factors is the annual rate of increase. Thus, population change may be defined as the outcome of the following formula:
Population change = Births - Death + In migration - Out migration

The term "mortality" is related to deaths as the second component of population change, irrespective of the type of data or method of collecting death statistics.

The conventional method in the study of mortality implies the calculation of crude death rates and age specific death rates on

regional and sub-regional bases. But, if data collected permit, these rates can be calculated for ethnic, religious and cultural distributions of the population. Such rates are very useful in comparing levels of mortality in different parts of the country. Moreover, comparison of mortality levels in the country with other mortality levels observed in developing, as well as developed countries is equally important in evaluating the achievements and consequences of public health programmes in the general health of the population.

2. A time series of death statistics is not only important in itself as a statistical indicator that shows in absolute figures the increase or decrease in the number of deaths occurring every year, but also it has a great value in depicting changes in the levels and trends of mortality. In the absence of death statistics, censuses and sample surveys have revealed serious limitations in providing satisfactory measures of mortality.

3. A broad term very frequently used in comparing various levels of mortality is the crude death rate. Expressed as the ratio of deaths during a specific year to total population in mid-year, the crude death rate has certain defects associated with the method of calculations; therefore, other measures that describe the specific components of the overall number of deaths are needed. Age specific death rates are of interest for their value in the analysis of the interchangeable effects of deaths and age structure.

4. The data available for estimating the level of mortality in Nepal are confined to the following:

(a) Two corrected age distributions (for age miss-statement) of 1961 and 1971 censuses.

(b) Number of deaths in the year preceding 1961 census by region.

(c) Number of children ever-born and number of children surviving by age of women in 1971 census.*

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* In 1961 census only children ever-born have been reported but not children surviving.

Because of the limitations of data at hand, we have chosen the indirect method of calculating death rates and relevant life tables to arrive at a reasonable conclusion of the level of mortality in the country. Let us first examine the death rates as given by 1961 census. Total number of deaths recorded in the year preceding 1961 census amounted to 122,450**, giving a crude death rate equal to 13 per thousand which is substantially low. The highest value was recorded in the Far Western Terai and Western Terai (18 per thousand) and the lowest value was recorded in Kathmandu Valley. On the whole, it is obvious that these rates are far below the real level of mortality.

5. Three independent approaches have been applied to the data available from 1961 and 1971 censuses for estimating mortality level.

(a) The estimation of mortality based on the records of population growth between 1952-1961 and 1961-1971 censuses and the age distributions of 1961 and 1971 censuses.
(b) The stable population analysis for 1961 and 1971 age distributions separately.
(c) The estimation of mortality based upon information on children ever-born and children surviving in 1971 census.

3. 6 The Survivorship Ratios 1961-1971

1. The first check that should be made for two sets of age structures taken ten years apart is customarily the calculation of the cohort survivorship ratios.*

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* 1961 Population Census Vol. 1, Table 5, p. 42.

** In a population closed to migration, enumerated at regular intervals the normal sequence of absolute figures and ratios in each cohort tends to decline systematically with age. The number of persons enumerated in age group 10-14, for instance, should be higher than the number of persons enumerated ten years later in the age group 20-24. The ratio of the persons in the age group 20-24 to the persons in age group 10-14, represents the intercensal risk of mortality of the age group 10-14.

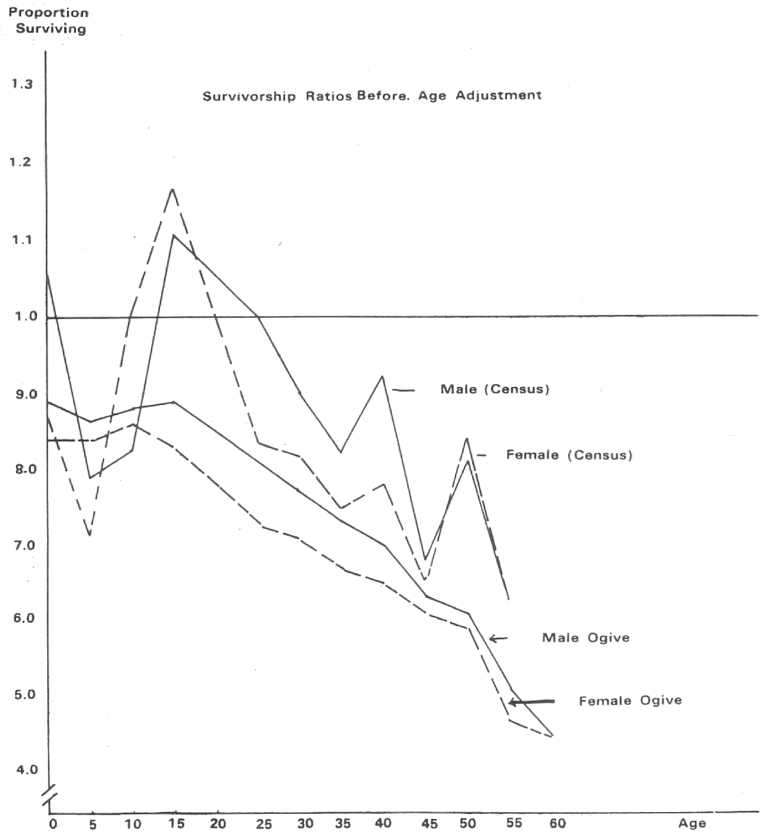
Proportion Surviving
Survivorship Ratios Before. Age Adjustment
1.3
1.2
1.1
1.0
9.0
8.0
7.0
6.0
5.0
4.0
Male (Census)
Female (Census)
Male Ogive
Female Ogive
0 5 10 15 20 25 30 35 40 45 50 55 60
Age

Figure (3.7)

Assuming that age reporting in both censuses of 1961 and 1971 was correct, the survivorship ratios should exclusively be fractions, high at lower ages, and systematically declining towards terminal ages. If such ratios are available the construction of an appropriate life table would be possible for age groups above 10 years of age and an estimation of infant and childhood mortality would subsequently be deduced.

2. Male and female survivorship ratios for the inter-censal period 1961-1971 have been calculated before and after adjustment of data for age miss-reporting as shown in table (3.12). The census survivorship ratios have shown an irregular pattern, with ups and downs at certain ages for both sexes influenced by miss-reporting of age. The remarkably high survivorship ratios for age group 10-14, 15-19 and 20-24 have been brought about by age shifting from younger ages in 1971 census in addition to under-enumeration of age group 0-4 and 5-9 in 1961 census.

Again, the survivorship ratios have been calculated for the data after adjustment (figure 3.8). Though wide fluctuations in the survivorship ratios have been reduced, they still show inconsistencies which make these ratios unsatisfactorily representing the age and sex pattern of mortality in Nepal.

By cumulating the population under age (x) and calculating the proportion surviving from the entire population in 1961 to age ten years and over in 1971 and from age 5 and over in 1961 to age 15 and over in 1971, in other words, by constructing the ogives of 1971 and 1961 censuses, irregularities in the survivorship ratios figures (3.7) and (3.8) should disappear. The ogives thus constructed resemble, to a large extent those of India for 1951 census.

Unlike simple survivorship ratios, the cumulated ratios cannot be directly expressed in terms of mortality level, and accordingly a life table cannot therefore be constructed. Surprisingly, the male ogive survivorship ratio was higher for males at all ages when compared with that for females at all ages, which implies higher expectation of life at birth for males.

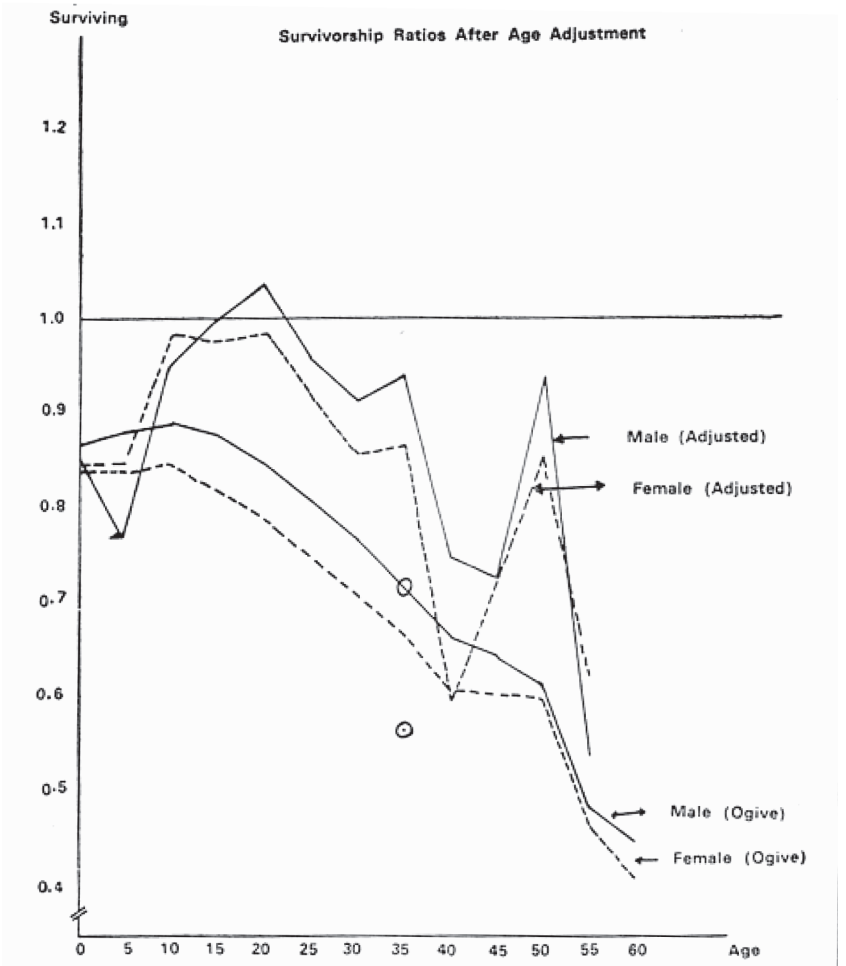
Surviving
Survivorship Ratios After Age Adjustment
1.2
1.1
1.0
0.9
0.8
0.7
0.6
0.5
0.4
Male (Adjusted)
Female (Adjusted)
Male (Ogive)
Female (Ogive)
0 5 10 15 20 25 30 35 40 45 50 55 60
Age

Figure (3.8)

Table 3.12 – Ten Years Survivorship Ratios 1961-1971 as calculated from Census and Adjusted Data by Age and Sex

Age Group	Census Data		Adjusted Data	
	Males	Females	Males	Females
0-4	1.06225	0.87321	0.85700	0.85520
5-9	0.79477	0.71547	0.77100	0.79993
10-14	0.82501	1.00974	0.95053	0.98607
15-19	1.11640	1.17947	1.01299	0.97843
20-24	1.05256	1.00189	1.04671	0.98835
25-29	0.99824	0.83550	0.96201	0.91758
30-34	0.89750	0.82518	0.91694	0.86554
35-39	0.82273	0.74890	0.94309	0.88791
40-44	0.92009	0.78519	0.75292	0.60057
45-49	0.68510	0.65017	0.73188	0.59921
50-54	0.81025	0.83589	0.94300	0.92502
55-59	0.62984	0.62632	0.54356	0.62649

Table 3.13 – Survivorship Ratios from Age X and over to Age X+10 and Over 1961-1971, as Calculated from Census and Adjusted Data by Age and sex

Under Age x	Census Data		Adjusted Data	
	Males	Females	Males	Females
5	0.89318	0.84527	0.86566	0.84089
10	0.86502	0.84054	0.86748	0.83843
15	0.87975	0.85933	0.88866	0.84562
20	0.89112	0.83369	0.87686	0.82129
25	0.85129	0.77866	0.84996	0.79179
30	0.81338	0.73349	0.80941	0.75099
35	0.76746	0.70730	0.77360	0.71126
40	0.73164	0.67348	0.57124	0.66994
45	0.70328	0.65199	0.66889	0.60781
50	0.63321	0.60814	0.65268	0.61027
55	0.61335	0.59396	0.62144	0.61449
60	0.51332	0.47594	0.48725	0.47723
65	0.45405	0.41206	0.45405	0.41361

However, expectation of life at birth is almost universally higher for females than for males.

3. In contrast to this general rule, Nepal is not the only excep-tion. Ceylon, India and Pakistan appear to have the same trend. The life tables of those countries show an excess in male expectation of life at birth equal to 0.5 year in Ceylon (1962) in India 1.3 years (1951-61) and 2.7 years in Pakistan (1962-64)*.

3.10 The Estimation of Mortality Based on Growth Rate and Age Distribution

1. This method implies that either male or female age structure would be used in estimating the level of fertility and mor-tality. Although the female age structure in both 1961 and 1971 censuses is equally distorted, it was found that female age structure has been less influenced by migration and the inter-censal rate of growth would accordingly be less biased.

The concept of this method rests upon projecting the initial population (1961) by age groups to (1971) using different levels of ten-year survivorship ratios of the "West" model life tables. The comparison of 1971 census ogive with the ogives of the projected population, permit bracketing and interpolating different levels of mortality. The median value of those levels is supposed to represent the estimated level of mortality**.

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* It is most likely that in fully agrarian societies where maternal services in the countryside do not exist, or are only restricted to urban settlements, women are exposed to high mortality conditions during conception and delivery. Furthermore their daily work, in addition to home work consists of ardent field work alongside with men. Their social status is inferior to men. Therefore, it is not unusual that women have higher mortality risk.

** Computations involve the following procedure:

(a) In the first step we projected the smoothed female population of 1961 census to 1971 using survivorship ratios in the mortality levels 1-13 of the "West" model life table.

3.10 Estimation of Mortality by Stable Population Analysis

1. The concept of stability in the population age structure stems from the fact that if age specific death rates and specific fertility rates have remained constant over the past sixty or seventy years, the proportion of each age group to total population tends to be stable. This condition also holds true even if mortality has been declining only very slightly over the same period.

Close observation of the female age structure in 1961 and 1971 censuses tables (3.16) and (3.17) confirms the stability in the age structure of the population of Nepal. There is a strong tendency to believe that fertility has been constant for a long time, approximately at the natural level of fertility, where restriction of any kind have not previously existed. The assumption that mortality has declined only very slightly in the past six decades also holds true.

(b) The projected populations and 1971 female population were cumulated from bottom to top to obtain population above age (x) table (3.15).

(c) For each age group the cumulated figure in 1971 census was compared the corresponding value in the ogives for bracketing the value of 1971 census (the higher and lower values)

(d) By linear interpolation we found the corresponding level of mortality for each age group.

(e) The median value in the first nine levels was selected as the first estimate of the mortality level in Nepal.

(f) Accordingly, the central death rate ($_n^mx$) have been interpolated from the life table functions and are equal to level (7.4) for both males and females, table (3.16).

(g) The age specific death rates ($_n^mx$) were applied to average (1966) population for males and females to obtain an estimate of average annual deaths, and hence for calculating death rates – table (3.17) and (3.18).

Table 3.14 – Female (1961) Projected to (1971) by Various Levels of Mortality

Age Group	1961	"West" Model Life Table Mortality Levels						
	Females	Level 1	Level 3	Level 5	Level 7	Level 9	Level 11	Level 13
0-4	705,323	-	-	-	-	-	-	-
5-9	645,013	-	-	-	-	-	-	-
10-14	509,755	519,823	553,467	580,622	603,192	622,518	639,234	654,046
15-19	464,906	563,483	577,028	588,316	597,992	606,377	613,794	620,374
20-24	425,778	437,166	448,992	458,830	467,292	474,684	481,158	486,918
25-29	394,957	385,221	397,960	408,606	417,765	425,761	432,781	439,057
30-34	349,844	342,751	355,865	366,850	376,303	384,563	391,843	398,315
35-39	289,709	309,686	322,996	334,173	343,771	352,183	359,648	366,244
40-44	257,297	267,981	280,505	291,035	300,096	308,038	315,104	321,367
45-49	209,812	217,803	228,406	237,359	245,065	251,815	257,812	263,143
50-54	168,416	186,978	196,806	205,117	212,296	218,599	224,183	229,149
55-59	113,866	141,623	150,582	158,177	164,765	170,577	175,760	180,375
60-64	127,905	99,702	108,039	115,196	121,529	127,002	131,971	136,434
65-69	55,781	54,883	61,305	66,896	71,827	76,245	80,218	83,817
70 & Over	83,457	68,840	78,821	87,302	94,667	101,199	107,098	112,474

$$70 + P_{60} + = (\frac{L_{70}}{L_{60}}$$

Table 3.15 – Accumulated Female Projections 1961-1971 by Various Mortality Levels and accumulated 1971 Census Females by Age Group and Corresponding Interpolated Level of Mortality

Age Group	Level 1	Level 3	Level 5	Level 7	Level 9	Level 11	Level 13	1971 Female	Level Inter-polated
10-14	3,595,940	3,760,772	3,989,479	4,016,560	4,119,561	4,210,604	4,291,713	4,037,817	7.4
15-19	3,076,117	3,207,305	3,317,857	3,413,368	3,497,043	3,571,370	3,637,667	3,434,625	7.5
20-24	2,512,634	2,630,277	2,729,541	2,815,376	2,890,666	2,957,576	3,017,293	2,918,659	9.8
25-29	2,075,468	2,181,285	2,270,711	2,348,084	2,415,982	2,476,418	2,530,375	2,416,006	9.0
30-34	1,690,247	1,783,325	1,862,105	1930319*	1,990,221	2,043,637	2,091,318	1,961,128	8.0
35-39	1,347,496	1,427,460	1495255*	1,554,016	1,605,658	1,651,794	1,693,003	1,540,311	6.5
40-44	1,037,810	1,104,464	1161082*	1,210,245	1,253,475	1,292,146	1,326,759	1,177,904	5.7
45-49	769,829	823,959	870,047	910,149	945,437	977,042	1,005,392	875,101	5.2
50-54	552,026	595553*	632,688	665,084	693,622	719,230	742,249	617,864	4.2
55-59	365,048	398,747	427,571	452788*	475,023	495,047	513,100	463,340	7.9
60-64	223,425	248,165	269,394	288,023	304,446	319,287	332,725	337,618	15.0
65-69	123,723	140,126	154,198	166,494	177444*	187,316	196,291	181,829	9.9
70 & Over	68,840	78,821	87,302	94,667	101,199	107098*	112,474	110,493	12.3

* Bracketing Value

Table 3.16 – Calculations of Age Specific Death Rates $_{n}{}^{m}x$ per Thousand-Level 7.41 "West" Model Life Table

Age Group	Male $_{n}{}^{m}x$ per 1000	Female $_{n}{}^{m}x$ per 1000
0-0	286.0	238.4
1-4	38.6	38.6
5-9	7.7	8.2
10-14	5.5	6.4
15-19	7.6	8.4
20-24	10.9	10.5
25-29	12.1	11.9
30-34	14.1	13.5
35-39	16.6	14.9
40-44	20.2	16.1
45-49	23.9	17.7
50-54	31.0	23.3
55-59	38.9	30.2
60-64	54.1	44.9
65-69	74.0	62.1
70 & Over	140.6	130.9

$4\,{}^{m}o = (1_{o} - p_{5})\,(1^{L}o + 4^{L}_{1})$

$\infty\,{}^{m}{}_{70} = p_{70} \mid T_{70}$

Male $4\,{}^{m}o = 96.4$

Female $4\,{}^{m}o = 84.5$

Table 3.17 – The Estimation of Annual Female Deaths Average 1966

Age Group	1961	1971	Average 1966	A.S.D.R.	Average Annual Deaths
0-4	705,323	893,924	799,623	84.5	67,568
5-9	645,013	857,452	751,233	8.2	6,160
10-14	509,755	603,192	556,474	6.4	3,561
15-19	464,906	515,966	490,436	8.4	4,120
20-24	425,778	502,653	464,215	10.5	4,874
25-29	394,957	454,878	424,918	11.9	5,057
30-34	349,844	420,817	385,330	13.5	5,202
35-39	289,709	362,407	326,058	14.9	4,858
40-44	257,297	302,803	280,050	16.1	4,509
45-49	209,812	257,237	233,525	17.7	4,133
50-54	168,416	154,524	161,470	23.3	3,762
55-59	113,866	125,722	119,794	30.2	3,618
60-64	127,905	155,789	141,849	44.9	6,369
65-69	55,781	71,336	63,558	62.1	3,947
70 & Over	83,457	110,493	96,975	130.9	12,694
All Females 140,432	4,801,819	5,789,193	5,295,506	-	140,432

$$\text{Estimated Female Death Rate} = \frac{140,432}{5,295,506} = 26.5 \text{ per thousand}$$

Table 3.18 – The Estimation of Annual Male Deaths Average 1966

Age Group	1961	1971	Average 1966	A.S.D.R.	Average Annual Deaths
0-4	834,440	910,209	872,325	96.4	84,092
5-9	715,178	864,798	789,988	7.7	6,083
10-14	521,742	715,115	618,428	5.5	3,401
15-19	451,523	551,402	501,463	7.6	3,811
20-24	390,453	495,933	443,193	10.9	4,831
25-29	360,063	457,388	408,725	12.1	4,946
30-34	319,547	408,693	364,120	14.1	5,134
35-39	260,329	346,384	303,357	16.6	5,036
40-44	254,068	293,004	273,536	20.2	5,525
45-49	198,111	245,515	221,813	23.9	5,301
50-54	147,870	191,294	169,582	31.0	5,257
55-59	131,405	144,993	138,199	38.9	5,376
60-64	103,176	139,441	121,308	54.1	6,563
65-69	51,443	71,427	61,435	74.0	4,546
70 & Over	68,303	101,218	84,760	140.6	11,917
All Males	4,807,651	5,936,814	5,372,232	-	161,819

Estimated Male Death Rate = $\frac{161,819}{5,372,232}$ = 30.1 per thousand

2. It was believed that before giving a definite statement on the true level of mortality in Nepal, other methods of estimate should be explored, to check which of the alternative methods has given a fairly reasonable estimate that many agree with the accuracy of the data.

Thus, the derivation of stable population estimates of birth and death rates has been worked out separately for 1961 and 1971 female age structure (tables 3.19 and 3.20). This method implies the accumulation of the proportions of all age group up to age 50. Using the intercensal 1952/54 – 1961 – 1971 rates of growth (0.016 and 0.018 respectively). The stable population parameters for 1961 and 1971 censuses have been interpolated.

The intermediate values for the first nine interpolated levels were 8.38 and 9.34 for 1961 and 1971 censuses. The estimated

female birth and death rates were 0.041 and 0.025 per thousand for 1961 and 0.041 and 0.023 per thousand for 1971 censuses.*

3.12 Estimation of Mortality from Information on Number of Children Ever Born and Number of Children Surviving

1. Data on the number of children born during the life time of each woman, and the number of children still alive provide a very useful basis for determining the level of fertility and mortality. Since this kind of information has been given in 1971 census, it is necessary to utilize to the utmost benefit these statistics, first as a check to the quality of these data, and second to derive if possible another indicator of the level of mortality in Nepal.

This method essentially recognizes the construction of a series of probabilities of dying from birth t certain ages 1, 2, 3, 5, 10, …… 25, upon which a life table can be chosen from the "west" model life tables.

Table 3.19 – Derivation of Stable Population Estimates of Birth and Death Rates based on Female Age Structure, and Intercensal 1952/54 – 1961 Rate of Growth

Age	Proportion Uner Age X	Level 7	Level 9	Level 11	Mortality Level	Birth Rates	Death Rates
5	0.1469	-	0.1511	0.1405	9.80	0.0378	0.0218
10	0.2812	0.2858	0.2724	-	7.68	0.0425	0.0265
15	0.3874	0.4001	0.3836	-	8.54	0.0404	0.0244
20	0.4842	0.5017	0.4831	-	8.88	0.0396	0.0266
25	0.5729	0.5910	0.5713	-	8.84	0.0388	0.0228
30	0.6551	0.6687	0.6490	-	8.38	0.0408	0.0248
35	0.7280	0.7360	0.7169	-	7.84	0.0421	0.0261
40	0.7883	0.7936	0.7759	-	7.60	0.0427	0.0267
45	0.8419	0.8428	0.8269	-	7.12	0.0438	0.0278

r(1952/54-1961) = 0.016

* Given female birth and death rates in tables 3.19 and 3.20 the male birth was calculated as:
Male birth rate = Female birth rate x Sex ratio at birth/Sex ratio of the population.
Death rate = Birth rate – Annual rate of increase

Table 3.20 – Derivation of Stable Population Estimates of Birth And Death Rates Based on Female Age Structure And Inter-censal 1961-1971 Rate of Growth

Age Group	Proportion under Age	Level 5	Level 7	Level 9	Level 11	Mortality Levels	Birth Rates	Death Rates
5	0.1545	-	-	0.1564	0.1472	9.4200	0.0405	0.0225
10	0.3026	0.3126	0.2969	-	-	6.2800	0.0519	0.0339
15	0.4068	-	0.4138	0.3975	-	8.1400	0.0434	0.0254
20	0.4959	-	-	0.4984	0.4822	9.3000	0.0407	0.0227
25	0.5827	-	-	0.5870	0.5698	9.5000	0.0403	0.0223
30	0.6613	-	-	0.6642	0.6468	9.3400	0.0406	0.0226
35	0.7340	-	-	0.7493	0.7310	10.6800	0.0380	0.0200
40	0.7966	-	0.8053	0.7886	-	9.9400	0.0395	0.0215
45	0.8489	-	0.8529	0.8378	-	8.4800	0.0426	0.0246

The results drawn by this method were far from representing the true level of mortality in the country and the probabilities of dying constructed to ages 1, 2, 3, 5, 10, 20 were very low giving an expectation of life equivalent or over 50 years.

The main cause of this bias lies in the fact that the women responding to the census schedule were more inclined to omit dead children so that number of children ever born exceeds number of children still alive only very slightly at all ages. The correction factor (1.038) was remarkably low.

Calculation of Proportion Dying from Birth to Age (x)

Age	Proportion Dying $x^{q}o$	Average Ever Born Children	Average Children Still Alive	Multi-pliers	Propor-tion Dy-ing (Co-rrected)	Propor-tion* Surviving
15-20	$1^{q}o$	0.15238	0.13639	1.031	0.108	0.867
20-24	$2^{q}o$	1.00977	0.89051	1.038	0.123	0.884
25-29	$3^{q}o$	2.19766	1.84014	1.009	0.164	0.872
30-34	$5^{q}o$	3.07485	2.59297	1.016	0.159	0.853
35-39	$10^{q}o$	3.62454	3.07614	1.026	0.155	0.839
40-44	$15^{q}o$	3.99239	3.21482	1.004	0.196	0.818
45-49	$20^{q}o$	3.32913	3.15328	1.003	0.053	0.794

$p_1/p_2 = 0.153$

Source: 1971 census tables 33 and 34

Obviously, children still alive as well as children ever born have been under-reported. The sequence of proportion dying was upset by false statements of the number of children ever born and number of children still alive where a decline is apparent at age groups 30-34 and 35-39. Substituting 2^{q}_{o} instead of 1^{q}_{o} as an indicator of infant morality, a proportion of dying 0.123 is not at all acceptable. In other words we can freely judge that information on children still alive is fictitious. Therefore, the resultant estimate was on the whole rejected.

* Proportion of children still alive to children ever born.

3. 13 The Estimated Level of Mortality for Nepal

1. Combining together all the results of estimates by methods previously mentioned, the following table shows the estimated birth and death rates by sex and total population.

Estimation of Birth and Death Rates*

Method		Birth Rate	Death Rate
1) Estimation by growth rate and age distribution	Male	0.0439	0.0301
	Female	0.0425	0.0265
	Total	0.0432	0.0283
2) Estimation by stable population (1961) census	Male	0.0432	0.0280
	Female	0.0408	0.0248
	Total	0.0420	0.0270
3) Estimation by stable population (1971) census	Male	0.0420	0.0213
	Female	0.0406	0.0226
	Total	0.0413	0.0214
4) Estimation by information on children ever born and children surviving	Male		
	Female	Rejected	Rejected
	Total		

2. The first estimate of birth and death rates, which has been based on the projected ogives of 1961 female population, seems to give a relatively high death rate of 0.028 for total population and 0.030 and 0.026 death rates for males and females respectively. Meanwhile, the stable population analysis has revealed a trend which is almost consistent with the present demographic phenomenon observed in the developing countries, that is, constant fertility level and declining mortality.

* Total Birth Rate = Birth Rate X $\frac{\text{Female Population}}{\text{Total Population}}$ (1+Sex Ratio at Birth)

It should be pointed out that a substantial decline in mortality rates has taken place in several countries of the world where mortality was considered to be as equally high as the fertility level. Gains in the expectations of life in these countries have surpassed all previous records of achievement in the more advanced countries within a corresponding number of years.

In terms of public health programme, Nepal has made steady progress during the last three economic plans in raising the health standard of the population. Total expenditure of health activities amounted to 7 percent of total expenditures on economic and social development. Through international cooperation, a malaria eradication programme has successfully been implemented in the Terai area. Cholera and smallpox are no longer threatening epidemics, in spite o the fact that they still toll several hundred souls every year. Malnutrition, measles, tuberculosis and to a major extent intestinal infection and water pollution are still forming a great hazard to the general health of the population.

Strenuous efforts in curtailing infectious diseases such as vaccination campaigns and increasing medical personnel are still badly needed. Number of persons per physician is as high as 40,000. Number of hospitals and hospital beds is still far below the adequate level.* The doctor/population ratio in Nepal is the lowest recorded in ESCAP region.

3. Our estimate of the Crude Death Rate in Nepal for the period 1953-61 is 27.0 per thousand and for the period 1961-71 is 21-4 per thousand. This rate is listed among the highest rates persisting in the low-income countries, and matches those countries with a high level of mortality in Africa and Asia. The following death rates have been estimated by UN's Population Division for some African and Asian countries where death statistics are lacking or incomplete.

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* In 1971 – 72 there were 55 hospitals, with total beds numbering 2,006.

AFRICA	C.D.R.	ASIA	C.D.R
Botswana	22.6	Afghanistan	26.5
Burundi	25.2	**Nepal**	**22.9**
Cameroon	22.8	Pakistan	18.4
Zaire	22.8	India	16.7
Sierra Leone	22.7		

Source: UN's Demographic Yearbook 1972, Table 23, pp. 526-530.

3.14 Estimated Life Table for Nepal

According to the selected levels of mortality in tables 3.19 and 3.20, two sets of life tables have been constructed for the period 1953-61 and 1961-71. The expectation of life at birth of the first period was 37.4 and 35.2 for females and males respectively. Expectation of life at birth in the calculated life tables was less than the corresponding "West" level by almost 1/3 of a year, because more weight has been given to infant mortality.

As revealed by the estimated life tables (tables 3.21-3.24) gains in expectation of life at birth amounted to 2.49 years and 2.0 for males and females, that is, 0.25 year and 0.20 year per year between 1961-1971.

Table 3.21 – Estimated Life Table for Nepal 1953-1961 (Females)

Age Group	Central Death Rates $_nm_x$	Probability of Dying $_nq_x$*	Survivors to exact Age x l_x	Persons Living in Age x+n $_nL_x$	Number of years still to be Lived T_x	Expectation of Life e^o_o
0-0	0.2157	0.1947	100,000	86,371	3,741,159	37.41
1-4	0.0346	0.1360	80,530	300,215	3,654,788	45.38
5-9	0.0074	0.0369	69,578	341,472	3,354,573	48.21
10-14	0.0058	0.0289	67,011	330,213	3,013,101	44.96
15-19	0.0076	0.0379	65,074	319,205	2,682,888	41.23
20-24	0.0096	0.0478	62,608	305,557	2,363,683	37.75
25-29	0.0109	0.0542	59,615	289,998	2,058,126	34.52
30-34	0.0123	0.0611	56,384	273,308	1,768,128	31.36
35-39	0.0136	0.0675	52,939	255,763	1,494,820	28.24
40-44	0.0148	0.0735	49,366	237,760	1,239,057	25.10
45-49	0.0164	0.0813	45,738	219,395	1,001,297	21.89
50-54	0.0216	0.1068	42,020	198,880	781,902	18.61
55-59	0.0281	0.1386	37,532	174,655	583,022	15.53
60-64	0.0419	0.2052	32,330	145,065	408,367	12.63
65-69	0.0584	0.2537	25,696	112,183	263,302	10.25
70 & Over	0.1269	1.0000	19,177	151,119	151,119	7.88

* Converting Formula $_nq_x = \frac{2n.\ n.\ {}_nm_x}{2+n.\ {}_nm_x}$

$L1 = 0.30\ p_o + 0.7\ p_1$

$\infty L_{70} = \frac{\infty P_{70}}{\infty m_{70}}$

Table 3.22 – Estimated Life Table for Nepal 1953-1961 (Males)

Age Group	Central Death Rates n^mx	Probability of Dying n^qx*	Survivors to exact Age x I_x	Persons Living in Age x+n n^Lx	Number of years still to be Lived T_x	Expectation of Life e^o_o
0-0	0.2431	0.2168	100,000	84,824	3,515,128	35.15
1-4	0.0346	0.1360	78,320	291,976	3,430,304	43.80
5-9	0.0070	0.0349	67,668	332,435	3,138,328	46.38
10-14	0.0050	0.0249	65,306	322,465	2,805,893	42.97
15-19	0.0070	0.0349	63,680	312,845	2,483,428	39.00
20-24	0.0100	0.0476	61,458	299,977	2,170,583	35.32
25-29	0.0111	0.0552	58,533	284,588	1,870,606	31.96
30-34	0.0129	0.0641	55,302	267,647	1,586,018	28.68
35-39	0.0151	0.0749	51,757	249,092	1,318,371	25.47
40-44	0.0186	0.0921	47,880	228,375	1,069,279	22.33
45-49	0.0221	0.1093	43,470	205,472	840,904	19.34
50-54	0.0287	0.1415	38,719	179,897	635,432	16.41
55-59	0.0364	0.1787	33,240	151,350	455,535	13.70
60-64	0.0509	0.2482	27,300	119,560	304,185	11.14
65-69	0.0701	0.3386	20,524	85,247	184,625	9.00
70 & Over	0.1366	1.0000	13,575	99,378	99,378	7.32

Table 3.23 – Estimated Life Table for Nepal 1961-1971 (Females)

Age Group	Central Death Rate n^mx	Probability of Dying n^qx*	Survivors to exact Age x I_x	Persons Living in Age x+n n^Lx	Number of years still to be Lived T_x	Expectation of Life e^o_o
0-0	0.1943	0.1771	100,000	87,603	3,989,541	39.90
1-4	0.0308	0.1213	82,290	309,196	3,901,938	47.42
5-9	0.0067	0.0334	72,308	355,503	3,592,742	49.69
10-14	0.0052	0.0259	69,893	344,940	3,237,239	46.32
15-19	0.0069	0.0344	68,083	334,560	2,892,299	42.48
20-24	0.0087	0.0433	65,741	321,588	2,557,739	38.91
25-29	0.0099	0.0493	62,894	306,718	2,236,151	35.55
30-34	0.0111	0.0552	59,793	290,713	1,929,433	32.27
35-39	0.0124	0.0616	56,492	273,760	1,638,720	29.01
40-44	0.0135	0.0670	53,012	256,180	1,364,960	25.75
45-49	0.0151	0.0749	49,460	238,038	1,108,780	22.42
50-54	0.0200	0.0990	45,755	217,450	870,742	19.03
55-59	0.0262	0.1293	41,225	192,800	653,292	15.85
60-64	0.0391	0.1918	35,895	162,263	460,492	12.83
65-69	0.0549	0.2672	29,010	125,672	298,229	10.28
70 & Over	0.1232	1.0000	21,259	172,557	172,557	8.12

Table 3.24 – Estimated Life Table for Nepal 1961-1971
(Males)

Age Group	Central Death Rate $_nm_x$	Probability of Dying $_nq_x$*	Survivors to exact Age x l_x	Persons Living in Age x+n $_nL_x$	Number of years still to be Lived T_x	Expecta-tion of Life e^o_o
0-0	0.2328	0.2085	100,000	85,405	3,704,230	37.04
1-4	0.0309	0.1217	79,150	297,334	3,618,925	45.72
5-9	0.0063	0.0314	69,517	342,128	3,321,591	47.78
10-14	0.0045	0.0224	67,334	332,900	2,979,463	44.25
15-19	0.0064	0.0319	65,826	323,880	2,646,563	40.21
20-24	0.0092	0.0458	63,726	311,333	2,322,683	36.45
25-29	0.0101	0.0502	60,807	296,405	2,011,350	33.08
30-34	0.0117	0.0582	57,755	280,373	1,714,945	29.69
35-39	0.0138	0.0685	54,394	262,655	1,434,572	26.37
40-44	0.0170	0.0843	50,668	242,662	1,171,917	23.13
45-49	0.0204	0.1010	46,397	220,270	929,255	20.03
50-54	0.0266	0.1313	41,711	194,862	708,985	17.00
55-59	0.0341	0.1676	36,234	165,988	514,123	14.19
60-64	0.0479	0.2339	30,161	133,167	348,135	11.54
65-69	0.0664	0.3213	23,106	69,970	214,968	9.30
70 & Over	0.1329	1.0000	15,682	117,998	117,998	7.52

PART IV

Marital Status and Fertility Patterns in Nepal

4.1 Information on marital distribution on fertility statistics by region were provided in 1961 and 1971 censuses. Data on the incidence of marriage, widowhood and diverce seem to be fairly accurate, while data on children ever born and number of births in the year preceding the census, are not satisfactory. Therefore, the correction of age structure, and the use of indirect methods were necessary before deriving the approximate level of fertility pertaining to the country.

Where it was possible to hold comparisons, or to outline regional differences in marital status between 1961 and 1971 censuses, either 1971 data was re-grouped to match 1961 census divisions or *vice versa*. But when information on a certain topic was provided by one census rather than the other, inter-regional differences were discussed confining them only to that census. For comparing marital status in the four distinct ecological regions, namely the mountains, hills, Kathmandu Valley and the Terai, information on these regions was re-grouped from a selected number of districts in each region; since the calculation of ratios for all the 75 districts would apparently be a very long process.

4.2 The Conjugal Distribution

2. The mean age at marriage and the marital distribution of the population, have, in the absence of voluntary fertility control, a significant impact on the pattern of fertility of any community. The singulated mean age at marriage for females as revealed by the following table is considerably low. This must be regarded as favourable to high fertility.

Singulated Age of Marriage*		
	Male	Female
1961	20.4	15.7
1971	20.9	16.8

Child marriage was a deep rooted norm in the society of Nepal. A boy and a girl may be declared in a religious ceremony as married couples at an age as low as 6 years, but the bride would not move to the husband's house until puberty. Table (4.1) and (4.2) have shown that this marital pattern is declining. At age 10-14 for instance the ever married proportion for males has declined from 10.7 in 1961 to 6.29 in 1971 while in the same period female marriage at the same age has declined from 24.85 in 1961 to 13.44 in 1971. Although the (New Law of the Land) Naya Mulki Ain of 1962 has restricted age at marriage to 14 and 18 years of age for female and male respectively and by now has further raised them to 16 and 18 years respectively. Table (4.1) shows that literacy and mode of living were actually the important Variables in the regional differences in early marriage. While a decline in ever married proportions at age 10-14 in all regions has been observed, particularly, in Kathmandu Valley where the highest proportion of literacy was found, the Terai region still has the highest proportion of child marriage. There is no doubt that child marriage has a negligible effect on fertility at age below 15, but in fact its effect on fertility afterwards would be significant.

2. A widow is not allowed to re-marry according to Hindu Traditions. The restrictions on re-marriage, which are deeply associated with the religious and social norms of the country, have been eliminated by the Naya Mulki Ain, but post-widowhood celebracy is still being practiced by a large proportion of the population as continuation of the prevailing traditional norms.

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* Calculated by the indirect method devised by J. Hajnal "Age at Marriage and Proportions Marrying", Population Studies (London) 7(2); 115. November 1953.

The percentage widowed and divorced in the reproductive age group of 1961 and 1971 is as follows:

Percentage Widowed and Divorced (Females)

Age Group	1 9 6 1 Widowed	Divorced	Total	1 9 7 1 Widowed	Divorced	Total
15-19	0.8	0.3	1.1	0.3	0.2	0.5
20-24	1.6	0.4	2.0	0.7	0.3	1.0
25-29	3.2	0.4	3.6	1.6	0.3	1.9
30-34	6.1	0.4	6.5	3.3	0.3	3.6
35-39	11.6	0.5	12.1	6.6	0.4	7.0
40-44	19.9	0.5	20.4	12.1	0.3	12.4
45-49	29.6	0.4	30.0	18.3	0.4	18.7

The age distribution of the widowed gives an idea of declining mortality among adults in the inter-censal period. Apparently widowhood has a negative effect on the reproductive span of women, since the highest rates are affecting those women who have already passed their reproductive age, or the ages where fertility is declining to its minimum point. The incidence of widowhood has declined substantially between 1961 and 1971. a striking similarity in the incidence of widowhood and divorce has been revealed by the Indian Censuses conducted at the same period. The following table shows the percentages of widowhood for women their reproductive age groups in 1961 and 1971 Indian censuses:

Percentage Widowed in Reproductive Age Groups (Female)*

Age Group	1961	1971
15-19	0.6	0.3
20-24	1.3	0.9
25-29	2.9	1.9
30-34	6.4	3.9
35-39	11.2	7.0
40-44	20.7	14.2
45-49	28.8	20.4

* Source: C.I.C.R.E.D., The Population of India, Table 20, p. 26.

Table 4.1 – Proportion Ever Married Population by Age Literacy and Mode of Living (1961 Census)**

Age Group	Nepal		Literate		Illiterate		Urban		Rural	
	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female
6-9	2.99	5.33	2.85	2.30	2.99	5.35	0.60	1.31	3.06	6.27
10-14	10.70	24.85	13.97	10.33	10.14	32.01	3.38	10.52	10.95	25.33
15-19	36.60	73.85	39.44	53.59	35.99	74.49	20.70	54.69	37.38	74.59
20-24	73.15	94.61	75.24	85.55	72.61	94.83	56.06	86.25	74.08	94.94
25-29	89.65	98.08	91.70	95.34	89.22	98.12	80.91	93.86	90.04	98.22
30-34	95.23	98.96	96.51	97.25	94.98	99.00	90.55	96.21	95.44	99.05
35-39	97.27	99.22	98.06	96.71	97.11	99.25	94.24	97.12	97.39	99.29
40-44	97.92	99.31	98.36	96.77	97.84	99.34	95.68	98.00	98.02	99.36
45-49	98.39	99.42	98.49	96.75	98.37	99.44	96.26	97.96	98.47	99.47
50-54	98.52	99.45	98.53	96.85	98.52	99.46	96.57	98.17	98.60	99.48
55-59	98.73	99.49	98.71	96.75	98.73	99.51	98.36	97.67	98.79	99.55
60 & Over	99.01	99.54	98.47	95.99	99.09	99.56	97.76	98.10	99.06	99.59
Total	61.93	74.53	70.44	60.63	60.49	74.75	59.12	69.16	62.09	74.71
Standardized*f* Total	61.93	74.53	63.14	68.12	61.70	75.55	55.22	68.09	62.24	74.86
15 Years & Over	83.93	94.97	83.02	82.29	84.13	95.17	75.74	88.76	84.33	95.19
Standarized	83.93	94.97	85.00	89.38	83.70	95.11	76.51	89.48	84.29	95.18

** Excluding Unknown Ages. No information were given by 1971 census on Marital Status by Literacy or by Place of Residence.

f Population Age Structure has Been taken as standard.

Source : 1961 Census, Vol. 3, Part 6, Table 7, p. 1 ff.

Table 4.2 – Proportion Ever Married Population by Selected Geographic Regions Age and Sex (1971 Census)

Age Group	Total		Mountain[1]		Hills[2]		Kathmandu Valley[3]		Terai[4]	
	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female
6-9	1.22	2.35	0.41	0.52	0.36	0.24	0.46	0.83	0.16	4.16
10-14	6.29	13.44	1.78	4.57	1.78	5.06	1.65	3.46	11.43	25.56
15-19	26.98	60.67	15.10	34.84	18.49	51.44	16.23	54.80	38.33	75.05
20-24	66.89	92.13	52.08	75.30	62.81	88.69	52.84	87.30	72.66	96.26
25-29	87.74	97.41	76.57	89.75	86.92	96.58	78.90	93.42	90.04	98.93
30-34	94.38	98.60	88.30	94.30	94.66	98.23	89.45	96.04	95.27	99.51
35-39	96.75	98.92	92.69	96.18	97.15	98.81	92.92	96.54	97.19	99.73
40-44	97.69	99.08	95.24	97.11	98.01	99.09	94.75	97.13	98.03	99.78
45-49	98.40	99.23	97.38	97.46	98.78	99.07	96.52	98.19	98.52	99.81
50-54	98.57	99.29	97.68	97.96	98.96	99.23	96.90	98.22	98.43	99.70
55-59	98.78	99.32	97.26	87.28	99.10	99.34	97.64	98.27	98.72	99.71
60-64	98.87	99.38	97.56	98.53	99.11	99.37	97.91	98.23	98.73	99.68
65 & Over	98.97	99.39	97.89	98.30	99.13	99.31	98.36	98.50	98.91	99.61
Total	59.00	70.16	51.37	63.30	54.94	66.89	54.89	67.03	62.71	74.40
Standardized Total	59.00	70.16	53.19	62.09	57.74	67.21	53.64	72.19	61.90	74.27
15 Years & Over	80.71	92.24	72.24	82.50	77.69	89.72	73.15	86.96	85.40	95.91
Standarized	80.71	92.24	73.69	83.18	80.05	90.08	74.33	96.99	83.78	95.40

(1) Taplejung, Solukhumbu, rasuwa, Mustang and Humla Districts.
(2) Panchthar, Okhaldhunga, Tanahun, Baglung, Myagdi, Rukum and Doti Districts.
(3) Kathmandu, Lalitpur and Bhaktapur Districts.
(4) Sunsari, Mahottari, Nawal Parasi, Banke and Kailali Districts.

Source : 1971 Census, Vol. 1, Table 15.

Another factor which os of prime importance in determining fertility is the incidence of primary and secondary sterility among married women in their reproductive age. Since information on childlessness by duration of marriage is lacking, it is quite impossible to assess the effect of sterility on fertility behaviour. However information on children ever born has shown that (11.65) percent of ever married women above age 35 have not given birth to any child. Most probably some women who have given birth, but has none of their children alive at the date of census were included in this category.

3. Presented in tables (4.1) and (4.2) is the distribution of ever married males and females in 1961 and 1971 respectively. Differences in marital status exist below age 30 among the literate and illiterate on one hand and by rural urban residence on the other. While ever married literate females at age 15-19 amounted to 53.59 percent, the corresponding rate for illiterates is 74.49 percent. The same trend also exists between urban and rural females.

At age 30-34 almost every Nepali man and woman is married. About 90 percent and 98 percent of males and females respectively are married once before reaching age 30. the marital distributions of the four categories mentioned in table (4.1) have been standardized by the total population age structure. The standardized rates have shown higher ever married rates among the literate males than the illiterate males. The economic factor in this respect is playing an important role in the marital status of males. A literate male may have the opportunity to gain higher income and hence marry earlier than the illiterate of the same age group as suggested by the ever married ratio for males in the age groups 15-19 and 20-24. The standardized rates for total males and females ever married of age 15 years and over, have shown that literate males and females have lower ever married rates than the illiterate on the female side, and higher rates on the male side.

There are substantial differences in proportion ever married between urban and rural residence, probably because literacy rates

in urban settlements are much higher than literacy rates in rural areas, and because female labour in the rural area is no less important than male labour.

4. A close comparison between proportion ever married in 1961 and 1971, has shown that a change I marital pattern has started to take place at lower age groups for both males and females. A decrease of 3 percent and 2 percent of ever married males and females at age 15 years and over has been observed between 1961 and 1971.

The differences of ever married proportions at early ages between the mountain inhabitants and population of the other parts of the country, reflect the differences in social and religious norms among the Buddhist in the north and the Hindus in the south. While the institution of marriage in Hindu Religion insists on early marriage for girls, these traditions are not followed by the Buddhists. Kathmandu Valley has shown the highest proportion of ever married women 15 years and over (96.99) percent and a low proportion of ever married men (74.33) percent. But combining both sexes the Terai still has the highest proportion among all regions. The incidence of child marriage is substantially higher in the Terai than any other region. On the whole, the same pattern of 1961 census of ever married proportions still exists at age 30.

Generally, almost every female in Nepal marries before reaching age 25. The ever married ratios suggest (other things being equal) the prevalence of high fertility of patterns.

5. In the ten geographic regions classified in 1961 census, table (4.3) reveals widespread decline in proportion ever married. This is associated with varying degrees, with educational and cultural differences among the various regions. For total population propor-tion ever married 6 years and over, declined by 3.6 and 5.0 percent for males and females respectively. The most pronounced decline occurred in Eastern Terai and Eastern Hills. In the Western Hills and Western Terai, although a similar trend has started to occur,

it is most likely that the low rate of literacy and the overwhelming agricultural activities, may resist for some period of time, drastic changes in marital pattern. The decline in ever married males and females has occurred in the regions where the proportions were substantially higher than the average.

In towns as well as the country-side it is still customary to marry early. The overall decline in proportions ever married would not affect the level of fertility, since this decline is limited to younger age groups which have no significant effect on fertility.

4.3 Fertility Level in Nepal

1. The age composition of the population of Nepal as assessed by 1961 and 1971, does not reflect prevalence of high fertility rates, due to certain deficiencies either in reporting number of children in the (0-4) age groups, or number of children born alive. Perhaps the effect of high infant mortality in the past was a main factor in reducing number of children born alive to woman passing through their reproductive ages (15-49) years. Child/Women ratio which is relative measure of fertility performance is substantially low (587 per 1000) as compared with neighbouring India, Pakistan and Sri Lanka. The child/woman ratios in these countries were 659,832 and 686 respectively.*

The corrected value as shown in table (4.4) was 640 per 1000 women. Number of ever born children per women is similarly suffering from under-reporting. The reported number of children ever born per 1000 women in their reproductive age, amounted to 2,255 with a standard deviation equal to 159 among the 14 administrative zones.

Total fertility rates calculated from information on number of births in the year preceding 1971 census amounted to 3.08 per woman. Assuming a sex ratio at birth of 106 males per 100 females, the gross production rate would thus be 1.5, and the net reproduction rate would be reduced below the level of replacement.

* UN's Demographic Yearbook 1969, Table 8, p. 217

Table 4.3 – Proportion Ever Married 6 Years of Age and Over reported in 1961 and 1971 Censuses, by Region

Area	1961*		1971		Percent Change	
	Male	Female	Male	Female	Male	Female
Nepal	61.14	73.86	58.99	70.16	-3.0	-5.0
1. Eastern Hills	57.18	68.98	51.78	63.00	-10.0	-8.0
2. Eastern Inner Terai	57.54	70.51	55.60	66.98	-3.4	-5.0
3. Eastern Terai	68.22	80.32	57.99	74.86	-15.0	-6.8
4. Kathmandu Valley	57.78	68.63	54.89	64.30	-5.0	-6.3
5. Western Hills	56.59	71.98	55.09	67.98	-2.7	-5.6
6. Far Western Hills	60.22	73.00	58.37	69.14	-3.1	-5.3
7. Central Inner Terai	60.41	70.80	58.37	68.78	-3.4	-2.9
8. Western Inner Terai	60.30	68.40	57.28	66.31	-5.0	-3.1
9. Western Terai	74.36	82.79	72.15	81.81	-3.0	-1.2
10. Far Western Terai	64.39	76.04	60.73	71.17	-5.7	-6.4

2. Inter-zonal differences in total fertility reflect to some extent the under-reporting of births rather than genuine difference in fertility levels. It is generally believed that women in the Terai are more prolific than women living in the mountain area due to early marriage, traditions and some environmental factors. If this is really the case, there is no explanation why total fertility in Dhaulagiri zone, which is a completely mountainous area, is much higher than total fertility in Janakpur or Lumbini in the Terai.

* Excluding Unknown Ages

Source: 1961 Census, Vol. 3, Part 6, Table 7 and 1971 Census, Vol. 1, Table 15.

Completed fertility also is ranging from 3.18 per women in Janakpur to 4.84 I Mahakali. This contrast leaves no possibility for comparing fertility levels by region unless regrouping and age adjustments are made for each geographic region alone.

Table 4.4 – Child/Women Ratio and Total Fertility by Region Calculated from Birth reported in 1971 Census.

	Zone	Child/Women Ratio Per 1000 W	Ever Born Children Per 1000 Women	Total Fertility per 1000 W	Completed Fertility (2)
1.	Mechi	648	2,358	3,592	4,158
2.	Koshi	639	2,373	3,299	4,092
3.	Sagarmatha	575	2,229	2,781	4,091
4.	Janakpur	589	2,317	3,307	3,182
5.	Bagmati	570	2,219	2,973	3,770
6.	Narayani	606	2,082	2,662	3,772
7.	Gandaki	543	2,239	3,064	3,864
8.	Lumbini	569	2,400	3,134	3,961
9.	Dhaulagiri	534	2,264	5,446	3,662
10.	Rapti	627	2,546	3,789	3,823
11.	Karnali	555	1,999	3,473	4,578
12.	Bheri	629	2,204	2,969	4,116
13.	Seti	557	1,998	2,562	4,666
14.	Mahakali	574	2,027	2,834	4,841
	Nepal	587	2,255	3,080	3,973
	Standard Deviation ±	37	±159	+719	±423
	Corrected Ratios	640 (1)	-	6,308	-

(1) See Table 3.7 Part III

(2) Children ever born per 1000 women in the group (45-49).

Source: 1971 Census, Vol. 1. Table 6.

3. If only ever married women are considered, the number of children born alive would be 2.49 per woman, table 4.5. Comparing children ever born and children still alive, the proportion of children dying is strikingly low. It ranges from 3.8 percent in Mechi zone to 21.9 in Rapti zone. For all Nepal the total proportion of children dying to ever married women in age group 15-49 was only 16.1 percent. Part of the differences may be attributed, to the fact that either woman has ignored the number of children who have died, and reported only those who have already survived, or the questions on both topics were not fully understood by the enumerators in some zones.

Table 4.5- Children Under Five Years and Children ever born to ever Married Women 15-49 Years of Age by Zone (1971 Census)

	Zone	Children Under 5 year	Children Born Alive	Children Still Alive	% of Children who died
		Per 1000 Ever Married Women (15-49)			
1.	Mechi	771	2,806	2,699	3.8
2.	Koshi	731	2,716	2,370	12.7
3.	Sagarmatha	630	2,443	2,129	12.9
4.	Janakpur	626	2,454	2,048	16.5
5.	Bagmati	661	2,575	2,152	16.4
6.	Narayani	633	2,173	1,882	13.9
7.	Gandaki	617	2,547	2,122	16.7
8.	Lumbini	605	2,552	2,067	19.0
9.	Dhaulagiri	645	2,716	2,240	17.5
10.	Rapti	713	2,893	2,260	21.9
11.	Karnali	605	2,179	1,727	20.7
12.	Bheri	683	2,395	2,031	15.2
13.	Seti	598	2,145	1,796	16.3
14.	Mahakali	601	2,178	1,919	11.9
Total Nepal		648	2,490	2,090	16.1

Source : Ibid

4. Crude birth rates estimates for Nepal are ranging between 40-50 per thousand. It was estimated for the period 1945-49, that the crude birth rate is 45 per thousand and the gross reproduction rate is 2.7.* The vital registration pilot project which was conducted by the C.B.S. in some selected areas in 1968 has revealed a birth rate of 42 per thousand. As far as the age structures of 1961 and 1071 permitted, the crude birth rate as estimated by indirect methods was 41 per thousand. Most likely a modest decline in fertility has taken place in the last decade, but it would be extremely difficult to assess the extent and trends of this decline. However, fertility in Nepal can still be considered as being at a high level. In fact the high level of mortality particularly among infants is probably the only mechanism working in reducing population growth.

5. One of the main drawbacks of the 1971 census tabulations is the lack of information on urban-rural cross classification of fertility. While in 1961 census information on children born alive by age of women, cross classified by literacy status and urban-rural residence was collected, such data are lacking in 1971 census.

4.4 Age Specific Fertility Rates

1. Age specific fertility rates have been calculated for total Nepal, urban and rural areas from information on children ever born in 1961 censuses, using the indirect method devised by G. Mortara.*f* The cumulative fertility curve has shown a systematic increase up to age 35 after which under-reporting of children born alive becomes evident. Value of cumulative fertility after this age were read from had smoothed curve which only very slightly corrected number of ever born children.

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* UN's Population Bulletin No. 7 Chapter. IV, p.58.

f Unitaed Nations, Methods of Using Census Statistics for the Calculation of Life Tables and Other Demographic Measures, Population Studies No. 7, N.Y. 1949, p. 40 ff.

Table 4.6 – Calculation of Age Specific Fertility Rates From Cumulative Fertility Rates Derived From Data on Children Ever Born of 1961 Census (Nepal)

Age Group x+n	Number of Women of Age x+n	Number of Children Born by Women of Age x+n	Children Ever Born per 100 Women Until Age x+n/2	Children Ever Born per 100 Women Until Exact Age x	Crude Age Specific Fertility Rates Age x-(x+n) [b]	Children Ever Born Read from Curve	Children Ever Born per 100 Women Until Exact Age x [d]	Adjusted A.S.F.R. per 100 Women Age x-(x+n)
15-19	289,759	66,128	22.82	22.82	10.03	22.82	22.82	10.03
20-24	330,348	435,674	131.88	72.99 (a)	23.11	131.88	72.99 [a]	23.11
25-29	366,806	899,489	245.22	188.55	24.26	245.22	188.55	24.26
30-34	330,918	1,239,245	374.49	309.85	17.31	374.49	309.85	19.48
35-39	257,516	1,077,254	418.33	396.41	10.09	440.00	407.24	11.05
40-44	223,201	1,061,081	475.39	446.86	7.30	485.00	462.50	8.50
45-49	170,927	843,174	493.29	483.34	2.93	525.00	505.00	5.46 [c]
50-54	164,977	838,984	508.55	500.92	—	550.00	537.75	—

(a) 131.88 - 0.54 (131.88 – 22.82) Gross Total Fertility = 101.89

(b) Differences between successive rates of Col. 8 divided by 5.

(c) For the last age group a divisor 6 was chosen in order to allow for the decline of fertility at the end of child bearing age.

(d) Values read from extrapolated curve after age 35.

Table 4.7 – Calculation of Age Specific Fertility Rates From Cumulative Fertility Rates Derived From Data on Children Ever Born of 1961 Census (Rural Area)

Age Group x+n	Number of Women of Age x+n	Number of Children Born by Women of Age x+n	Children Ever Born per 100 Women Until Age x+n/2	Children Ever Born per 100 Women UntilExact Age x	Crude Age Specific Fertility Rates Age x-(x+n) [b]	Children Ever Born Read from Curve	Children Ever Born per 100 Women Until Exact Age x [d]	Adjusted A.S.F.R. per 100 Women Age x-(x+n)
15-19	281,748	63,226	22.44	22.44	9.92	22.44	22.44	9.92
20-24	320,665	417,861	130.31	72.06 [a]	23.11	130.31	72.06 [a]	23.11
25-29	354,951	869,440	244.95	187.63	21.69	244.95	187.63	21.69
30-34	320,648	1,113,300	347.20	296.07	17.95	347.20	296.07	17.95
35-39	249,303	1,058,253	424.48	385.84	12.83	424.48	385.84	12.83
40-44	215,680	1,025,658	475.55	450.01	6.85	475.55	450.01	10.55
45-49	165,145	814,482	493.19	484.37	0.10	530.00	502.77	5.79 [c]
50-54	159,169	758,663	476.64	484.91	——	545.00	537.50	——

(a) 130.31 - 0.54 (130.31 – 22.44) Gross Total Fertility = 101.84

(b) Differences between successive rates of Col. 8 divided by 5.

(c) For the last age group a divisor 6 was chosen in order to allow for the decline of fertility at the end of child bearing age.

(d) Values read from extrapolated curve after age 35.

Table 4.8 – Calculation of Age Specific Fertility Rates From Cumulative Fertility Rates Derived From Data on Children Ever born of 1961 Census (Urban Area)

Age Group x+n	Number of Women of Age x+n	Number of Children Born by Women of Age x+n	Children Ever Born per 100 Women Until Age x+n/2	Children Ever Born per 100 Women UntilExact Age x	Crude Age Specific Fertility Rates Age x-(x+n) (b)	Children Ever Born Read from Curve	Children Ever Born per 100 Women Until Exact Age x (d)	Adjusted A.S.F.R. per 100 Women Age x-(x+n)
15-19	8,011	2,902	36.23	36.23	9.60	36.23	36.23	9.60
20-24	12,683	17,813	140.45	84.17 (a)	22.97	140.45	84.17 (a)	23.00
25-29	11,856	30,527	257.48	199.00	21.18	257.48	199.00	21.18
30-34	10,270	36,187	352.36	304.92	17.09	352.36	304.92	17.09
35-39	8,213	35,171	428.38	390.37	11.83	428.38	390.37	11.83
40-44	7,521	35,401	470.70	449.54	6.78	470.70	449.54	7.16
45-49	5,782	28,692	496.23	483.46	1.07	500.00	485.35	4.52 (c)
50-54	5,749	27,674	481.37	488.80	-	525.00	512.50	-

Gross Total Fertility = 94.38

(a) 140.45 - 0.54 (140.45 – 36.23)

(b) Differences between successive rates of Col. 8 divided by 5.

(c) For the last age group a divisor 6 was chosen in order to allow for the decline of fertility at the end of child bearing age.

(d) Values read from extrapolated curve after age 35.

However, the overall fertility was apparently under-reported in 1961. The age specific fertility rates thus calculated have shown slight differences in total fertility between urban and rural population. Because, urban population amounted to only 3 percent in 1961 the effect of urbanization on the age specific fertility rates was negligible. Total fertility rate was 5.09 for total Nepal and 5.09 and 4.72 for rural and urban settlements respectively. Although these rates might have reflected the actual level of fertility at that time, they still denote, to some extent, the existence of differences in fertility by urban and rural residence.

The same rates have been calculated for literate and illiterate women. But due to the small number of literate women, the rates have not shown significant differences.

2. The data provided by 1971 census on ever born children and number of births occurring during 1970 have permitted the application of a different techniques for the calculation of age specific fertility rates.

Age specific fertility rates have first been calculated before adjustment in age miss-statement. Total fertility thus calculated was 5.7, gross reproduction rate 2.7, net reproduction rate 1.7 and intrinsic rate of natural increase was 1.5 percent per annum. Since the correction factor depends upon the curvature of fertility curve which is highly influenced by miss-statement of age, particularly in the first two age groups, we preferred to follow the same procedure after eliminating the effect of age shifting.

The calculation procedures are described in table (4.9)*. The results denoted a high fertility level. Total fertility rate turned out to be 6.3, the gross reproduction rate 3.06 and the net reproduction rate 1.7, as shown in table (4.10). Although these rates seem to be somewhat high, the prevalence of high mortality level and the present age composition of the population support this high level in fertility. Total fertility rate as estimated by the National Health survey is 6.5. The following is a comparison in age specific fertility rates with the NHS Rates.

* Brass' techniques were used in the calculation.

Table 4.9 – Calculation and Correction of Age Specific Fertility Rates from Information given in 1971 Census*

Age Group	Adjusted Number of Women (1971) [a]	Births Reported in 1970	Average Birth per Women (Fi)	Cumulative Fertility	Reported Ever Born Children	E.B. Children per women (Pi)	Multi-plying Factors (wi) [b]	Fi [c]	Pi/Fi	Corrected A.S.F.R.
15-19	515,966	18,829	0.03649	0	78,621	0.15238	1.804	0.06583	2.3137	0.07471
20-24	502,653	65,824	0.13095	0.18245	507,566	1.00977	2.373	0.49319	2.0474	0.26811
25-29	454,878	69,205	0.15214	0.83900	999,669	2.19766	2.999	1.29527	1.6967	0.31037
30-34	420,817	53,911	0.12811	1.59970	1,293,948	3.07485	3.120	1.99940	1.5379	0.26134
35-39	362,407	34,862	0.09619	2.24025	1,313,560	3.62454	3.245	2.55239	1.4201	0.19623
40-44	302,803	16,139	0.05330	2.72120	1,208,909	3.99239	3.510	2.90828	1.3728	0.10873
45-49	257,237	5,477	0.02129	2.98770	856,375	3.32913	4.395	3.08127	1.0800	0.04343
Total	2,816,761	264,247	0.61847	-	6258648[d]	2.22193	-	-	-	1.26168

Fi/F2 = 0.279

m = 28.7

(a) Adjusted for miss-statement of age.

(b) For estimating average value Fertility for the first 3 age groups Fi/f2 was used in bracketing multipliers while m was used in the remaining 4 age groups.

(c) Estimated average cumulative fertility.

(d) Number of children ever born was accepted up to (3) for age group 15-19, (6) for age group 20-24 and (8) for age group 25-29.

Table 4.10 – Total Fertility, Gross Reproduction Rate and Net Reproduction Rate Calculated from Information Given in 1971 Census

Area	A.S.F.R.	A.S.F.R X 100/206	Expected Female Births per Women	Lx/I_o	Expected Female Birt
15-19	0.0744	0.0361	0.1805	3.1920	0.1152
20-24	0.2671	0.1296	0.6480	3.0556	0.3960
25-29	0.3104	0.1507	0.7535	2.9000	0.4370
30-34	0.2613	0.1268	0.6340	2.7331	0.3466
35-39	0.1962	0.0952	0.4760	2.5576	0.2434
40-44	0.1087	0.0528	0.2640	2.3776	0.1255
45-49	0.0434	0.0211	0.1055	2.1939	0.0429
Total	1.2615	0.0612	3.0615	-	1.7066

Total Fertility = 1.2615 X 5 = 6.3075
Gross Reproduction Rate = 3.0616
Net Reproduction Rate = 1.7066
* Table 3.23 part III

Age Specific Fertility Rates per 1000

Age Group	NHS (a)	Census Analysis (Table 4.9)
15-19	145	74
20-24	345	267
25-29	240	310
30-34	250	261
35-39	100*	196
40-44	107*	109
45-49	120*	43
Gross Fertility Rate	1307*	1260

(a) Source: K.H. Zevering, ARTEP, Report on Estimating Methods and Results Used in Migration Analysis for Nepal, 1974.

* In order places Mr. Zevering estimated total fertility to 6 chi.

As a replacement index the net reproduction rate indicates that a woman passing through her reproduction life span would reproduce 1.7 girls according to the specific conditions of fertility and mortality table (4.10). The intrinsic population growth, table (4.11) is 1.8. The inter-censal crude rate of increase was about 2 percent per annum. Taking into account that immigration has taken course only very recently the intrinsic rate of growth seems to be valid. The margin of 0.2 percent denotes the net inward migration.

3. In conclusion, by way of three independent methods we arrived at two estimates for a crude birth rate of 45 and 41 per thousand. The rates for individual zones or regions could not be assessed with equal certainty unless each individual region is treated separately for miss-statement of age and other errors. The effect of religious or ethnic composition on fertility cannot be discussed due to lack of information. Information on the relationship between literacy status and fertility is meager, Needless to say that literacy is a very important factor in determining fertility levels.

The level of fertility in Nepal turned to be high. It occupies a pivotal position between the levels of fertility in India and Pakistan the neighbouring countries. Life expectancy at birth is slightly less than 40 years. The effect of mortality is visible in reducing the gross reproduction rate from 3.06 to 1.71.

Table 4.11 – Calculation of the Intrinsic Rate of Growth (1971)

Age Group	Annual Births of Daughters per Female	Pivotal Age	$\frac{5L_x}{1_0}$	6 P R O D U C T S		
				Zero Moment R_0	First Moment R_1	Second Moment R_2
15-19	0.0361	17.5	3.1920	0.1152	2.0160	35.2800
20-24	0.1296	22.5	3.0556	0.3960	8.9100	200.4750
25-29	0.1507	27.5	2.9000	0.4370	12.0175	330.4812
30-34	0.1268	32.5	2.7331	0.3466	11.2645	366.0962
35-39	0.0952	37.5	2.5576	2.0435	9.1312	342.4200
40-44	0.0528	42.5	2.3776	0.1255	5.3337	226.6822
45-49	0.0211	47.5	2.1939	0.0463	2.1992	104.4620
Summation	0.6123	-	-	1.7101	150.8721	1605.8966

$$r = \frac{\frac{R_1}{R_0} \sqrt{\left(\frac{R_1}{R_0}\right)^2 - 2\left[\frac{R_2}{R_0} - \left(\frac{R_1}{R_0}\right)^2\right] \text{Log}_e R_o}}{\frac{R_2}{R_0} - \left(\frac{R_1}{R_0}\right)^2}$$

$r = 1.838$

Natural growth was 1.8 percent per year during 1961-1971. Actual growth rate may have been slightly higher because of migration, but disregarding such a minor increase, the trend in population growth is clearly upward.

PART V

The Level of Literacy and Regional Differences in Education

5.1 The Educational Statistics

1. The 1961 census supplies two different types of data on education in Nepal, i.e. data on persons who reported to be literate and illiterate by age (ten years and over), sex, geographic region, district and rural-urban residence and date on population ten years of age and over by level of education completed. Similarly, 1971 census provides data on the same topics by zone and district, with further information on the number of persons who reported to be enrolled in school ate the time of the census. While information on literacy for the urban population was given in 1961 census for total population and by region, information on the same topic and on school enrolment was given in 1971 census in a separate tabulation for the 16 Nagar (Town) Panchayats, but with no further data on the level of education attained in these towns.

2. The current educational statistics on the number of students enrolled, issued annually by the Ministry of Education, has started only very recently. The 1965-66 and 1966-67 Statistical Reports were based on a nation-wide survey of all schools and educational institutes, but unfortunately the data collected was not complete. It was estimated that the rate of response in 1965-66 is 70 percent and 1966-67 about 90 percent. Data on school enrolment thus cannot be directly used for testing the quality and accuracy of educational statistics given in both censuses. However, the latest information available on school enrolment dates back to 1970.

3. While investigation into the amount of schooling received is comparatively easy, and could be achieved by comparing data on level of education completed between the two censuses, inquires as to whether a person is literate or illiterate are much more difficult (with regard to definition as well as the quality of the returns). Both 1961 and 1971 censuses have adopted the same definition of literacy as "the ability to read and write, in any language, a short statement on every day life". However, since no test for literacy could be given, regarding a census undertaking, a certain amount of inaccurate response has to be expected. Persons, for example, who can read but not write, or who can write their names only, but not read, may very often consider themselves already literate. Furthermore, many illiterates, particularly adult males, may feel ashamed to admit to the interviewer that they are illiterate. Experience has shown that literacy in the ESCAP Region according to different censuses has been exaggerated by 10-25 percent.

5.2 Regional Differences in Literacy Level

1. The level of education in an area, although largely determined by economic, cultural, traditional and historical factors, is in several ways related to population growth and structure as well. Rapid population growth as a consequence of high fertility and low mortality is bound to compete with efforts to increase the rate of enrolment at school-going age, and to raise the standard of education. High mortality among school age children and high dropout rates at various levels of education imply a respective loss of educational investments, and in turn delay anticipated improvements in educational levels. Low standards of social and economic well-being in some areas sternly compete with allocating additional funds for education in the subsequent development plans. Finally, migration movements have direct impact on the distribution of educated and technically qualified persons. Urban settlements tend to attract relatively many well educated and trained persons, and thus weaken the levels of education in the countryside, and strengthen those in the receiving areas. The disproportionate economic structure itself and the standard of living of the population

in a certain area may also play a very important role in determining the level of educational attainment and decide to a large extent the future trend of education. In areas overwhelmingly dominated by intensive agriculture, with the least prospects of mechanization and the relief of workers, child labor becomes indispensable and sternly resists all efforts made for improving the level of school enrolment.

2. Data on the level of schooling reached by the population and its various groups have to be evaluated with regard to the school system in Nepal. Education in Nepal is divided into three levels: Primary, Secondary and Higher. The primary stage consists of a period of 5 years course starting at age five, but in practice the entrance age extends three or four years beyond that. Secondary education is also a five years course, at the end of which a School Leaving Certificate (S.L.C) is granted on a national basis examination. The Nepali language is the teaching medium in primary and secondary education. Higher education which is controlled by the National University (Tribhuwan University) consists of a two years course leading to the Intermediate Examination followed by a two years course leading to a Bachelor Degree, Examination in one of the four branches of Arts, Science, Education and Commerce. The University education, which had been affiliated for a ling time before 1959 with Patna University in Bihar (India), came in 1960 under the control of Tribhuwan University. Post graduate studies leading to M.A. and Ph. D. degrees in the above mentioned fields were also facilitated for graduates. In addition to general education there exist in the country various technical and vocational institute, which after a course of two years (the S.L.C having already been gained), provides diploma in vocational training. These technical institutes which are basically aiming at producing skilled persons in engineering agriculture, medicine, law and human studies, are now under the supervision of Tribhuvan University. According to the New Education Plan, in the level of higher education, different institutes, such as, Humanities and Social Sciences, Sciences, Education, Business Administration, Engineering, Medicine, Forestry etc. have been established under Tribhuvan University. The University confers certificate for a two years course after S.L.C.

followed by a two years course leading to Diploma and Degree for a three years course after diploma (Two years' study and one year service in the rural areas of the country under National Development Service). Vocational training on the other hand, is provided by a number of vocational schools controlled by the Ministry of Education. Training, which generally includes carpentry, machine repairing, weaving, carpet industry, secretariat and other skills, is provided also on a two years basis after the S.L.C. level.*

General education in Nepal is exclusively provided by government schools, with the exception of two missionary schools in Kathmandu Valley.

General education comprising altogether a ten years interval i.e. five years in primary, and five years in secondary, of which the latter can be divided into middle secondary for 3 years course and higher secondary for two years course.

3. Taking the country as a whole, and considering the population ten years of age and over 8.92 percent (16.36 percent of the male and 1.76 percent of the female reported to be literate in 1961 table (5.1), while 14.32 percent (24.72 percent of the males and 3.66 percent of the females) reported to be literate in 1971, table (5.2). considering the individual age groups, what was supposed to be a systematic decline in the literate male proportions has been distorted by the skewness in age reporting, and moreover, by the influence of out-migration. The female population which is less vulnerable to migration has shown a systematic decrease in proportion literate by age. However literacy rates as revealed by 1961 census indicate that, in the preceding two or three decades, there had been no substantial increase in proportions literate, particularly among the young generations. Table (5.1) shows that proportions literate do not differ widely between age group 15-19 and 35-39 for both sexes. The individual proportions literate as reported in 1971 census table (5.2) reveal a wider range in the level of literacy between young and

* The New National Education Plan for 1971-76 has now

old generations. Literacy rate in the age group 10-14, for instance, is as four times higher as the proportion literate in the age group 65 year and over, while the proportion literate in the age group 10-14 was only twice as high as the proportion literate in the age group 65 years and over in 1961 census.

Literacy in Nepal increased by almost 60 percent in the decade preceding 1971, due to the recent expansion in education which has started only very recently. Both sexes have benefited from nation-wide programemes aiming at accelerating the development in education. Percentage wise, literacy among females increased even faster than among males. Concerning the population 15-19 year of age, 35.40 percent of the males and 7.10 percent of the females were reported to be literate in 1971, against 19.51 percent for the males and 3.09 for the females reported to be literate in 1961. Chances for males and females to become literate have nearly doubled between 1961 and 1971. Yet, inspite of this

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adopted a new system with the following objectives:

a) Primary education will extend from Class 1-3 and will aim at literacy.

b) Lower secondary education will extend from Class 4-7 and will aim at character building.

c) Secondary education will extend from Class 8-10, and its aim will be to produce skilled workers by imparting vocational training.

d) First level of higher education will be the Certificate level, and its aim will be to produce low-level technical manpower.

e) The second level of higher education will be the Diploma level, and its aim will be to produce middle level technical manpower.

f) The third level of higher education will be the degree level and its aim will be to produce high level technical manpower (Ministry of Education, HMG of Nepal, The National Education System Plan for 1971-76).

Table 5.1 – Proportion Literate in 1961 by Age, Sex and Mode of Living

Age Group	TOTAL			URBAN			RURAL		
	Total	Male	Female	Total	Male	Female	Total	Male	Female
10-14	9.17	14.55	3.06	47.28	57.81	34.92	7.87	13.05	1.99
15-19	11.38	19.51	3.08	51.63	66.46	34.29	9.70	17.42	1.88
20-24	10.62	20.19	2.35	46.70	65.18	24.64	8.96	17.74	1.49
25-29	9.07	17.36	1.58	40.60	59.68	17.73	7.86	15.49	1.04
30-34	8.43	16.36	1.25	38.21	57.81	14.24	7.31	14.54	0.83
35-39	10.66	19.80	1.17	35.39	54.20	12.00	7.99	14.94	0.81
40-44	7.76	15.43	0.94	32.13	51.43	9.87	6.79	13.79	0.63
45-49	8.15	15.26	0.93	31.21	49.82	9.12	6.47	13.85	0.65
50-54	6.72	13.20	0.76	29.08	48.06	7.95	5.87	11.73	0.52
55-59	7.52	14.33	0.73	30.49	50.15	7.19	6.68	12.90	0.51
60 & Over	5.92	12.34	0.58	24.47	45.61	5.61	5.24	11.07	0.40
Grand Total	8.92	16.36	1.76	39.95	57.49	19.55	7.72	14.61	1.14
Standardized Rates	8.92	16.36	1.76	39.73	57.10	19.28	7.68	14.62	1.14

Source: 1961 Population Census Vol. 3, Part 4, Table 5.

Table 5.2 – Proportion Literate in 1971 by Age, Sex and Mode of Living

Age Group	TOTAL			URBAN			RURAL		
	Total	Male	Female	Total	Male	Female	Total	Male	Female
10-14	23.80	35.80	9.60	66.96	76.08	56.51	21.98	34.16	7.56
15-19	21.90	35.40	7.10	64.74	75.09	51.32	19.80	33.30	5.14
20-24	17.00	30.90	4.10	55.68	71.64	33.97	14.99	28.39	2.83
25-29	13.30	24.40	2.50	46.50	64.39	23.20	11.74	22.26	1.74
30-34	10.50	20.30	1.60	39.09	59.54	15.29	9.29	18.39	1.14
35-39	9.80	17.60	1.40	34.93	53.34	12.11	8.76	16.04	0.96
40-44	8.70	16.40	1.10	31.98	50.48	9.55	7.76	14.87	0.82
45-54	8.70	15.70	1.00	29.67	47.42	7.80	7.81	14.34	0.72
55-64	6.80	13.20	0.70	24.07	41.41	5.37	6.20	12.08	0.53
65 & Over	6.00	11.70	0.60	19.72	35.89	4.29	5.50	10.80	0.47
Grand Total	14.32	24.72	3.66	46.95	62.44	28.00	12.90	22.92	2.70
Standardized Rates	14.32	24.72	3.66	45.85	61.57	26.41	12.91	22.94	2.71

Source: 1971 Population Census Vol. 1, Table 16.

impressive improvement in the literacy status acquired during one decade, females are still lagging far behind males in their literacy status. While literacy proportion in the male age group 15-19 is five times higher than female literacy proportion in the same age group, the opportunity for a female to acquire higher educational status dwindles with age and the differences becomes more pronounced at advanced ages.

4. The 1961 and 1971 censuses have shown that there are wide differences in proportion literate between urban and rural populations. Proportion literate 10 years of age and over in the urban area was 39.95 percent in 1961 (57.49 percent for the males and 7.72 percent for the females), while this proportion was 7.72 percent (14.61 percent for the males and 1.14 percent for the females) in the rural areas in 1961. Proportion literate 10 years of age and over in 1971 census was 46.95 percent (62.44 percent for the males and 28.00 percent for the females) in the urban area, against 12.90 percent (22.92 percent for the males and 2.70 percent for the females) in the rural area. Apparently, differences in the age structure between the urban and the rural areas have a negligible effect on proportion literate. The standardized rates do not deviate substantially from the actual rates.* Many factors are in several ways related to urban-rural differences in proportion literate. Educational facilities are more assessable in the city or the Nagar Panchayat than the village, due to economic and administrative factors. The villages being widely dispersed, and economically poor, cannot in most cases provide even the minimum funds required for the erection of a school. Furthermore, the opening of a school is sometimes conditioned on the number of pupils in the villages. Another factor, which is one-way factor and is praying an essential role in out-balancing literacy in the urban area is represented by the effective mobility of literate persons to the cities and in particular, to Kathmandu (The Capital). Presented in table (5.5) is the proportion literate in the age groups 6-24 in the 16 Nagar Panchayats.

* The total population age structure has been used as standard in calculating the standardized rates.

Although Tansen has the highest rate of literacy 87.58 percent in the age group 10 years and over, the population of this town is very small. Kathmandu city which ranks third in proportion literate has a literacy rate of 73.39 percent in the age group 10 years and over, and 63.8 percent in the age group 15-19. Most likely, the concentration of higher education in Kathmandu city, especially the University and technical institutions is playing a major role in raising the proportion literate in the capital. However, comparing the proportion literate presented in table (6.5) with proportion literate in the rural area in table (5.2), it would certainly reflect the tremendous gap in literacy between the main cities and the country-side. In the urban area literacy was ten times higher than the corresponding rate in the rural area in 1961. These differentials which seem to have persisted for a long time, in more acute lineament before the 60's, have to some extent been reduced in the intercensal period.

5. Inspite of the apparent increases in proportion literate from 1961 to 1971, the number of persons who are still lacking adequate schooling is formidable and the number of illiterate has grown by 14 percent in the same period.**

The level of literacy measured as average percentage 10 years of age and over who can read and write, will be used in discussing regional differences in literacy. With the exception of Gandaki zone in the Western region table (5.3) the proportion literate is decreasing from east to west and from south to north. Taking into consideration the ecological structure, literacy is higher in the Terai region, followed by the hills, and proportion literate is the least in the mountain area table (5.4). The differences in the level of literacy are concomitantly following the regional variations in the standard of living, economic opportunity and fertility of the

** The number of illiterate persons ten years of age and over was 6,122,586 in 1961 (2,751,245 males and 3,371,341 females) and the number of illiterate persons according to 1971 census amounted to 7,007,299 (3,117,351 males and 3,889,948 females).

land. Moreover, literacy in the regions open to India in the Far East and the far western Terai, where people can easily move on both directions, have been recorded comparatively higher rates over those parts of the same region. Literacy rate in the Western Development Region has been pushed upwards by the relatively high rate in Gandaki zone. In addition to being known in Nepal's History as the birthplace of the leading elite Brahmins, scholars, writers and politicians, Gandaki zone is also the home of the Gorkha soldiers. The military service, as well as the secured earnings has much

Table 5.3 – Proportion Literate 10 years of Age and Over by Sex, Region and Zone, 1971

Region	Both Sexes	Male	Female
Nepal	**14.32**	**24.72**	**3.66**
Eastern Development region	15.76	26.77	4.33
Mechi	17.78	28.97	5.57
Kosi	18.57	30.09	6.31
Sagarmatha	12.99	23.46	2.52
Central Development Region	**14.56**	**24.12**	**4.54**
Janakpur	10.94	19.50	2.30
Bagmati	18.71	29.64	7.17
Narayani	12.90	21.60	3.46
Western Development Region	**16.99**	**30.71**	**3.65**
Gandaki	18.32	34.09	3.58
Lumbini	16.53	28.99	3.88
Dhaulagiri	14.04	25.71	3.02
Far Western Development Region	**9.51**	**17.27**	**1.52**
Rapti	9.96	18.59	1.54
Karnali	6.43	11.64	0.80
Bheri	9.12	15.70	1.98
Seti	7.46	13.78	1.05
Mahakali	14.26	25.96	1.91

Source: 1971 Census Vol. I, Table 16.

helped the adults and children of this zone in acquiring higher standards of literacy. The Far Western Development Region turned out to be the region where literacy and economic conditions, had least advanced. Proportion literate in this region was, according to 1971 census, 9.51 percent (17.27 percent for the males and 1.52 percent for the females). The highest proportion in this region was observed in Mahakali zone, where early cultural relationships had been established with the neighbouring Indian Province (Uttar Pradesh). Proportion literate in the in-land of the Far Western Region did not reach 10 percent for total population ten years of age and over. Women literacy on the other hand counts for almost (1.41) percent of total female literacy rate.

Table 5.4 – Proportion Literate 6 years of Age and Over by Sex and Development Region, 1971

Region	Both Sexes	Male	Female
Nepal	**13.89**	**23.59**	**3.91**
Eastern Development region	**15.25**	**25.47**	**4.65**
Eastern Mountains	13.29	23.47	3.23
Eastern Hills	13.4	23.88	3.18
Eastern Terai	17.21	27.12	6.28
Centrral Development Region	**14.19**	**23.11**	**4.82**
Central Mountains	8.66	15.6	1.66
Central Hills	17.58	27.88	6.89
Central Terai	11.94	19.91	3.39
Western Development Region	**16.57**	**29.46**	**3.93**
Western Mountains	12.42	19.53	5.04
Western Hills	17.36	31.7	3.78
Western Terai	14.54	23.96	4.32
Far Western Development Region	**9.05**	**16.27**	**1.61**
Far Western Mountains	8.15	14.8	1.14
Far Western Hills	9.15	17.23	1.18
Far Western Terai	9.48	15.14	3.09

Source: 1971 Census Vol. I, Table 16.

Table 5.5 – Proportion Literate by Age and Sex 10 years of Age and Over by Major Towns, 1971

Towns	M A L E S					F E M A L E S				
	10 Years & Over	6-14	15-19	20-24	6-24	10 Years & Over	6-14	15-19	20-24	6-24
Bhadrapur	54.90	58.20	67.20	63.50	61.70	29.70	53.10	49.70	30.30	47.90
Bhairahawa	67.00	68.10	80.70	75.90	73.30	23.10	51.80	41.70	22.50	42.80
Bhaktapur	41.90	53.30	65.70	48.50	55.60	9.90	23.60	23.60	11.70	21.00
Biratnagar	53.20	65.10	62.90	56.30	62.10	29.50	55.00	49.90	32.40	48.60
Birgunj	70.30	77.80	75.20	75.70	76.50	40.80	64.40	55.30	41.30	56.30
Butwal	54.40	67.60	75.30	62.80	68.50	23.40	50.40	42.90	27.60	43.60
Dharan	65.90	76.30	84.70	75.60	78.70	38.30	67.40	66.30	41.40	61.70
Hetauda	55.70	53.50	61.10	61.70	56.90	14.80	35.50	23.50	12.40	27.70
Illam	60.90	55.70	69.30	69.00	62.00	24.20	36.50	40.10	31.30	36.30
Janakpur	52.50	58.20	63.80	51.80	58.10	17.80	35.70	32.20	20.30	31.50
Kathmandu	73.40	70.40	82.40	83.30	77.40	37.10	60.20	65.70	47.80	58.60
Lalitpur	55.40	57.90	69.50	66.40	62.60	20.80	39.10	44.60	24.90	37.10
Nepalgunj	52.00	49.20	62.20	66.70	56.50	19.50	35.30	36.10	22.50	32.30
Pokhara	66.70	72.70	80.10	79.50	75.80	19.80	42.70	39.80	21.30	37.70
Rajbiraj	77.20	84.20	84.10	83.10	83.90	43.00	69.40	65.80	48.40	63.40
Tansen	87.60	93.10	91.20	93.80	92.80	48.40	81.90	77.70	59.00	75.30

Source: 1971 Population Census Vol. 2, Table 42.

Taking into consideration the population literate by development region, the first three regions do not differ widely in their present level of literacy. Inter-zonal differences in proportion literate are varying only very slightly from the total. Gandaki, Kosi and Bagmati zones are parallel in their literacy rate. Regarding the female population in Bagmati and Kosi zones, the highest female literacy rates 7.17 percent and 6.31 percent respectively have been recorded in these zones followed by Mechi zone 5.57 percent. In the far west, female literacy has also been the least, with only 1.52 percent of female population of ten years of age and over.

Table (5.4) percents the proportion literate 6 years of age and over by mountains, hills and Terai. Although it is generally established that literacy in the Terai is comparatively higher than literacy in the other two regions, population movement, particularly in Bagmati zone which consists of the three largest cities in the country, has played an important role in attracting the literate persons, especially in the young adult age. Therefore, the central and west hills seem to be exceptions to the general rule. It is quite anticipated that further movements of the literacy would take place in response to the growing urbanization trends. Proportion literate in the Central and Western hills are almost analogous.

6. A refined index for exploring the recent achievements in education can be visualized by comparing the proportions of persons who reported to have completed five years of formal education in the age groups 15-19 and 20-24 at two different points of times, because the level of literacy mentioned above accounts for all ages, disregarding when the persons attended school and acquired their ability to read and write.

Taking the country as a whole, the proportions of persons who reported to have received five years of formal education and more in 1961, in the age group 15-19 were, 4.04 percent (6.73 percent for the males and 1.30 percent for the females), and in age group 20-24 the proportions were 2.86 percent (5.42 percent for the males and 0.65 percent for the females), table (5.6). In 1971, table (5.7) shows that the proportion of persons who have completed five

Table 5.6 – Persons 15-19 and 20-24 years of Age with Five Years and More of Formal Education By Mode of Living and Development Region, 1961

Region*	MALES		FEMALES		BOTHSEXES	
	15-19@	20-24@	15-19@	20-24@	15-19@	20-24@
Nepal	**6.73 (19.5)**	**5.42 (20.2)**	**1.30 (3.1)**	**0.65 (2.3)**	**4.04 (11.4)**	**2.86 (10.6)**
Mode of Living						
1. Urban	41.02 (66.05)	32.29 (65.2)	19.43 (34.3)	8.99 (24.6)	31.07 (51.6)	21.67 (46.7)
2. Rural	5.20 (17.4)	3.96 (17.7)	0.59 11.9)	0.33 (1.9)	2.92 (9.7)	2.00 (9.0)
Development Region						
1. E.D. Region	7.16 (21.2)	5.44 (22.6)	1.42 (3.2)	0.80 (2.4)	4.35 (12.4)	3.00 (12.0)
2. C.D. Region	10.63 (22.4)	6.90 (23.7)	0.99 (4.9)	2.06 (3.9)	5.69 (13.5)	4.33 (13.2)
3. W.D. Region	6.27 (22.0)	4.39 (21.4)	0.66 (1.7)	0.40 (1.4)	3.28 (11.2)	2.16 (10.3)
4. F.W.D. Region	3.60 (12.1)	2.75 (12.4)	0.34 (1.2)	0.22 (0.9)	1.97 (6.7)	1.39 (6.2)

* 1, 2, 3, 4 in development stand for East, Central, West and Far Western Development Region.

NOTES: @ In Brackets denote percentage of persons considering themselves as literate.

Source: 1961 Population Census Vol. 3, Part 4, Table 4 and Vol.3, part 5, Table 5.

Table 5.7 – Persons 15-19 and 20-24 Years of Age with Five Years and More of Formal Education By Development Region and Zone 1971

Region*	MALES		FEMALES		BOTH SEXES	
	15-19 @	20-24 @	15-19 @	20-24 @	15-19 @	20-24 @
Nepal	**16.80 (35.4)**	**13.88 (30.9)**	**3.70 (7.1)**	**1.88 (4.1)**	**10.55 (21.9)**	**7.65 (17.0)**
Development Region						
1. E.D. Region	17.60 (37.2)	14.96 (33.0)	4.05 (8.3)	2.07 (4.6)	11.22 (23.6)	8.31 (18.3)
Mechi	15.31 (39.2)	13.50 (34.8)	3.99 (9.5)	2.08 (5.4)	9.97 (52.2)	7.85 (20.3)
Kosi	21.05 (40.7)	17.51 (36.7)	6.84 (11.8)	3.60 (7.0)	14.38 (27.1)	10.47 (21.7)
Sagarmatha	16.30 (33.5)	2.03 (29.4)	2.03 (5.1)	1.09 (2.8)	9.56 (2.0)	7.11 (15.2)
2. C.D. Region	**18.33 (33.2)**	**15.74 (31.6)**	**6.01 (8.7)**	**3.38 (5.0)**	**12.58 (22.1)**	**9.39 (18.2)**
Janakpur	13.59 (26.6)	12.37 (24.9)	1.87 (4.4)	0.95 (2.7)	8.11 (16.2)	6.33 (13.2)
Bagmati	23.23 (38.6)	20.41 (39.1)	10.61 (14.1)	6.10 (9.2)	17.28 (27.0)	13.93 (24.4)
Narayani	15.83 (32.2)	12.45 (27.9)	3.03 (7.3)	1.13 (3.5)	10.00 (20.9)	6.47 (15.0)
3. W.D. Region	**20.85 (45.9)**	**14.91 (37.4)**	**2.78 (7.0)**	**2.14 (3.9)**	**11.94 (26.7)**	**8.10 (19.5)**
Gandaki	22.64 (48.9)	14.95 (40.5)	2.38 (6.8)	2.96 (3.7)	12.54 (27.9)	8.50 (20.7)
Lumbini	21.00 (44.6)	15.79 (36.3)	3.43 (7.5)	1.68 (4.2)	12.42 (26.5)	8.33 (19.3)
Dhaulagiri	13.89 (39.5)	10.90 (31.0)	1.95 (6.3)	1.06 (3.2)	8.00 (23.1)	5.67 (16.2)
4. F.W.D. Region	**9.67 (26.1)**	**7.15 (21.4)**	**0.87 (2.7)**	**0.49 (1.6)**	**5.41 (14.8)**	**3.69 (11.1)**
Rapti	10.00 (26.8)	6.66 (22.6)	0.52 (2.8)	0.38 (1.6)	5.24 (14.8)	3.34 (11.5)
Karnali	3.07 (19.8)	3.65 (16.3)	0.21 (1.4)	0.16 (0.9)	2.04 (11.1)	1.93 (8.7)
Bheri	9.43 (23.9)	7.84 (18.9)	1.81 (3.4)	0.84 (2.0)	5.87 (14.3)	4.22 (10.1)
Seti	6.70 (21.7)	4.98 (17.2)	0.61 (1.9)	0.34 (1.1)	3.80 (12.3)	2.53 (8.7)
Mahakali	17.17 (38.5)	12.04 (32.1)	0.87 (3.0)	0.59 (2.0)	9.08 (20.9)	6.24 (16.9)

* 1, 2, 3, 4 in development stand for East, Central, West and Far Western Development Region.

NOTES: @ In Brackets denote percentage of persons considering themselves as literate.

Source: 1971 Population Census Vol. I, Tables 16, 17 and 18.

years of formal education in the age group 15-19 were 10.55 percent (16.80 percent for the males and 3.70 percent for the females) and in the age group 20-24, the proportions were 7.65 percent (13.88 percent for the males and 1.88 percent for the females).

Concerning Nepal's total, this remarkable increase in proportions attaining five years of formal education and over reflects a tremendous effort being made in raising the level of education. The proportions previously mentioned indicate that the younger persons who attended school approximately five years later than the older group, enjoyed much better opportunities of education. Since almost all of these persons in the age groups 15-19 and 20-24 in 1961 have completed schooling after 1951 and all persons in the same age groups in 1971 have finished schooling after 1961, the relative difference between literacy rates in the two periods of the older and younger generations can be used as an indicator of the improvements in the educational facilities of country as a whole, since 1951.

7. Efforts to achieve greater quality of education are particularly reflected by the fact that literacy among females in all rural areas had advanced rapidly. The extensive educational efforts made after 1951, aiming at achieving higher standards of education for the new generations are still persisting with even greater efforts, to cope with the population growth.

Naturally, the four development regions did not receive spontaneous efforts for improving the educational attainments due to the reasonable trend towards greater equality of education between sexes, urban and rural areas and various regions. Furthermore, the formerly wide discrepancies in proportion literate between regions, although to some extent still persisting, are more inclined to shrink. Literacy rates of the 20-24 year old population which reflects educational conditions in the 60's, deviated in 1971 by 180 percent between Bagmati zone and the least advanced zones of Karnali and Seti. Concerning the age group 15-19 years old persons who have recently attended school, the deviations between the most extreme zones-Gandaki 27.9 percent and Karnali 11.1 percent have been

reduced to 151 percent. A prospective outlook indicates further reduction in inter-zonal discrepancies in education. Again the geographic reason and inaccessibility to the centre and big cities are the main obstacles to accelerated improvements in some areas. Bheri-which is a Terai area-Rapti, Seti and Mahakali have achieved higher improvement rates, while Karnali which is completely mountainous and located in the far North West has achieved only very slight progress.

5.3 Regional Differences in School Enrolment

1. Elementary education is Nepal comprises five years, and it is important to outline that the legal primary entrance age is 6 years, but actually, entrance age may vary from 5 years to over ten years of age. Due to the fact that literacy in the country is still at a very low level, no admission to primary education could be rejected on the basis of ineligibility. Therefore, age intervals in classifications of persons enrolled do not exactly coincide with the intervals of school enrolment.*

It was reported that in the primary stage, about 61 percent of all pupils enrolled were above the normal age, 31 percent within the normal age and 8 percent below the normal age. †

2. Table (5.8) shows the population 6.24 years of age attending school by region, zone and urban and rural residence. For the country as a whole, out of every five boys in the age group 6-24 only one goes to school, as against one girl out of every twenty in the same age group. The rate of school enrolment in the age group 6-14 was 23.91 and 6.56 percents for males and females respectively. For the whole age group 6-24 the enrolment rate was 20.24 percent for boys and 4.68 percent for girls. School attendance

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* While age was classified in five years age groups, except for the first age group 6-9, the educational levels were classified into 1-5, 6-8, 9-10, 11-12 and 13 years and over intervals.

† HMG, Ministry of Education, Educational Statistical Report, 1966-67, Table 3, p. 19, June 1969.

as shown by table (5.8), may be somewhat biased to the age group 15-19. However, these enrolment rates show very wide discrepancies between rural and urban population. In the urban settlements (including the 16 Nagar Panchayats), while enrolment rates were 170 percent higher in the male age group 6-14 than in the rural area, it was distinctly higher for the same age group among the females.

3. Taking into consideration the division of the country into development regions, school attendance is, in some respect, in agreement with the distribution of proportion literate, presented in table (5.7). The Western Development Region has recorded the highest enrolment rate4s for males (32.87 percent) in the age group 6-14, and (28.01 percent) in the age group 15-19. Within each region, inter-zonal differences do not indicate extraordinary fluctuations around the average enrolment in the region. The lowest rate recorded for the age group 6-24 in the western region was in Dhaulagiri zone 22.23 percent for the males and 4.13 percent for the females. Yet, these rates are still comparatively close to the total enrolment rates. The Central development region, and particularly Bagmati zone, is drawing especial attention. While it was contemplated that Bagmati zone which comprises the largest three cities would have the highest enrolment rates, it was found that the male enrolment rates, inspite of the concentration of a large number of technical and vocational institutes in Kathmandu Valley, was only 21.87 percent in the age group 6.24. Female enrolment rates, on the other hand, were exclusively higher in Bagmati at all levels. Taking the cities of Kathmandu, Bhaktapur and Lalitpur separately, the enrolment rates in table (5.9) were 56.8 percent, 36.7 percent and 50.2 percent for males in the age group 6-24 respectively. The highest enrolment rates recorded in all Nagar Panchayats in the age group 20-24 were in Kathmandu and Lalitpur for both sexes. Employment opportunities in the growing industrial sector in the urban area and intensive agriculture in Kathmandu Valley presumably have participated in keeping the enrolment rates in Bagmati at the present low levels.

Table 5.8 – Population 6-24 Years of Age Attending School by Mode of Living, Development Region and Zone, 1971

Region	M	A	L	E	F	E	M	A	L	E
	6-14	15-19	20-24	6-24	6-14	15-19		20-24		6-24
Nepal	**23.91**	**22.00**	**7.52**	**20.24**	**6.56**	**3.92**		**0.89**		**4.68**
Urban	59.69	54.37	27.15	49.89	36.36	38.47		12.56		31.40
Rural	22.50	20.28	6.28	18.84	5.36	2.39		0.40		3.57
1. Eastern Development region	**25.26**	**23.55**	**8.07**	**21.56**	**7.87**	**4.37**		**0.84**		**5.58**
Mechi	26.18	23.16	6.93	21.62	10.31	4.60		0.79		7.02
Kosi	27.99	25.54	9.01	23.78	11.16	6.73		1.57		8.15
Sagarmatha	22.97	22.29	8.02	19.98	4.38	2.51		0.41		3.09
2. Central Development Region	**21.19**	**20.66**	**9.08**	**18.60**	**7.53**	**5.90**		**1.59**		**5.77**
Janakpur	17.98	16.17	6.12	15.32	4.04	1.75		0.24		2.66
Bagmati	23.84	25.01	13.17	21.87	11.16	10.38		3.62		9.32
Narayani	21.39	18.80	6.21	17.68	6.29	3.13		0.44		4.14
3. Western Development Region	**32.87**	**28.01**	**7.98**	**27.08**	**7.24**	**3.33**		**0.55**		**4.85**
Gandaki	34.65	30.95	10.21	29.34	6.77	3.18		0.59		4.58
Lumbini	32.59	26.50	6.77	26.23	7.93	3.61		0.54		5.30
Dhaulagiri	27.46	22.81	5.15	22.23	6.15	2.91		0.47		4.13
4. Far Western Development Region	**17.26**	**16.19**	**3.95**	**14.34**	**2.68**	**1.27**		**0.17**		**1.77**
Rapti	17.38	15.37	3.42	14.23	2.83	1.27		0.12		1.87
Karnali	11.20	12.77	4.06	9.90	1.11	0.62		0.06		0.73
Bheri	15.94	15.82	3.48	13.50	3.46	1.92		0.26		2.37
Seti	13.96	13.93	4.18	12.00	1.65	0.94		0.17		1.14
Mahakali	27.40	23.82	5.14	21.80	3.47	1.09		0.14		2.13

Source: 1971 Population Census Vol. I, Table 17, Vol. 2, Table 43

Table 5.9 – Population 6-24 Years of Age Attending School by Major Towns, 1971

	M	A	L	E	F	E	M	A	L	E
Towns	**6-14**	**15-19**	**20-24**	**6-24**	**6-14**	**15-19**	**20-24**	**6-24**
Bhadrapur	43.10	43.00	14.10	36.30	52.60	28.10	4.30	37.90
Bhairahawa	33.80	49.20	8.40	30.60	50.20	25.00	2.90	33.70
Bhaktapur	46.70	33.10	18.70	36.70	21.30	19.30	5.70	17.50
Biratnagar	58.50	45.70	19.10	44.50	48.50	32.00	6.90	35.20
Birgunj	65.90	47.40	18.30	47.20	52.50	28.00	6.20	35.00
Butwal	67.10	50.40	17.20	51.00	53.40	27.40	6.20	37.60
Dharan	72.70	65.80	30.90	61.80	64.00	53.70	19.30	52.20
Hetauda	48.90	33.30	7.70	36.80	32.40	14.20	1.80	21.60
Illam	52.10	47.30	16.90	42.60	34.40	24.60	6.60	26.20
Janakpur	56.40	45.90	18.60	45.00	34.20	17.20	2.80	23.60
Kathmandu	65.50	63.80	37.10	56.80	56.10	54.10	21.90	47.40
Lalitpur	55.30	54.60	34.10	50.20	36.90	35.70	11.60	30.70
Nepalgunj	45.50	39.30	9.10	34.90	31.70	21.80	3.20	22.50
Pokhara	70.30	64.80	25.80	59.80	47.80	27.30	6.60	34.30
Rajbiraj	81.30	56.50	22.40	59.20	65.40	34.50	5.70	43.60
Tansen	92.10	70.70	33.20	72.30	78.90	58.00	16.70	59.50

Source: 1971 Population Census Vol. 2, Table 43.

Enrolment rates in the age group 20-24 which may be considered as representing enrolment in higher secondary, intermediate and university levels were remarkably consistent with the economic growth in each region, and to a very less extent with the educational requirements needed to secure equitable educational advancement. Although it can be assessed that Bagmati zone has the highest share of technical and vocational institutes alongside with the university, other zones were not deprived from this privilege. In 1966 there were 34 colleges and institutions, at various parts of the country, providing higher education to about 8,000 students. By 1970 the number of colleges was increased to 49 in which 19,290 students of both sexes were enrolled. In the far western region, the school enrolment rate was 40 percent less than the average. With the exception of Mahakali zone the differences would probably rise to 70 percent. Needless to say that success in the development efforts to raise the social and economic standard in this region would depend upon consolidating and improving the educational attainment of the population, with proper emphasis on primary education as the first element of increasing literacy and in the second place, to maintain broader vocational training. In view of the female enrolment rates, the far western region, although proved to advance comparatively rapidly in the last decade, has the least educational attendancy at all levels. A complex of several economic, social and administrative reasons seem to have operated in sustaining low levels of enrolment in the age group 6-14 in all zones. A serious problem, which was facing the country in promoting primary education in the last decade, was the dearth of trained teachers, especially female teacher. While proportion of female enrolment amounted to 14 percent of total enrolled students at all levels, the percentage of female teachers did not exceed 4 percent. Moreover, it was extremely difficult for the authorities to find a female teacher who was willing to work in the remote areas. Although mixed education in the primary stage which is applied in Nepal, is probably helping to some extent solving the problem of teacher scarcity, still it is not completely accepted in all regions. A large number of populations would accordingly abstain from sending their girl to a mixed school.

Table 5.10 – Percentage Distribution of Enrolment Level of Education, Sex and Region, 1971

Region	TOTAL				MALE				FEMALE			
	Total	First Level	Second Level	Third Level	Total	First Level	Second Level	Third Level	Total	First Level	Second Level	Third Level
Nepal	**100.00**	**66.74**	**28.82**	**4.44**	**100.00**	**66.38**	**29.20**	**4.42**	**100.00**	**68.40**	**27.07**	**4.53**
Eastern Dev. Reg.	**100.00**	**68.66**	**27.87**	**3.47**	**100.00**	**67.42**	**28.86**	**3.71**	**100.00**	**73.87**	**23.70**	**2.43**
Mechi	100.00	75.65	22.30	2.05	100.00	74.07	23.60	2.33	100.00	81.03	17.93	1.04
Kosi	100.00	65.15	30.28	4.57	100.00	64.33	30.85	4.82	100.00	67.78	28.46	3.76
Sagarmatha	100.00	67.63	29.06	3.31	100.00	66.32	30.12	3.55	100.00	76.74	21.66	1.60
Central Dev. Reg.	**100.00**	**56.64**	**34.68**	**8.68**	**100.00**	**56.76**	**35.16**	**8.08**	**100.00**	**57.58**	**33.74**	**8.68**
Janakpur	100.00	65.00	30.52	4.48	100.00	63.35	31.74	4.91	100.00	75.57	22.70	1.73
Bagmati	100.00	48.32	38.76	12.92	100.00	59.22	30.37	10.41	100.00	48.69	39.21	12.10
Narayani	100.00	66.40	29.94	3.66	100.00	64.76	31.29	3.95	100.00	74.36	23.38	2.26
Western Dev. Reg.	**100.00**	**72.68**	**25.33**	**1.98**	**100.00**	**71.51**	**26.39**	**2.10**	**100.00**	**79.50**	**19.21**	**1.29**
Gandaki	100.00	71.58	26.44	1.98	100.00	70.09	27.76	2.15	100.00	81.35	17.73	0.92
Lumbini	100.00	72.45	25.41	2.14	100.00	71.56	26.20	2.24	100.00	77.07	21.31	1.62
Dhaulagiri	100.00	79.11	19.66	1.22	100.00	78.20	20.57	1.23	100.00	79.50	19.21	1.29
Far Western Dev. Reg.	**100.00**	**76.00**	**22.81**	**1.19**	**100.00**	**75.68**	**23.14**	**1.18**	**100.00**	**78.69**	**20.02**	**1.29**
Rapti	100.00	75.13	23.61	1.26	100.00	74.60	24.05	1.35	100.00	79.23	20.18	0.59
Karnali	100.00	87.06	12.49	0.45	100.00	86.74	12.83	0.43	100.00	91.86	7.36	0.78
Bheri	100.00	74.32	24.15	1.53	100.00	74.69	23.92	1.39	100.00	72.04	25.56	2.40
Seti	100.00	78.02	20.90	1.08	100.00	77.87	21.03	1.10	100.00	79.81	19.41	0.78
Mahakali	100.00	74.56	24.42	1.01	100.00	73.52	25.48	1.00	100.00	85.98	12.84	1.18

Source : 1971 Population Census Vol. I, Table 17.

Nepali as a medium language is compulsory in primary and secondary education. Various languages in Nepal may also have been a major factor in lowering school attendance.

4. On the whole, school enrolment in the urban sector is extremely higher than school enrolment in the rural sector. However high the enrolment rates in the urban sector may be, the population

Table 5.11 – Population 10-14 and 15-19 Years of Age, who were not Enrolled in School in 1971 by Development Region and Zone

Region	MALE		FEMALE	
	15-19*	10-14*	15-19*	10-14*
Nepal	**78.01**	**67.31**	**96.08**	**91.5**
1. Eastern Dev Reg.	**76.45**	**65.39**	**95.62**	**89.71**
Mechi	76.84	64.3	95.4	86.96
Kosi	74.46	62.47	93.27	85.56
Sagarmatha	77.71	67.97	97.49	94.08
2. Central Dev. Region	**79.33**	**72.18**	**94.1**	**90.31**
Janakpur	83.83	75.85	98.25	94.93
Bagmati	74.99	69.04	89.62	85.9
Narayani	81.18	71.56	96.87	91.88
3. Western Dev. Region	**71.99**	**55.58**	**96.58**	**90.71**
Gandaki	69.05	52.53	96.82	91.22
Lumbini	73.5	56.83	96.39	89.97
Dhaulagiri	77.19	61.18	96.67	90.71
4. Far Western Dev. Reg.	**83.8**	**74.8**	**98.74**	**96.48**
Rapti	84.63	74.81	98.73	96.36
Karnali	87.24	83.43	99.38	98.47
Bheri	84.19	76.27	98.08	95.43
Seti	86.07	78.89	99.06	97.6
Mahakali	76.18	62.2	98.92	95.8

NOTES: * Persons who were not enrolled a percentage of all persons in age group.

Source : 1971 Population Census Vol. 1, Table 17.

residing in urban settlement counts only 3 percent of total population and has no substantive effect on the number of total persons enrolled, while total enrolment in the age group 6-14 for males was 20.24 percent, the enrolment rate in the rural sector was 18.84 percent and the enrolment rate in the urban sector or the same age group was 49.89 percent. It seems quite apparent that within the 16 Nagar Panchayats (comprising the urban sector) there were wide discrepancies in educational facilities from one town to another, and school enrolment was not growing simultaneously in all these towns. Table (5.9) shows the enrolment rate in the Nagar Panchayats in the age groups 6-24. Kathmandu city is ranking seventh in primary education enrolment for males and third for females. The rural-urban difference in education would clearly denote the strenuous efforts that should be made in acquiring broader educational attendance in the rural area. The exclusion of children from their fundamental right of a proper education would ultimately tend to impede social and economic advancement in a sector where the majority of people live.

5. The individual age groups enrolment for total population as given in 1971 census, show that a few thousand who are over age 30 years, were enrolled in all levels of education from the primary to higher education. This situation reflects the people's aspiration for acquiring literacy in the first place for those who were illiterates and higher educational level for those who have maintained a certain level of education irrespective of age. Taking the level of education completed in the higher, secondary, and intermediate and university education in the age groups 15-19, 20-24 and 25-29 and comparing the proportions of years completed between 1961 and 1971, a steady progress at all levels has been observed, particularly for females. The percentage of female graduates has increased from 0.01 percent to 0.11 percent in the intercensal period. Those who were in the higher secondary school in 1961 were having greater opportunities to extend their education to the university level in 1971. High secondary education for the age group 25-29 has increased 5 times in the same period.

Kathmandu valley which contains the largest cities in the country and where the central government is located represents the leading area in administration, trading, finance, industry and education. 45 percent of all university graduates are in Kathmandu Valley. The impressive changes in the levels of education completed table (5.12) in this area were partially due to migration. It is a well established fact that the major towns in Nepal have not yet reached the situation where the complex functions of a leading urban centre have materialized. The anticipated network of roads and the rising attract a large number of migrants. The qualities of education which are necessary to promote social and economic progress, and to build prosperous urban centre, comprise a fair amount of general knowledge, understanding of the social and economic goals of the development plans and appropriate working attitudes or properties of a leading force, in addition to specific administrative and organizational skills. The wide varieties of technical and vocational schools in the country denote that the build-up of a trained workforce is in progress. However, it has always been proved that the basic talents and general attitudes can best be developed at school. Taking the age group 20-24, the percentage of persons who completed the intermediate level increased from 0.23 percent to 1.06 percent etween 1961-1971, that is, from 4,646 persons to 13,762 persons. In the field of raising the level of literacy in the country, improving the standard of education and broadening the base of school enrolment, the task is very big, and the achievements to be fulfilled are immense. Further progress in the years to come, will certainly depend upon discerning and competent cooperation between planning and executing governmental bodies, in utilizing the capacity of the present educational potentialities and in carrying the educational standard further, not only of certain age groups, but also for the whole population and both sexes.

6. A balanced economic growth in Nepal, would definitely imply introduction of radical shift for the whole country from a situation where agriculture comprises more than 66 percent of the gross national product and more than 94 percent of its labour force is

Table 5.12 – Percentage of Population 15-19, 20-24 and 25-29 Reported to have completed High, Intermediate, and Graduate and Post Graduate Levels in 1961 and 1971 Censuses

Region	Sex	15-19			20-24			25-29		
		High 9-10 Years	Inter mediate 11-12 Years	Graduate & Over 13 Years +	High 9-10 Years	Inter-mediate 11-12 Years	Graduate & Over 13 Years +	High 9-10 Years	Inter mediate 11-12 Years	Graduate & Over 13 Years +
Nepal	T	**1.1**	**0.12**	**0.03**	**1.04**	**0.23**	**0.17**	**0.51**	**0.11**	**0.15**
	M	**1.82**	**0.19**	**0.06**	**2.06**	**0.45**	**0.32**	**1**	**0.21**	**0.31**
	F	**0.38**	**0.05**	**0.01**	**0.18**	**0.04**	**0.03**	**0.05**	**0.01**	**0.01**
Kathmandu Valley	T	**8.82**	**1.12**	**0.18**	**6.4**	**1.73**	**1.42**	**2.97**	**0.9**	**1.52**
	M	12.86	1.53	0.2	10.66	2.93	2.39	5.21	1.63	2.78
	F	4.59	0.68	0.15	1.99	0.49	0.4	0.64	0.14	0.2
1971 Nepal	T	**1.7**	**0.21**	**0.01**	**3.81**	**1.06**	**0.22**	**2.79**	**1.04**	**0.43**
	M	**2.45**	**0.31**	**0.02**	**5.8**	**1.85**	**0.38**	**5.13**	**1.89**	**0.77**
	F	**0.83**	**0.25**	**0.01**	**1.04**	**0.33**	**0.08**	**0.53**	**0.22**	**0.11**
Kathmandu Valley	T	**9.51**	**1.47**	**0.06**	**17.87**	**6.59**	**1.43**	**14.67**	**7.4**	**3.49**
	M	11.78	2.04	0.07	25.18	9.23	4.7	22.8	12.54	5.35
	F	6.93	3.18	0.05	9.72	3.65	0.88	5.77	2.93	1.51

Source : 1961 P.C. Vol. I, Part 1 Table 1 and 1971 P.C. Vol. I, Table 18

engaged in agricultural activities, to a position of rapidly growing industrial and services sectors, in which a large number of superficially employed workers in the primary sector can be absorbed in productive activities. If such economic changes have to come very soon, in consequence to the implementation of the development plans, it would be impossible to make up later for missing school education in childhood for the new generations who will take the initiatives of promoting economic and social changes. Table (5.11) shows that in the far western development region 74.8 percent of the males and 96.1 percent of the females in the age group 10-14 were not enrolled in school at the date of the census. For total population the rates were 67.3 for males and 91.5 for females. In terms of absolute figures these percentages will be translated into 1,016,879 persons of both sexes in the same age group. The limited duties left to a young boy or a young girl of either grazing or field work in the rural areas, or an unproductive job in an urban household, are apt not only to affect his future life as a whole but also to create a state of dissatisfaction and deprive the child from progressive thinking and productive activities. Lack of initiatives and future outlook induces discontent and resignation. Unprepared for a gainful job the young workers cannot produce enough had contributed nothing to fill the gap for skilled labourers. The role of parents can be immensely effective if they are persuaded that the immediate and meager benefits of child labour should not override the prospective and fruitful educational attainment of their children. A closer investigation into the percentages presented on table (5.11) shows that much progress had been achieved in the eastern and western regions but still opportunities to attend school should be raised in all regions for both sexes.

7. Considering the increase in school enrolment from 300 thousand in 1961 to 602 thousand in 1971 and taking into consideration the overall economic conditions of Nepal, one should impartially say that the increase in the number of students was enormous, and the efforts were large enough, but the burden was in fact much larger. Total expenditure on education has tripled in one decade, from 14 to 53 million rupees. Investment in education stubbornly

competes with investment in a large number of priorities in the various backward sectors of the economy. The difficulties to adjust between the investment in education and investment of physical capital in other competitive needs of the country in order to achieve the economic planning goals, should not abolish the long term problems innate in missing education in childhood, which nothing can compensate for in the future.

PART VI

Regional Differences in the Structure of the Economically Active Population

6.1 The Economically Active Concept

1. The economic characteristics of the population are among the most important topics of investigation in population censuses. The economically active population, which is a function of the population composition is of fundamental importance for the studies of factors determining the size, distribution and composition of the nation's manpower and its relationto the size, distribution and composition of the population and further for planning and projection the future requirements of manpower for various types of economic activities. For social and economic planning purposes, it would be necessary to have separate information of that part of the population which is actively engaged in producing goods and services, and the remaining part of the population, i.e., inactive population supported by and dependent for their living on the economically active population.

2. The economically active population is generally understood to comprise all those persons who contribute to the supply of labour for the production of goods and services disregarding whether they actually were employed at the time of enumeration or not. The definition of the economically active comprises two concepts. First, a broad concept of "The labour force"- which is often used as equivalent to the work force or economically active, consists of all persons who during a specific period of time (a week, a month or even a year) were practicing some profession or occupation or seeking employment.

The second concept, concerned with "the gainful work" generally investigates the usual occupation or the gainful activity of the person without specifying when the work was actually performed and it excludes all persons seeking employment for the first time, temporary workers and students and women working only seasonally. The labour force concept identifies a large number of persons than the "gainful work" concepts which has no explicit time reference. The implication of one of those two concepts is not, however, without some limitations. In an agrarian economy like Nepal where the rural population lives a subsistence, or semi-subsistence life and where, a considerable proportion of the economically active population consists of unpaid family workers, it would be rather difficult to translate their participation in household productions into salaries and wages, in terms of cash. It is thus very difficult to determine who is and who is not economically active.

3. Apparently, both 1961 and 1971 censuses have adopted a mixture of both concepts. The question concerning the economic activity of a person, referred to his gainful activity during a period of eight months in the course of the year preceding the census. If the person is fulfilling this requirement his, occupation, industry and economic status whether he is employer or employee, own account worker or unpaid family worker, had to be stated. Those persons who were seeking work at the time of enumeration, but had worked for eight months and more previously, have been considered active, and categorized by their previous occupation and economic status. Theoretically the gainful work period was eight months of work continuously or discontinuously, but in practice, however, the answers to the gainful work questions seem to have referred to a period far shorter than eight months. All those who have been considered in-active were classified into (household workers, students, old age, lepers, impeded by chronic disease, invalids, lunatics, inmates of institutions, prisoners, pensioners and others). What in fact the census was trying to collect was information on the labour force through gainful worker concept. As regards unemployment, the census did not elicit information on these topics. All

persons seeking work for the first time and those who had worked for a period of less than eight months and were out of work at the time of enumeration have been classified in-active.

4. Regional differences in the labour force composition and distribution in Nepal should be analyzed in the light of the economic structure of the country. Nepal is an agrarian country in which 94 percent of its labour force is engaged in agricultural activities and over 65 percent of its gross national product is yielded by agriculture. The household retains the most important position in the national economy as a producing unit. All the household members over age six participate actively in the field, almost in all cultivation seasons. Farm enterprises are organized on a family basis and women can participate as actively as men in all agricultural operations. Though it is difficult to conclude in any precise manner the level of unemployment, seasonal variations may influence employment of workers hired at the beginning of cultivation and at harvest time. The application of a long reference period tends to eliminate variations in employment and raised accordingly economic activity rate. It may further be noted that both 1961 and 1971 censuses have been conducted in the second half of June, at approximately the beginning of the monsoon, which is the appropriate time for the transplantation of paddy and when a large number of workers are usually hired to work in the fields. Therefore, the potential of fringe workers who are available during the season only, probably counted for high participation rates, in addition to the inclusion of persons who reported to have been working more than eight months, while in fact they may have worked for a short period.

5. Under the existing conditions of agriculture the per capita arable land is very inadequate to sustain a reasonable standard of living for the people. The low standard of living and limitation of cultivated area (2.8 acre per household) have compelled the household members to utilize the piece of land which they have possessed or hired, to the utmost of their energy within the limitations of their financial capacity. No doubt this situation has brought about certain limitations on the classifications of labour force by

economic status. The distinction between unpaid family workers and self-employed workers becomes rather difficult and depends upon either the interpretation of the respondent or on the interviewers own judgment. Unpaid family workers comprised, in 1961, 6.26 percent of total labour force (2.8 percent for males and 11.35 percent for females). This proportion has declined in 1971 census to 4.29 percent (3.10 percent for males and 7.16 percent for females). As a matter of fact, female work in a country like Nepal is no less important in agricultural production than male work. On the whole, unpaid family work tends to be of real economic significance even though it is sometimes limited to a certain season in the course of the year. It is worth mentioning that female work is not only socially accepted without religious or cultural restraints, but also indispensable for the maintenance of the family life. Children's participation in the production of goods and services is also quite significant in Nepal. The 1971 census has revealed that almost half of persons (50.5 percent) in the age group (10-14) are in the labour force (59.2 percent for males and 40.1 percent for females). Also, the contribution of old persons 65 years of age and over is high for both sexes. In the absence of any kind of social security, old people tend to work until they are physically unfit.

6. Quality and meaning o the returns have, no doubt, been influenced by many factors. Differences in participation rates and economic status between 1961 and 1971 censuses reflect wide variations. Among these the most outstanding factors are probably the differences in interpretations of the gainful work during the reference period by the respondents. Since it is impossible to know how many and which groups of the respondents miss-interpreted the definition, it would be extremely difficult to accept and evaluate the data on the economically active persons by economic status, industry and occupation as such. It was, however, noted, that out of 602,150 persons reported to be enrolled in school in 1971 census, only 423,482 persons have reported to be economically in-active due to the same reason. This will leave us with a residual of 178,729 persons or 29.9 percent in school who has reported to have been gainfully active during a period of eight months. Different age

group intervals have been applied in classifying the returns in the last three censuses. Incomparability in economic status, occupation and industry may be due to differences in successive revisions of international classifications of economic activity. In discussing regional differences in the structure of the economically active population, although an attempt was made to bring the data into comparable tabulation, such kind of reservations should be taken into consideration.

6.2 The Economic Activity Rates

1. The supply of labour is a function of size and structure of the population, and of the volume of employment opportunities, including opportunities for self-employment. Rapid population growth implies high entrance ratio to the labour force and high dependency ratio as well. High adult mortality, however, implies a respective loss of working years. While proportion of labour force to total population may remain constant over a long period of time, unless certain demographic and socio-economic changes take place, the labour force size would increase in accordance with population growth. It would be necessary before discussing in detail the regional difference in the labour force and the developments that have occurred in the intercensal period, to examine changes in the volume of labour force over the two decade before 1971 census. The following figures illustrate the relationship between population growth and labour force.

	Population			Percentage Change		
	Total	**Male**	**Female**	**Total**	**Male**	**Female**
1952/54	8,235,079	4,050,607	4,184,472	0	0	0
1961	9,412,996	4,636,033	4,776,693	14.30	14.45	14.16
1971	11,555,883	5,817,203	5,738,780	22.77	25.48	20.13

	Labour Force			Percentage Change		
	Total	**Male**	**Female**	**Total**	**Male**	**Female**
1952/54	3,893,997	2,314,042	1,579,955	0	0	0
1961	4,306,839	2,563,915	1,742,924	10.60	10.80	10.31
1971	4,197,962	3,017,767	1,180,195	-2.53	17.70	-32.29

While population growth between 1961 and 1971 is in close agreement with the prevailing conditions of fertility and mortality in the country, the labour force volume does not follow developments in population growth from 1961 to 1971. initially, the above mentioned figures lead us to suspect that either the size of the labour force in 1961 was inflated, or that 1971 labour force figures, have in someway, been under-estimated. Similarly, other factors such as differences in data collection methods, editing, coding and tabulating might have emerged to produce these variations.

2. Taking the country as a whole, table (6.1) shows that while crude rate of economic activity for total population in 1961 was 76.1 percent (94.1 percent for males and 59.4 percent for females) in the population 15 years of age and over. This rate has dropped down to 59.3 percent (82.9 percent for males and 35.1 percent for females) in the population 10 years of age and over in 1971. Taking the population 15 years of age and over in 1971, the crude rate of economic activity turned out to be 61.0 percent (87.8 percent for males and 34.3 percent for females).

3. Obviously, the main decline in crude economic activity rate between 1961 and 1971 was in the female labour force. Close examination of this phenomenon has disclosed a number of factors which contributed to variations in crude activity rate. Firstly, it seems quite apparent that 1971 census was more strict in verifying female activities and distinguishing the active females from the inactive ones. While in 1971 census, 2,006,887 females 15 years of age and over out of total population 3,443,624 or 58.3 percent in the same age group have been reported inactive as being housewives, only 34.7 percent or 1,017,180 females out of 2,935,174 females above age 15 were reported inactive in 1961, and classified under the category of domestic workers. This reason seems to be the main factor in reducing female crude activity rate. Secondly, the remarkable increase in female enrolment rate in higher education has also contributed to the retention of some females in the inactive category. While only 3,550 females above age 15 were reported to be students in 1961 census, the number of inactive female

students was 21,836. Similarly, on the male side, the sharp rise in school enrolment had also affected to size of labour force. While in 1961 about 21 percent of all inactive male population were considered to be students, this ratio amounted to 35 percent of total inactive males above age 15 in 1971 census. It is sometimes argued that steady achievements in economic development and rise in public education and understanding of the objective of the population census, have some implications or the general attitude of the public to give in a more specific manner, the real economic status of the individual. Yet, expansion in education is normally expected to influence the level of economic participation rates at lower ages. Unfortunately no comparison can be held between activity rates below age 15 in 1961 and 1971 censuses, since the former lacks such data.

4. The age specific participation rates have an obvious economic significance. The higher these rates, the larger is the number of income recipients under given conditions of productivity, employment of the labour force and volume of capital invested. Needless to emphasize that the distribution of age specific activity rates, either for males or for females is not only following the distribution of the population of potentially employable age, but it is also affected by certain demographic, social and organizational factors. In countries where education is compulsory up to age 15, for example, active persons form only a small fraction of total population below that age. Similarly, in countries where old age pensions are given through a network of social security after the individual reaches to a certain age, the participation rates drop sharply after that age. The implications of high fertility levels on female participation rates in the labour force need no explanation. High fertility levels deter women from participating actively in the labour force.

5. Close investigation of 1971 age and sex participation rates presented in table (6.1) has revealed that children's (below age 14) share in labour force is quite significant in Nepal. The combined rate for both sexes accounted for 50.5 percent (59.2 percent for males and 40.1 percent for females). Children in the age group

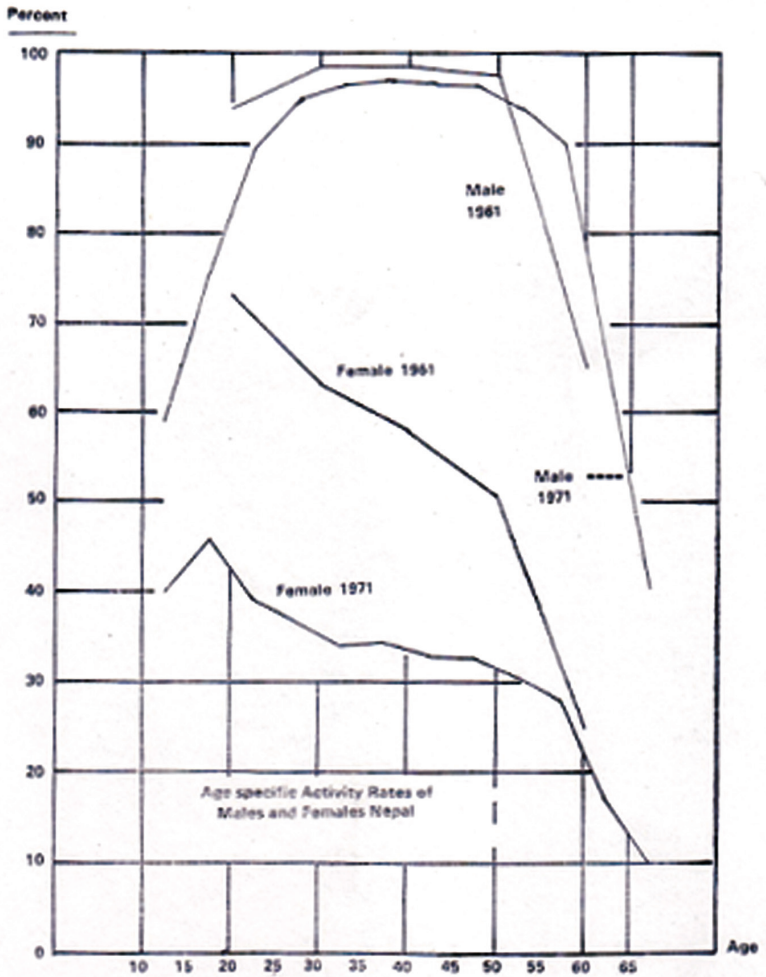
10-14 accounted for 13.5 percent to the total labour in Nepal. It is true that a high proportion of children in the labour force is a characteristic of many developing countries. But this proportion is, actually higher in Nepal than in her neighbouring countries. In Bangladesh, India and Pakistan this proportion was 10.2 percent, 6.0 percent and 8.8 percent respectively.* In most advanced countries child work constitutes only a negligible proportion.

6. The contribution of persons in the employable age (15-60) to the labour force follows the universal pattern and is characterized by high participation rates for all ages, where the participation rates curve reaches its maxima at age 35-39 and continues to show a broad peak up to age 60. The curve declines rapidly with advanced ages. In a purely agricultural society like Nepal, participation by women in all agricultural operations seems to have been established a long time ago with no significant change in pattern. Figure (6.1) show that female participation rates rise up to 46.2 percent in the age group 15-19 and decline afterwards gradually with age. It is also noted that participation rates do not differ substantially from one age group to other in the childbearing age for married women. Figure (6.2) shows that female activity varies greatly according to marital status. The sharp decline in married women's activities after age 20 explicitly reflects the influence of high fertility in shaping the trend of their economic activity. While, activity rates of married women in some industrialized countries are relatively higher in the early years of married life, they drop in the years when they are building their families, and rise again in later years when the children have grown older and no longer require such constant attention by the mother. The pattern is quite different in developing countries. Childbearing may continue as long as the women are capable to conceive. Therefore, the burden of children would remain as a powerful deterrent to women's employment. It would be expected that single women activity rates will rank the highest among the four groups, namely, single, married, divorced and widowed. But it seems traditionally

* ILO Yearbook of Labour Statistics, Table I, p. 9 ff., 1973.

Economic Participation Rates

for Males and Females
1961 and 1971 Censuses



(Figure 6.1)

Female Activity Rates
Specific for Marital Status and Age Nepal
1971

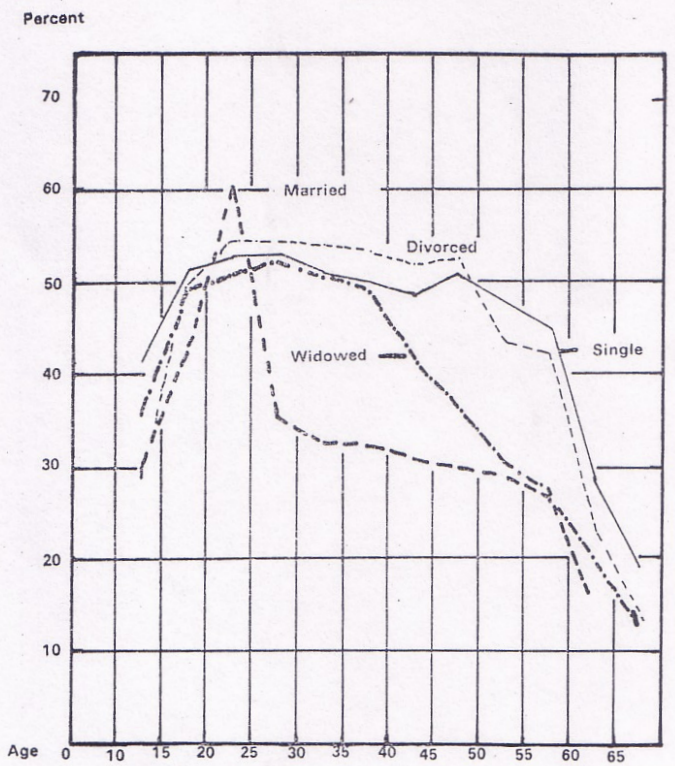


Figure (6.2)

Table 6.1 – Labour Force Participation Rates 10 Years of Age and Over by Age, Sex and Mode of Living 1952/54, 1961 and 1971 Censuses

Age Group	1971			1961			1952/54		
	Total	Male	Female	Total	Male	Female	Total	Male	Female
10-14	50.5	59.2	40.1	-	-	-	22.7 (a)	22.7 (a)	20.1 (a)
15-19	61.6	75.7	46.2	83.4	94.1	73.3	84.2	96.1	72.8
20-24	63.5	89.8	39.2						
25-29	65.3	95.1	36.6	79.9	98.5	63.1	79.4	99.1	61.4
30-34	63.7	96.6	33.9						
35-39	66.9	97.4	34.0	78.0	98.6	58.1			
40-44	64.7	97.2	32.9						
45-49	66.7	96.8	32.5	73.9	97.4	51.1	76.0	98.1	52.9
50-54	62.9	94.0	30.5						
55-59	60.0	93.3	27.7						
60-64	39.7	64.1	17.9	43.6	65.2	25.7	39.9	61.4	22.6
65 & Over	25.1	40.5	10.4						
Total Nepal	59.3	82.9	35.1	76.1	94.1	59.4	66.9	81.7	52.9
Urban (b)	42.3	66.8	12.3	55.5	79.5	27.8	-	-	-
Rural (b)	60.1	83.7	36.0	76.9	94.8	60.5	-	-	-

NOTES: (a) Active population under 15 years of age were divided by population 10-14.
(b) Including population 10-14 years of age in 1971.

Source: 1952/54 census table 16, 1961 census Vol. 4, table 1 and 1971 census Vol. 2, tables 19 and 44.

accepted that divorced women may be considered as still married, and more frequently allowed to work than single women. Although remarriage of widows is legally recognized, it is intolerable in practice, specifically among certain ethnic groups. Widowed women after seeing their children reach a certain age, may quite work and depend on their children in maintaining their subsistence.

7. The comparatively high rank which Nepal holds among countries of south Asia with regard to the proportion of economically active persons in total population is partly explained by the specific definition employed in successive censuses. In 1971 census Nepal's workforce comprised 4,852,524 persons or 42 percent of total population, as against 34.3 percent in Bangladesh, 32.9 percent in

Table 6.2 – Economically Active Persons as Percent of Total Population And Population 15 Years of Age and Over in Nepal And Selected Countries

		ECONOMICALLY ACTIVE					
		MALE		FEMALE		BOTH SEXES	
		As Percentage of					
Country	Date of Census	Total Population	15 Years of age +	Total Population	15 Years of age +	Total Population	15 Years of age +
Nepal	22/6/1961	55.3	94.1	36.5	59.4	45.8	76.1
Nepal	22/6/1971	59.0	24.1	73.7	34.3	42.0	61.0
Bangladesh	31/1/1961	56.2	93.0	10.8	18.1	34.3	57.2
India	1/4/1971	52.5	85.5	11.9	18.6	32.9	54.4
Philippines	6/5/1970	46.0	78.3	21.3	34.1	33.6	55.5
Sri Lanka	8/7/1963	49.8	82.0	14.1	23.5	32.7	54.4
Czechoslovakia	1/7/1970	53.3	72.9	42.3	54.1	48.7	63.1
Sweden	1/11/1970	54.7	69.4	29.9	37.3	42.3	53.2
United Kingdom	4/1966	63.0	83.8	32.6	41.9	47.3	61.9

Source : ILO, Year Book of Labour Statistics, 1973, Table 1, p.9. ff

India, 33.6 percent in Philippines and 32.7 percent in Sri Lanka. The rates presented in table (6.2) reveal at a glance that both male and female activity rates are higher in Nepal than the above mentioned countries, except for males above age 15 in Bangladesh. Nevertheless, one fact comes out directly from these figures, namely, the common factor among all these countries represented by the influence of a large child labour on the average level of economic activity, and the extension of working life beyond the retirement age. This phenomenon is specifically obvious on the male side, since males provide the bulk of labour force. If for example, conditions in Nepal are compared with some advanced countries, activity rate for total population, as well as adult population in Nepal resembles that of the advanced countries. While in the advanced countries, labour is concentrated in the most active age groups 15-64 years, in Nepal it extends over a much wider range between early childhood and very old ages.

8. It is commonly accepted, that with a high proportion of dependents, especially children in need of build-up, education, and various types of vocational training, the economy cannot break through the vicious circle of economic stagnation, and cannot make progress as quickly as those other countries where relatively fewer dependents need to be supported by the workforce. In low-income countries, where the population structure is normally characterized by a broad base comprising more than 40 percent of children under age 15, the individual worker who has to maintain a large family, must necessarily divert a comparatively high proportion of his income for basic consumer goods, and can consequently spend very little on health and education. The same thing would pertain to the economy as a whole. Government expenditure to accumulate capital would be seriously impeded by other urgent priorities such as, health, education and other social utilities. Comparing dependency ratio in Nepal with other Asian and European countries, the country would be ranked, as the figures in table (6.3) show in a moderate situation regarding the corresponding heavy dependency ratio in other Asian countries. While proportion of non-active per 100 active persons amounted in Nepal to 142, it

is 191 I Bangladesh, 204 in India, 198 in Philippines and 206 in Sri Lanka, as against 105 in Czechoslovakia, 137 in Sweden and 111 in United Kingdom. Considering the economic structure, and the cultivable area and the present capital formation and prospects of development, the dependency ratio in Nepal may be regarded as high in all respects. It would be extremely difficult to decide upon the optimum dependency load that the economically active population can take responsibility of. Different from most other Asian countries where 61 percent of population 15 years of age and more is in the labour force, Nepal has the highest proportion of children in the labour force. Since their contribution to the national economy may not be considered as important, active children under age 14 can be unwarrantly omitted from the labour force. In this regard, excluding children under age 14, the dependency ratio will rise to 175 non-actives per 100 active persons. That is, the average worker

Table 6.3 – Indices of Dependency in Selected Countries

Country	Percentage of Economically Active Persons to Total Population	Non Active per 100 Active persons	Population under 15 to total Population
Nepal (1961) a	45.8	118.0	39.9
Nepal (1971)	42.0	138.0	40.4
Nepal (1971) b	41.0	142.0	41.3
Bangladesh (1961)	34.3	191.0	46.1
India (1971)	32.9	204.0	42.0
Philippines (1970)	33.6	198.0	43.1
Sri Lanka (1963)	32.7	206.0	41.5
Czechoslovakia (1970)	48.7	105.0	22.9
Sweden (1970)	42.3	137.0	20.6
United Kingdom (1966)	47.3	111.0	23.4

NOTES: (a) Active persons 15 years of age and over
(b) Adjusted for under-enumeration of children.

in Nepal has to support 1.75 dependents as against 1.05 in Czechoslovakia, 1.37 in Sweden and 1.11 in United Kingdom.

9. In the industrialized countries, the concentration of labour force in the age group 15-64 came as a result of long demographic, social and economic processes which lasted over three centuries. Although the cause and effect of these changes are still debatable, these changes had been brought about partially by the decline in fertility and mortality, and the rising demand for a better standard of living through the establishment of education, industrial economy, and improving social conditions. Table (6.3) shows that proportion of population under 15 years of age in the industrial countries amounts to half of the corresponding prop0ortion in developing countries. Decline in fertility, however, has changed the population structure in the developed countries in favour of labour force. Child labour became legally forbidden, economically unprofitable, and socially unwanted and unacceptable. Variations in the effect of age structure on labour force can be clearly seen in the ratio of age group 10-14 to the population expected to drop-out by retirement in the group 60-64. In Nepal this ratio amounted to 4.4 against 4.7 in India, 5.5 in Sri Lanka, 1.42 in Denmark, and 1.20 in East Germany. The broad-based and sharply tapering age declining of the population is, evidently the consequence of declining mortality, while one can ascertain that fertility has remained at high level. This distribution suggests that the size of population entering the labour force will be four times higher than persons withdrawing when reaching retirement age. The burden of high entrance ratio has its implication on the national economy and administration, not only in terms of supplying productive jobs for a high number of workers, but also in preventing wastage by providing extensive training facilities for younger people entering the labour force. High efficiency of labour and capital are now forming the basis of economic development for better living conditions, of raising demand for goods and services, accelerating capital formation, improving educational status of the population, and expanding and diversifying employment, and furthermore utilizing of all economic resources in the country.

10. As it may be seen, the age specific activity rates presented in table (6.1) for 1971 and 1961 are not exactly comparable, due to the changes in classification. Nevertheless, 1971 activity rates, except in the first age group, have shown a pattern consistent with activity rates of the countries in the ESCAP Region. Employment of young people is in many ways related to the amount of schooling they received before entering the labour market. Male participation rates in the adult ages come closer to 100 percent, and working life extends beyond age 60, in both census. Female participation rates in 1961 were astonishingly high, a pattern which is not consistent with the pertaining level of fertility, although female work is a general phenomenon in Nepal. The 1971 pattern compared with other countries in the region seems to be more acceptable.

6.3 Regional Differences in Economic Activity

1. In discussing regional differences in economic activity patterns, dependency ratio and working habits in Nepal, three types of classifications are to be considered, namely, rural-urban residence, geographic distribution and administrative division of the country, with especial emphasis on differences in economic structure. In this connection, two facts should be borne in mind. Firstly, the urban population comprising only 3 percent of total population of Nepal, has only a very little impact on the crude economic activity rate for total population. Secondly, the economy of Nepal is characterized by extensive agricultural land-use combined with a high man-land ratio. This correlation resulted in very low real income, and consequently very low savings for reinvestment. Not only is agricultural product per acre low, but also a very large proportion of the labour force (64 percent) is tied up in producing that low out-put. Employment outside urban settlement is becoming, due to population pressure on land, more and more difficult. The surplus of workers in the rural areas would only be partially employed, and the increasing number of agricultural works per land unit, other things being equal, will finally be accompanied by increasing economic burden which implies deterioration in the standard of living of the population. Only a small

proportion of agricultural workers are infiltrating the urban settlements where there are limited employment opportunities for unskilled workers. The trend and magnitude of out-migration as indicator of population stress on land is exposed to many restrictions. The estimates of Nepalese workers reading abroad for six months or more are varying between 300 to 500 thousand.

2. Let us first examine the rural-urban difference in labour force. Apart from changes in economic activity rates by sex from 1961 to 1971 due to changes in classifications, working habits in urban and rural areas differ in a remarkable manner, especially in respect of females. Female economic activity rate was found to be far lower in urban areas in both censuses. Taking into account the 16 Nagar Panchayats* comprising the urban area in 1971, economic activity rates for females vary from 3.6 percent in Rajbiraj (in the Terai) to 46.5 percent in Pokhara (in the hilly region). In Kathmandu where one would expect higher economic activity rate, it was 10.0 percent. Except for pokhara all activity rates in the Nagar Panchayat were below 20 percent.

On the male side, economic rates in urban area were also lower than rural areas. It could be possible that persons in the urban area go to work later and retire earlier than people in the rural area. Besides, the urban areas may have less opportunity for child employment. Female labour in the transplantation of paddy is of first importance in the rural economy of Nepal, where no certain skills are needed for the performance of this work. Meanwhile, jobs in the city are bound to certain level or skills or qualifications.

3. Counting for 56 percent of total urban population of Nepal, Kathmandu, Bhaktapur and Lalitpur have a very high dependency load, as the following figures may reveal:

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* No data are available in 1971 census on economic activity by age and sex for the urban area.

City	Percentage of Economic Active	Non-Active per 100 Active	Persons out-side working age 10-14
Kathmandu	28.3	252	61
Bhaktapur	36.2	175	72
Lalitpur	29.8	234	70

It is of particular interest to assess those differences in the structure of the economically active and dependency ratios, thus calculated, are generally affected by the magnitude of under remuneration of young children. However, while agricultural workers were more likely to have reported themselves as economically active disregarding the length of period they have worked, the urban dwellers are inclined to report their activity in more specific statements, therefore, it would be expected that unemployment in the cities will turn out to surpass by respective levels of unemployment in rural areas.* High levels of economic participation rates persisting in the countryside have exclusively been determined by the specific working conditions rather than advantageous capital investments over urban areas. It would be useful to indicate however, that high unemployment levels observed in major cities in the developing countries have been created by the continuous influx of migrants from rural areas combined with serious shortage in capital investment.

4. Viewing the distribution of labour force in 1961 by geographic region presented in table (6.4), regional variations in economic activity and dependency load are quite discernible. The rise or decline in women's activity rates was, closely associated with the deficiency or excess in number of male workers. In the process of internal movement, the hilly regions have been continuously losing part of their male manpower. To compensate for shortage in male

* The census does not indicate the number of persons who were seeking work; therefore, it is difficult to discuss in detail the level of unemployment.

Table 6.4 – Economically Active Persons by Sex, Dependency Ratio and Sex Ratio For Geographic Regions and Mode of Living 1961

Region	Economically Active (15 years of Age and over)		Percentage of Economically Active Persons to Total Population	Non-Active per 100 Active (Both Sexes)	Sex Ratio
	Male	Female			
Eastern Hills	93.7	66.0	46.4	116	93.7
Western Hills	93.6	69.0	47.8	109	91.7
Far Western Hills	94.6	73.2	50.0	100	95.6
Kathmandu	83.9	46.9	42.2	137	103.2
Hill Region	**93.1**	**67.6**	**47.5**	**110**	**94.3**
Eastern Inner Terai	95.9	79.5	51.0	96	93.9
Central Inner Terai	94.9	72.0	49.5	102	102.6
Western Inner Terai	95.4	28.0	34.3	192	99.6
Inner Terai	**95.3**	**67.2**	**47.2**	**112**	**98.9**
Eastern Terai	95.6	38.4	40.6	146	102.7
Western Terai	96.9	48.1	47.1	112	103.7
Far Western Terai	96.4	48.3	44.1	127	109.4
Terai Region	**95.8**	**40.7**	**41.9**	**139**	**103.5**
Urban	79.5	27.8	36.0	177	112.4
Rural	94.8	60.5	46.1	117	96.5
Total Nepal	94.1	59.4	45.8	119	97.0

Source: 1961 Census, Vol. I, Part I, Table 1 and Vol. IV, Table I, p. 7 ff.

Table 6.5 – Economically Active Persons by Age Groups as Percentage of Persons in the same Age Group by Region and Zone
Males (1971)

Region	A	G	E	G	R	O	U	P	S	
	10-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65+	Total
Nepal	59.2	75.7	89.8	95.1	96.6	79.4	97.2	96.8	94.0	90.3	64.1	40.5	82.9
Eastern Dev. Region	56.7	73.7	89.3	95.5	97.7	98.0	97.8	97.6	94.6	91.3	70.0	45.1	82.7
Mechi	55.2	74.7	91.0	95.9	97.4	98.1	98.1	97.7	94.4	91.8	71.0	45.5	82.7
Kosi	52.9	71.7	88.0	94.9	96.9	97.9	97.7	97.6	95.0	91.7	73.9	49.8	86.6
Sagarmatha	60.2	74.5	89.3	95.7	97.4	98.1	97.8	97.6	94.3	90.8	67.0	41.8	83.4
Central Dev. Region	61.5	76.4	89.1	95.2	96.9	97.6	97.3	97.0	94.0	90.3	66.8	43.0	84.0
Jankpur	68.7	81.3	91.3	96.3	97.7	98.3	98.1	97.8	94.8	90.1	66.5	43.1	86.6
Bagmati	58.3	72.7	86.5	93.5	95.6	96.6	96.2	95.9	92.9	90.0	66.7	41.6	81.2
Narayani	57.5	76.8	90.6	96.1	97.5	97.9	97.8	97.3	94.8	90.9	67.2	45.3	85.0
Western Dev. Region	54.0	72.2	88.3	93.2	94.9	96.0	97.4	95.4	93.4	90.2	66.8	40.4	80.0
Gandaki	53.4	70.1	86.0	90.9	93.3	94.4	94.9	93.9	92.3	89.0	65.8	40.0	77.7
Lumbini	53.4	73.0	89.9	95.0	96.3	97.3	96.9	96.5	96.4	91.7	69.2	42.9	81.8
Dhaulagiri	58.7	77.1	89.7	91.5	93.2	95.1	95.3	95.6	92.6	89.3	61.6	33.0	80.0
Far Western Dev. Region	64.4	80.3	92.8	96.3	97.6	97.8	97.5	97.3	93.8	89.1	51.0	30.1	84.6
Rapti	68.6	82.3	93.3	96.7	97.6	97.7	97.1	96.4	93.4	87.9	51.9	29.7	85.2
Karnali	77.7	84.6	94.1	96.1	97.8	97.8	97.5	97.4	95.0	90.6	60.4	38.0	88.6
Bheri	59.6	78.8	92.9	96.6	97.5	98.0	97.4	97.2	91.8	88.0	49.0	32.5	84.1
Seti	67.1	82.6	93.2	96.6	97.6	98.2	98.2	98.3	95.1	89.2	48.1	26.6	85.4
Mahakali	53.1	73.1	90.5	94.4	96.0	96.9	97.2	97.2	94.4	91.4	51.7	29.7	80.7

Source: 1971 Census, Vol. 2, Table 19.

Table 6.6 – Economically Active Persons by Age Groups as Percentage of Persons in the same Age Group by Region and Zone Females (1971)

Region	A G E G R O U P S												
	10-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65+	Total
Nepal	40.1	46.2	39.2	36.6	33.9	34.0	32.9	32.5	30.5	27.7	17.9	10.4	35.1
Eastern Dev. Region	31.7	36.0	30.2	28.4	27.5	28.2	28.3	29.1	26.8	24.6	16.8	9.6	28.5
Mechi	38.5	45.7	39.9	33.5	32.3	31.8	33.2	35.1	33.0	31.1	22.3	12.2	35.4
Kosi	23.6	27.6	23.9	22.4	22.3	22.7	24.2	24.1	23.6	21.6	15.9	9.7	22.9
Sagarmatha	33.7	36.9	30.7	29.9	28.7	30.1	28.8	29.8	26.1	23.9	15.2	8.5	29.2
Central Dev. Region	34.7	39.3	31.3	29.3	26.7	27.1	25.9	25.2	24.8	22.5	15.9	9.4	28.6
Jankpur	30.1	31.8	23.9	23.2	21.2	21.7	21.9	21.0	21.8	19.3	13.5	7.9	23.3
Bagmati	46.4	53.5	49.5	45.7	42.8	42.0	38.3	37.5	34.4	32.0	23.4	13.6	42.2
Narayani	20.7	23.5	16.0	15.2	13.7	14.5	14.5	14.0	13.6	11.7	7.6	4.8	15.6
Western Dev. Region	55.4	65.4	58.5	54.8	50.3	49.2	47.0	44.5	42.3	38.6	24.7	13.7	52.6
Gandaki	59.6	68.6	64.9	60.3	56.3	53.9	50.7	49.3	44.4	40.9	27.1	15.0	54.2
Lumbini	48.1	58.5	49.8	48.2	43.5	43.9	42.4	42.6	39.7	35.2	21.1	11.8	44.2
Dhaulagiri	68.3	78.4	71.8	63.6	58.8	54.6	52.3	50.6	44.2	41.4	29.4	15.9	58.8
Far Western Dev. Region	41.8	46.8	42.2	38.9	36.3	35.5	34.6	32.9	30.6	27.2	14.9	8.1	36.9
Rapti	54.2	54.4	47.1	40.7	36.5	34.2	32.6	31.5	28.4	24.8	14.5	8.5	40.5
Karnali	57.5	58.6	56.3	53.9	52.1	51.9	47.5	49.9	42.5	40.5	22.5	13.1	50.7
Bheri	17.8	23.6	18.7	17.0	15.5	15.9	14.9	14.0	12.9	11.4	6.9	3.8	16.5
Seti	44.1	52.7	49.8	47.7	44.4	44.0	42.2	40.0	37.9	34.4	17.5	9.6	43.1
Mahakali	41.1	49.7	48.8	47.3	45.4	45.5	45.4	44.4	39.2	34.4	17.3	9.2	43.1

Source: 1971 Census, Vol. 2, Table 19.

labour force, female economic activity rates in the hilly region were remarkably higher than the corresponding rates in the Terai. The low activity rate in the Terai and in urban areas was caused by the accessibility of male workers. Despite these differences, the male activity rates were fairly identical throughout the country except for Kathmandu Valley. The same reasons for urban working

Table 6.7 – Indices of Dependency in Nepal by Development Region and Zone 1971

Region	Percentage of Economically Active Persons to Total Population	Non Active per 100 Active persons	Persons Out-side Working Age Per 100 in Age	
			10-64	15-64
Nepal (1961)*	45.8	118	45.7	74.3
Nepal (1971)	42.0	138	47.7	77.0
East Dev. Region	39.2	155	49.6	81.6
Mechi	41.9	139	49.1	83.3
Kosi	37.0	170	50.4	83.2
Sagarmatha	39.5	153	49.4	79.8
Central Dev. Region	40.4	148	47.4	75.1
Janakpur	38.5	160	49.2	77.6
Bagmati	45.0	122	45.2	73.8
Narayani	36.2	176	48.3	74.0
Western Dev. Region	46.6	114	46.7	77.3
Gandaki	47.4	111	46.6	78.1
Lumbini	45.1	122	47.2	76.9
Dhaulagiri	50.3	99	45.2	75.6
Far Western Dev. Region	43.0	132	46.9	74.9
Rapti	43.4	131	49.6	80.9
Karnali	50.9	97	42.4	65.6
Bheri	35.9	179	48.5	76.9
Seti	45.9	118	45.3	70.7
Mahakali	44.7	123	44.6	72.5

* Active persons 15 years of age and over.
Source: 1971 Census Vol. I, Table 6, Vol. 2, Table 19.

pattern might pertain to the region. Dependency ratio in the urban area was 177 non-actives per 100 active persons, compared with 117 in the rural area and 119 for total Nepal.

5. Presented in table 6.5 and 6.6 are the economic participation rates by age and sex, for the development regions and zones in 1971. The male economic participation rates between age 20 and 60 follow a uniform pattern throughout Nepal. It is evident that concentration of the workforce on the most active ages is very desirable. Children's work which is socially unaccepted and economically undesirable is, to a large extent, associated with school enrolment.* The Western Development Region which has the highest school enrolment rate (32.87 percent of population 6-24) has, however, the lowest economic participation rate in the age group 10-14. On the other hand, the highest economic participation rate for the same age group in the Far Western Development Region is closely correlated with the lowest enrolment rate (17.26 percent) in this region. Needless to say that children put early to work instead of attending school will, in general, not be able to contribute in a more efficient and skillful manner to the economic development of the country. The Far Western Development Region is said to be the least developed area in Nepal. In contrast to other region, old people in this area seem to withdraw from work earlier. Regional variations in female activity rates, as was stated earlier, are closely associated with the number of male workers. The highest individual activity rates were recorded in Dhaulagiri zone followed by Gandaki, which are completely mountainous region. The sex ratio for these zones was 96.1 and 94.9 respectively. Female crude economic activity rates for population 10 years of age and over were 52.6 percent for Western Development Region, 36.9 percent for the Far Western Development Region, 28.6 percent and 28.5 percent for the Central and Eastern Development Regions respectively. The different forms of female activity curves for zones denote a standard peak at age group 15-19. Most likely, variations in female activities between zones, can be attributed, in addition to the

* See Table 5.8 on Population 6-24 years of age attending school

availability of male worker, to variations in marital status, female enrolment in school, economic conditions and social attitudes towards women's participation in gainful work.

6. Considering the proportion o persons out-side working age table (6.7) to persons in the employable age (10-64, this proportion has slightly increased in 1971 over the same proportion in 1961 census, from 45.7 percent to 47.7 percent. Regional variations in this proportion are more or less caused by variations in proportion of children to total population due to under-enumeration in some areas. Karnali zone, for instance, has the lowest proportion 42.4 where proportion of population under 10 amounted to 27.7 percent as compared to 29.1 in total population. Dependency ratios as shown by table 6.7 could hardly reflect differences in economic conditions, or standard of living among individual zones. While the east is economically more prosperous, population in this area is faced with heavy dependency ratios. Meanwhile, dependency ratios in the less developed zones of the far west are comparatively low, except in Bheri zone which belongs to the Terai region. Again, dependency ratios in the Terai are quite higher than the average (Narayani 176, Bheri 179). Of course, the value of the dependency ratio depends upon the size of economically active persons in the denominator. Regarding the constant crude activity rates for males in the intercensal period, the increase or decrease in the size of the economically active population by zone, was closely connected with the number of females reported as economically active. The lowest dependency ratios in Dhaulatiri (99 percent) and Karnali (97 percent) are associated with the highest crude activity rates 50.3 and 50.9 respectively.

6. 4 Regional Difference in Industrial Composition

1. A relevant measure of economic development over a certain period of time in a country, can be accounted for, by classifying its labour force into three major sectors which together make up the economy; namely, the primary secondary and tertiary sectors. Primary industry includes mainly agriculture, fishing,

mining and quarrying. The secondary sector comprises manufacturing, construction and public utilities. In other words, this sector comprises all activities engaged in the process of primary products, disregarding the stage of production. Tertiary sector consists of transport and communication, trade, personal and domestic services such as insurance and finance.

2. Inspite of the wide controversy concerning the validity of this classification, and in the absence of relevant data on the economic development of Nepal, this type of analysis is quite justified. The proportions of the labour force engaged in the main three types of production are in certain respects an index of economic development throughout the period under observation. In the course of economic development in the industrialized nations, the proportion of labour force in agriculture was declining as these countries were advancing in thier economics. This decline was mostly in favour of rising proporitons of workings in the secondary and tertiary sectors. The proportion of labour force in agricluture in the industrialized countries declined considerably as a result of the fundamental changes in the functional distribution of the labour force. The primary sector comprises 4.9 in the United States, 17.4 in Australia, 14.6 in Denmark, 16.2 in West Germany and 5.4 in the United Kingdom. It should be borne in mind, that changes in the structure of labour forces in the advanced countries, were the result of a very long and complicated process of educational, technical, organizational, and social changes, combined with changes in structure, function, resource allocation and with expanding demand for various goods and services, due to rise in incomes and wages.

3. Comparing the more economically advanced countries with Nepal is in no way helpful, except in outlining economic progress in the west as merely an example of what these countries have achieved during a painful and labourious phase of their economic history. Economic Conditions in Asian Countries may serve, to certain respects, as a more plausible indicator in comparing the economic structure in these countries with Nepal, where in some respects there are common factors, namely, rapid population growth

and heavy burden on cultivated land. It is obvious from comparison with Asian countries table (6.8) that Nepal's economy was not able, during a period of almost twenty years, to bring changes in the functional distribution of the labour force. Primary sector has prevailed to be labour-intensive, while secondary sector, consisting mainly of cottage industry and a small size mechanized consumer's industry with very limited workers absorbing capacity, has not yet sufficiently developed to cover the expanding needs of the population for consumers' goods.

Table 6.8 – The Economically Active Population of Nepal and Selected Countries by Main Sector of Production (Percentages)

Country	Year	Primary @	Secondary @	Tertiary @	Activities
		Sector of Production			Not Adequately Described
Nepal	1952	93.8	2.2	4.2	0.2
Nepal	1961	93.8	2.0	3.4	0.8
Nepal	1971	94.4	1.2	4.4	-
Bangladesh	1961	85.9	4.9	8.9	0.3
Thailand	1970	81.6	4.2	13.2	1.0
India	1971	72.5	11.0	15.8	0.7
Indonesia	1971	62.4	9.4	27.2	1.0
Sri Lanka	1963	48.9	11.8	37.5	1.8
Republic of Korea	1966	53.6	13.6	24.8	8.0
Japan	1970	19.5	33.6	45.5	1.4
Belgium	1972	5.2	41.2	51.3	2.3
Italy	1972	18.1	42.4	37.2	2.3

Source: ILO, Year Book of Labour Statistics, 1973 Table 2, p.42 ff.

@ Primary production comprises agriculture and related industries as well as mining and quarrying. secondary production covers all activities engaged in the process of primary products, disregarding the stage of production such as manufacturing, construction and public utilities. Tertiary sector includes all activities which support and are supported by other sectors, such as commerce, transportation and all kinds of services.

Manufacturing and cottage industries share 9.02 percent of the gross national product of Nepal. Construction which is generally a labour-intensive activity in developing countries, contributed in 1971 to 2.35 percent of Nepal's GNP with a proportion of only 0.10 percent of the labour force and of 1.84 percent of total non-agricultural workers.

4. Taking Nepal as a whole 66.55 percent of her GNP is produced by 94.37 percent of the labour force and 33.45 percent is produced by the remaining 5.63 percent engaged in the secondary and tertiary sectors as the following figure for 1971 show.

Sectors	**Proportion of GNP**	**Proportion in Labour Force**
Primary	66.55	94.37
Secondary	11.59	1.20
Tertiary	21.86	4.42
	100.00	**100.00**

In some Asian countries, particularly in those countries which have started economic planning in the 50's, transformation of the economic function of the labour force from agriculture to manufacturing and services was accompanied by a respective increase in their per capita income. A strong negative correlation in consequently associated between proportion of labour force engaged in agriculture and per capita income. In the Republic of Korea and Sri Lanka where this proportion was 53.6 percent and 48.9 percent respectively, per capita income in U.S. Dollars for the same year was 216 and 108. In countries with a higher proportion of agricultural workforce, per capita income was according low. Bangladesh with the highest proportion, ranking second to Nepal, has pr capita income equal to 75 U.S. Dollars. In the more advanced countries where this transformation has taken place a long time ago, and where secondary and tertiary industries are efficiently carrying the large overheads of administrative, distributive and services costs, per capita income is exceedingly high. For example in Japan it is 11 times higher than in Indonesia and in Italy it is 10 times higher than in Thailand.*

* Per capita income in Japan 1,664 Dollars, in Belgium 3,286 and in Italy 1,987.

5. Nepal stands second to Nigeria, (96.9 percent 1960) in the proportion of agricultural workforce. A slight increase in this proportion has been recorded in 1971 census over 1961 census. Logically enough, since the rural population comprised 97 percent of total population, new generations entering labour force in this area who have the least opportunity to move in either direction, namely, in the scale of labour from unskilled agricultural labour to semi-skilled labour in other activities or from rural to urban settlements, would not find employment outside the traditional family enterprise. Of course, the low literacy rate in rural area on the one hand, and the narrow employment opportunity in secondary and tertiary sectors on the other, have both added to preserve this condition. While proportion of agricultural workforce has remained almost constant in the intercensal period, variations in proportions of other branches of industry are necessarily dependent upon firstly, changes in classification, and secondly on changes in the volume of work in some branches, as the relative increase in one branch accordingly implies a decline in the other. Nevertheless, agricultural labour force increased by 6.3 percent from 1961 to 1971, that is from 4,306,839 workers to 4,579,552 workers. For the same period labour force outside agriculture increased by only 2.5 percent, that is, from 266,232 workers to 272,972 workers.

6. Secondary and tertiary industries are by their nature concentrated in urban places were skilled manpower energy and moreover, markets and importing and exporting facilities do exist. But certain crafts, retail trade and cottage industry which are particularly related to agriculture and to the needs of the village population are practiced in the rural area.*

The importance of cottage industry in Nepal's economy lies in the fact that this activity is acting as an outlet for unemployment in agriculture after the harvest season. But a person with any size of agricultural holding would consider himself as a farmer disregarding

* Cottage industry, which is occupying an important part in the economy of the country outside agriculture, is by definition an industry employing less than ten persons and using no automatic power driven machine.

Table 6.9 – Economically Active Population by Sex, Branch of Industry and Mode of Living, 1961 and 1971

	Out of 100 persons .....belong to Branch @										
Particulars	**0**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**0-9**
1971											
Total	94.38	0.00	1.07	0.03	0.10	1.31	0.20	0.07	2.84	-	100.00
Males	92.81	0.00	1.32	0.05	0.14	1.62	0.27	0.10	3.69	-	100.00
Females	98.17	0.00	0.46	0.00	0.01	0.55	0.02	0.01	0.78	-	100.00
Urban	32.84	0.00	10.70	0.47	1.32	15.29	3.16	1.42	34.78	-	100.00
Rural	96.26	0.10	0.77	0.02	0.07	0.90	0.11	0.03	1.86	-	100.00
1961											
Total	93.82	0.00	1.88	0.03	0.13	1.10	0.38	1.90	0.77	100.00	
Males	91.74	0.00	2.31	0.05	0.21	1.51	0.51	2.81	0.86	100.00	
Females	96.87	0.00	1.24	0.02	0.01	0.49	0.19	0.55	0.63	100.00	
Urban	37.52	0.04	15.01	0.77	2.23	13.72	4.67	23.24	2.81	100.00	
Rural	95.45	0.00	1.50	0.01	0.07	0.73	0.26	1.28	0.71	100.00	

Source: 1961 Population Census Vol. 4, Tables 7 & 8, 1971 Census Vol. 2, Table 21.

(a) Number relate to 0 = Agriculture, Forestry, Hunting and Fishing, 1 = Mining and Quarrying, 2 = Manufacturing, 3 = Electricity, Gas & Water, 4 = Construction, 5 = Trade and Commerce, 6 = Transportation and Communication, 7 = Finance and Business services, 8 = Personal and community services, 9 = Activities not adequately described.

@ In 1972-73 census of manufacture in small industry more than one million workers have been reported engaged in this industry.

the period he spends on this work.*** On the whole 30 percent of all manufacturing industries are located in urban places, and 70 percent in the country side. Taking public services into account and considering the size of urban population, these services are extraordinarily concentrated in urban place. The proportion of workers in public services amounted to 36.5 percent in urban places. Trade and commerce activity, as table (6.9) shows, which is occupying the third place, excluding agriculture, has a strong position in urban area. Agriculture which is the backbone of the economy holds, naturally, a far less important position in urban economy (only 32.8 percent).

7. A clearer picture of the industrial distribution of the labour force can be drawn by dividing industries into agricultural and non-agricultural groups table (6.10). For a variety of reasons, proportions as well as number of workers were declining, both for males or females, in urban and rural areas. This was occurring in all industries except commerce and personal and community services. In transportation, for instance, proportion of workers declined from 6.18 percent of total non-agricultural workforce in 1961 to 3.53 in 1971. Porters, who were classified in 1961 as transport workers, were in some parts of the country, gradually replaced by more advanced techniques, due to expansion in the network of roads. Craftsmen engaged in cottage industry may find it much easier to shift to agriculture since both fields need no advanced skill in performing the work. Manufacturing which was offering employment for 30.36 percent in 1961, is sharing in 1971 only 19.02 percent of non-agricultural work force. Commerce which by its very nature is more profitable, seems to attract more labour, particularly in areas where barter was a predominant system for trading. Number of workers in personal and community services including government services amounted to 137,759 persons in 1971. Considering the non-agricultural sector, personal and community services sector has expanded from 43.01 percent to 51.74 percent, between 1961 and

* In 1972-73 census of manufacture in small industry more than one million workers have been reported engaged in this industry.

Table 6.10 – Percentage Distribution of the Economically Active Population in 1961 and 1971 by Urban, Rural and Major Industries

Major Occupation Group	1 9 7 1 Total	Male	Female	Urban	Rural	1 9 6 1 Total	Male	Female	Urban	Rural
Total Labour Force	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Farmers, Fishermen	94.38	92.81	98.17	32.84	96.26	93.82	91.74	96.87	37.52	95.45
Non-agri. Occupations	5.62	7.19	1.83	67.16	3.74	6.18	8.26	3.13	62.48	4.55
Non-agri. Occupations	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Manufacturing	19.02	18.38	25.06	15.38	20.72	30.35	28.00	39.51	24.04	32.87
Elect. Gas & Water	0.58	0.64	0.10	0.71	0.52	0.55	0.55	0.54	1.23	0.28
Construction	1.84	1.97	0.54	1.96	1.77	2.10	2.53	0.45	3.56	1.52
Commerce	23.29	22.56	30.22	22.78	23.57	17.73	18.26	15.70	21.98	16.05
Transportation	3.53	3.77	1.21	4.71	2.88	6.15	6.18	6.05	7.47	5.63
Finance & Business	1.27	1.35	0.52	2.11	0.80	30.72	34.09	17.65	37.22	28.14
Personal & Community Services	50.47	51.33	42.36	51.80	49.74					
Activities not Adequately described	0	0	0	0	0	12.39	10.40	20.10	4.50	15.53

Source: 1961 Census Vol. 4 Tables 7 and 8 and 1971 Census Vol. 2. Tables 21 and 45.

Table 6.11 – Economically Active Population by Branch of Industry, Development Region and Zone, 1971 (Both Sexes)

	Region	Out of 100 persons ..... belong to Branch (a)									
		0	1	2	3	4	5	6	7	8	0-8
1.	**East Dev. Region**	**94.08**	**0.0**	**1.24**	**0.03**	**0.07**	**1.55**	**0.22**	**0.06**	**2.76**	**100.00**
	Mechi	95.09	0.0	0.81	0.01	0.05	1.35	0.22	0.05	2.42	100.00
	Kosi	90.00	0.0	2.54	0.07	0.12	2.45	0.45	0.08	4.29	100.00
	Sagarmatha	96.11	0.0	0.65	0.01	0.04	1.10	0.08	0.04	1.98	100.00
2.	**Central Dev. Region**	**91.11**	**0.0**	**1.28**	**0.08**	**0.22**	**1.91**	**0.37**	**0.14**	**4.89**	**100.00**
	Janakpur	95.63	0.0	0.64	0.01	0.08	1.26	0.14	0.05	2.19	100.00
	Bagmati	86.33	0.0	2.02	0.16	0.37	2.38	0.51	0.26	7.98	100.00
	Narayani	93.67	0.0	0.83	0.03	0.13	1.90	0.41	0.06	2.97	100.00
3.	**Western Dev. Region**	**96.64**	**0.0**	**0.72**	**0.00**	**0.05**	**0.90**	**0.08**	**0.03**	**1.58**	**100.00**
	Gandaki	97.06	0.0	0.67	0.00	0.05	0.80	0.06	0.02	1.34	100.00
	Lumbini	96.10	0.0	0.71	0.00	0.06	1.09	0.12	0.04	1.88	100.00
	Dhaulagiri	97.26	0.0	0.92	0.00	0.01	0.52	0.03	0.01	1.25	100.00
4.	**Far Western Dev. Region**	**97.06**	**0.0**	**0.96**	**0.00**	**0.03**	**0.61**	**0.05**	**0.03**	**1.25**	**100.00**
	Rapti	96.64	0.0	1.64	0.00	0.02	0.51	0.04	0.03	1.12	100.00
	Karnali	97.97	0.0	0.40	0.79	0.00	0.79	0.02	0.01	0.80	100.00
	Bheri	95.31	0.0	0.81	0.01	0.08	1.33	0.14	0.06	2.26	100.00
	Seti	98.66	0.0	0.40	0.00	0.01	0.22	0.01	0.02	0.67	100.00
	Mahakali	96.85	0.0	1.14	0.00	0.03	0.46	0.04	0.02	1.46	100.00
	Total Nepal	**94.37**	**0.0**	**1.07**	**0.03**	**0.10**	**1.31**	**0.20**	**0.07**	**2.84**	**100.00**

Source : 1971 Population Census Vol. 2. Table 21.

Note:(a) Number relate to 0 = Agriculture, Forestry, Hunting and Fishing, 1 = Mining and Quarrying, 2 = Manufacturing, 3 = Electricity, Gas & Water, 4 = Construction, 5 = Trade and Commerce, 6 = Transportation and Communication, 7 = Finance and Business services, 8 = Personal and community services.

1971 censuses. Yet, in absolute figures and considering a population of 12 million, the previous number seems to be insufficient to provide the basic administrative needs of the population where needs of advanced social, health and educational services are growing fairly rapidly. This particular sector continued to absorb a growing workforce of educated and skilled person, as economic development advanced in the country.

8. As far as regional distribution of industry is concerned, proportions of persons engaged in agriculture are following a similar pattern among all zones except in Bagmati in which the largest urban community is located. Differences in industrial composition are closely related with the location of trading paths with India, in the Terai.*

In Kosi Zone, for example, where a considerable proportion of Nepal's import-export trade via India passes through the town of Biratnagar, manufacturing and trading were accordingly flourishing. Labour force engaged in agriculture in the zone amounted to 90 percent, while manufacturing and trade together, are offering jobs for 5 percent, which is the highest proportion for these two sectors combined, among all zones. Similarly, Narayani Zone, in the Central Region and Bheri in the far west, has low proportions of agricultural workers due to the same reason mentioned above.

9. The industrial distribution of non-agricultural workers by development region and zone is shown in table (6.12). Compared with other zones, Bagmati has in general, the highest proportion of workers in every industry. Taking the proportion of population in this zone account 12.95, table (6.12) suggests that essential activities such as electricity, finance and business institutions are highly concentrated in this area, particularly in Kathmandu Valley. Proportion of workers in electricity amounted

* The most important trading and manufacturing centers are Bhadrapur in Mechi zone, Biratnagar in Kosi zone, Rajbiraj in Sagarmatha, Birgunj in Narayani, Bhairahawa in Lumbini, Nepalgunj in Bheri and Mahendra Nagar in Mahakali zone.

Table 6.12 – Non-Agricultural Economically Active Distribution of Industry by Development Region and Zone, 1971

Region	Particulars in Zone	Out of 100 persons ..... in zone @ belong to Branch to Industry 2	3	4	5	6	7	8
Total Nepal	**100.00**	**100.00**	**100.00**	**100.00**	**100.00**	**100.00**	**100.00**	**100.00**
1. East Dev. Region	**24.22**	**26.12**	**17.42**	**14.69**	**26.84**	**24.89**	**17.56**	**21.97**
Mechi	5.35	4.03	0.94	2.59	5.49	6.00	3.98	4.53
Kosi	7.50	15.64	14.10	7.89	12.37	14.84	7.67	9.98
Sagarmatha	11.37	6.45	2.38	4.21	8.98	4.05	5.91	7.46
2. Central Dev. Region	**33.45**	**38.63**	**78.25**	**67.31**	**46.82**	**59.99**	**64.41**	**55.40**
Janakpur	10.95	6.03	3.63	7.50	9.66	7.21	6.64	7.76
Bagmati	12.95	26.17	67.79	49.56	25.21	35.74	50.61	39.02
Narayani	9.55	6.43	6.83	10.25	11.95	17.04	7.16	8.62
3. Western Dev. Region	**21.32**	**15.95**	**2.38**	**11.58**	**16.25**	**9.66**	**9.33**	**13.16**
Gandaki	8.84	6.28	0.75	4.74	6.08	2.95	2.63	4.71
Lumbini	10.09	7.19	1.63	6.46	9.04	6.32	6.12	7.19
Dhaulagiri	2.39	2.48	0.00	0.38	1.13	0.39	0.58	1.26
4. Far Western Dev. Region	**21.01**	**19.28**	**1.95**	**6.43**	**10.09**	**5.47**	**8.70**	**9.47**
Rapti	6.11	9.65	0.44	1.48	2.45	1.30	2.39	2.48
Karnali	1.63	0.73	0.25	0.08	1.19	0.23	0.20	0.56
Bheri	4.98	3.22	0.88	3.23	4.31	3.01	3.69	3.39
Seti	5.17	2.14	0.13	0.66	0.96	0.29	1.44	1.33
Mahakali	3.13	3.54	0.25	0.98	1.18	0.64	0.98	1.71

Source: 1971 Population Census, Vol. 2, Table 21.

NOTE @ Number relate to 2 = Manufacturing, 3 = Electricity, Gas and Water, 4 = Construction, 5 = Trade and Commerce, 6 = Transportation and Communication, 7 = Finance and Business Services, 8 = Personal and Community Services.

in Bagmati to 68 percent of total workers in this activity, in Nepal while in other zones it forms only an insignificant fraction of total workers, such as in Dhaulagiri. The distribution of energy, industry, construction, and financial and business activities in the country is expected in all aspects to differ form one region to the other according to the existing differences in economic development, educational levels and furthermore, differences in the proportion of urban population. The proportions presented in table (6.12) confirm this relationship. Manufacturing, which is by nature an energy consuming activity, is, in Bagmati zone alone, offering jobs equivalent to the jobs offered by the same activity in the whole Eastern Development Region. In a subsistence agrarian economy where primary products are not only limited in variety, but also produced by almost every family enterprise, such goods would not be marketable in a poor urban market, even if the transport difficulties can be overcome. Trade, therefore, particularly outside urban settlements, remains a marginal activity limited to the rudimentary purchasing power of the population.

6.4 Regional Differences in Occupational Composition

1. The occupational structure of a country is generally the ultimate product of past educational development, social attitudes towards work and the will of the nation to economize all possible resources for raising the peoples' standard of living. Therefore, the occupational structure, in some ways, reflects the investment in human capital. The quality of labour means more than simply technical skills. It assumes that the body of knowledge, experience, and practice acquired by the labour force can be effectively used in bringing changes in the economic structure of the country.

2. The occupational structure of the economically active population of Nepal shows largely the same characteristics as the industrial structure of the country. Let us first examine the educational characteristics of the labour force by occupation. Table (6.13) shows the percentages of years of schooling completed

Table 6.13 – Economically Active Persons by Educational Level, Sex and Occupation, 1971

Occupation	Years of Education Completed					
	Total	No Schooling	Primary 1-5	Secondary 6-10	Inter mediate 11-12	Graduate +
Both Sexes	**100.00**	**93.76**	**3.31**	**3.39**	**0.27**	**0.27**
Prof., Tech & Related	100.00	4.63	8.63	55.42	12.28	19.04
Administration	100.00	22.74	3.29	23.38	32.88	17.72
Clerical and Related	100.00	42.93	6.60	31.76	9.61	9.10
Sales Workers	100.00	77.21	7.97	12.16	1.54	1.12
Service Workers	100.00	81.71	6.90	9.54	1.09	0.76
Farmers & Related	100.00	95.35	3.10	1.42	0.08	0.05
Production Workers	100.00	82.55	5.85	10.56	0.69	0.35
Males	**100.00**	**91.61**	**4.42**	**3.24**	**0.37**	**0.37**
Prof., Tech & Related	100.00	4.15	8.94	55.67	12.21	19.03
Administration	100.00	21.26	3.34	23.93	11.53	39.94
Clerical and Related	100.00	42.48	6.74	32.04	9.72	9.02
Sales Workers	100.00	74.84	8.74	13.44	1.73	1.25
Service Workers	100.00	78.80	7.99	11.06	1.27	0.89
Farmers & Related	100.00	93.67	4.19	1.96	0.11	0.07
Production Workers	100.00	81.07	6.33	11.47	0.74	0.39
Females	**100.00**	**98.96**	**0.64**	**0.32**	**0.03**	**0.05**
Prof., Tech & Related	100.00	10.21	5.08	52.49	13.10	19.12
Administration	100.00	56.52	2.17	10.87	4.35	26.09
Clerical and Related	100.00	54.07	3.17	25.07	6.88	10.81
Sales Workers	100.00	94.58	2.35	2.77	0.18	0.12
Service Workers	100.00	97.35	1.06	1.42	0.11	0.06
Farmers & Related	100.00	99.19	0.61	0.19	0.00	0.00
Production Workers	100.00	97.63	0.97	1.30	0.10	0.00

Source: 1971 Census Vol. 2, Table 22.

for males and females in 1971 by occupation.* These percentages indicate the general trend pertaining to developing countries in the educational level of the labour force. The relationship between the level of education attained and occupation needs no demonstration. Males and females with no-schooling background have far less chance in the professional and technical jobs. The percentage of farmers (94.37 percent) corresponds closely and logically with the proportion of workers engaged in agriculture. More than 95 percent of total agricultural workers who form the majority o the work force did not receive and type of schooling.

3. The very low supply of professional, technical and related workers (0.52 percent of total L.F. Table 6.15) of administrative and managerial workers (0.02 percent) of clerical workers (0.96 percent) of service, and related workers (0.71 percent) and of production (2.18 percent) agrees very well with the still limited opportunities open for persons outside agriculture and reflects the magnitude of difficulties that are facing the national economy in modernizing parts of its sectors. Furthermore, the build-up of certain skills to increase agricultural production by applying certain skills to increase agricultural production by applying modern techniques would obviously be impeded by the very low proportion of educated and skillful workers (0.13) percent beyond secondary level. Increase in sales workers from 17.39 percent) in 1961 to 22.02 percent in 1971 coincides with the general trend of expansion in the trading sector.

4. Compared with other developing countries, particularly of south Asia, Nepal has a fairly low proportion of professional managerial and skilled labours (0.54 percent in Nepal) as against 3.4 in India, 5.6 in Indonesia, 3.4 in Korea, 2.2 in Malaysia and 1.8 in Pakistan). It must be taken into account that accumulation of skill, administrative and managerial tradition, is not only a product of the educational system, but also is a function of time, and Nepal has been opened to the outside world only very recently. Since no information was given on the economic characteristics

* This is the only information provided by the census on the educational level of the labour force.

of the Nepalese residing abroad, it would be difficult to discuss the impact of out-migration on the skilled labour force in the country.

5. The regional distribution of occupation (table 6.15) reveals typical concentration of professional, administrative, and clerical workers in Bagmati zone. Almost half the workers in administration were in Bagmati zone. This distribution indicates the limited opportunities for administrators, technicians and other skills in the remote areas of the far west, and the inducement to migrate to Bagmati where the capital and other large urban places are situated.

6. East and Central Development Regions employ together 85.7 percent of total administrative persons and about 70 percent of persons in the professional and technical category. This big

Table 6.14 – The Distribution of the Economically Active Persons in 1961 and 1971, by Sex, and Occupational Status

	1971			1961		
Occupation	**Total**	**Male**	**Female**	**Total**	**Male**	**Female**
Nepal	100.00	100.00	100.00	100.00	100.00	100.00
Farmers & Related	94.37	92.80	98.17	93.78	91.68	96.87
Non-Farmers	5.63	7.20	1.83	6.22	8.32	3.13
Non-Farmers	**100.00**	**100.00**	**100.00**	**100.00**	**100.00**	**100.00**
Prof., Tech & Related	9.27	9.43	7.73	6.29	7.39	1.97
Administration	0.40	0.42	0.18			
Clerical and Related	17.11	18.17	7.05	6.63	8.23	0.33
Sales Workers	22.02	21.40	27.92	17.39	17.78	15.87
Service Workers	12.53	11.68	20.66	21.47	22.90	15.91
Production Workers	38.67	38.90	36.46	36.28	33.80	45.95
Unknown	0	0	0	11.94	9.90	19.97

Source: 1961 Population Census, Vol. 4, Table 13 and 1971 Population Census Vol. 2, Table 26.

Table 6.15 – Regional Distribution of the Economically Active Population by Occupational Groups 1961 and 1971, Both Sexes & Percentages

Region	Occupational Groups @								
	0	1	2	3	4	5-8	9	10	0-10
1. East Dev. Region	**24.99**	**21.09**	**19.55**	**26.47**	**22.54**	**23.87**	**23.63**	**0**	**22.61**
Mechi	5.35	5.75	3.51	5.11	5.37	4.21	6.25	0	5.33
Kosi	8.36	8.49	8.85	12.06	6.29	13.90	10.99	0	6.60
Sagarmatha	11.28	6.85	7.19	9.30	10.88	5.76	6.39	0	10.68
2. Central Dev. Region	**45.70**	**64.76**	**58.60**	**47.22**	**31.07**	**48.54**	**56.80**	**0**	**32.18**
Janakpur	11.04	5.94	7.18	10.07	10.19	5.77	8.45	0	10.05
Bagmati	25.61	49.41	42.15	25.09	12.70	34.77	39.67	0	13.89
Narayani	9.05	9.41	9.27	12.06	8.18	8.00	8.68	0	8.24
3. Western Dev. Region	**18.60**	**8.30**	**12.75**	**15.90**	**24.27**	**13.62**	**11.65**	**0**	**23.70**
Gandaki	7.71	1.64	5.55	5.78	10.27	4.76	3.58	0	9.99
Lumbini	8.72	5.75	6.22	9.03	11.04	7.31	6.63	0	10.84
Dhaulagiri	2.17	0.91	0.98	1.09	2.96	1.55	1.44	0	2.87
4. Far Western Dev. Region	**10.71**	**5.85**	**9.10**	**10.40**	**22.13**	**13.97**	**7.93**	**0**	**21.52**
Rapti	4.05	1.37	2.74	2.45	6.46	5.53	1.96	0	6.31
Karnali	0.41	0.46	0.53	1.26	2.05	0.56	0.70	0	1.97
Bheri	2.40	3.01	2.89	4.46	4.30	3.82	2.91	0	4.26
Seti	1.41	0.37	1.32	1.00	5.91	1.77	0.66	0	5.65
Mahakali	2.44	0.64	1.62	1.23	3.41	2.29	1.70	0	3.33
Total	100.00	100.00	100.00	99.99	100.00	100.00	100.00	0	100.00
~~Nepal (1971)~~	~~0.52~~	~~0.02~~	~~0.96~~	~~1.24~~	~~94.37~~	~~2.18~~	~~0.71~~	~~0~~	~~100.00~~
Nepal (1961)	0.39	0.41	-	1.08	93.78	2.34	1.26	0.74	100.00

@ 0 = Professional, Technical and Related Workers, 1 = Administrative, Executive and Managerial Workers, 2 = Clerical Workers, 3 = Sales Workers, 4 = Farmers, Fishermen, Hunters and Related Workers, 5-8 = Miners, Quarrymen, Transport and Communication, Craftsmen and Production Workers, 9 = Service and Recreation Workers, 10 = Workers not Classified by Occupation.

Source: 1961 Population Census, Vol. 4, Table 5 and 1971 Population Census, Vol. 2, Table 20.

Table 6.16 – Regional Distribution of the Economically Active Males by occupational Groups 1961 and 1971 (Percentage)

Region	Occupational Groups @								
	0	**1**	**2**	**3**	**4**	**5-8**	**9**	**10**	**0-10**
1. East Dev. Region	**25.12**	**21.54**	**19.67**	**26.19**	**23.97**	**24.17**	**24.25**	**0**	**23.97**
Mechi	5.36	5.91	3.53	5.19	5.47	3.99	6.38	0	5.41
Kosi	8.31	8.48	8.77	12.22	7.02	14.48	11.22	0	7.38
Sagarmatha	11.45	7.15	7.37	8.78	11.48	5.70	6.65	0	11.18
2. Central Dev. Region	**45.18**	**64.16**	**58.62**	**48.65**	**33.01**	**49.22**	**56.09**	**0**	**34.32**
Janakpur	11.58	6.01	7.37	10.68	11.46	6.04	8.92	0	11.22
Bagmati	24.29	48.62	41.85	25.21	11.57	34.76	37.78	0	13.14
Narayani	9.31	9.53	9.40	12.76	9.98	8.42	9.39	0	9.96
3. Western Dev. Region	**18.82**	**18.39**	**12.54**	**14.72**	**20.87**	**13.12**	**11.24**	**0**	**20.35**
Gandaki	7.85	1.62	5.32	0.65	8.34	6.24	3.10	0	8.08
Lumbini	8.81	5.81	6.24	9.06	10.18	7.34	6.77	0	9.99
Dhaulagiri	2.16	0.95	0.98	1.01	2.35	1.52	1.37	0	2.28
4. Far Western Dev. Region	**10.87**	**5.92**	**9.18**	**10.44**	**22.14**	**13.48**	**8.41**	**0**	**21.35**
Rapti	4.08	1.43	2.77	2.50	6.17	5.29	1.91	0	5.99
Karnali	0.44	0.48	0.54	0.86	1.91	0.59	0.81	0	1.82
Bheri	2.39	2.96	2.93	4.84	5.20	3.98	3.10	0	5.09
Seti	1.42	0.38	1.30	0.95	5.64	1.61	0.66	0	5.33
Mahakali	2.54	0.67	1.64	1.29	3.22	2.01	1.93	0	3.12
Total Males	99.99	100.00	100.00	100.00	99.99	99.99	99.99	0	99.99
Males 1971	0.68	0.03	1.31	1.54	92.80	2.80	0.84	0	100.00
Females 1971	0.14	0.00	0.13	0.51	98.17	0.67	0.38	0	100.00
Males 1961	0.61	0.69	1.48	91.69	2.94	1.77	0.82	100.00	
Females 1961	0.06	0.01	0.50	96.87	1.44	0.50	0.62	100.00	

@ 0 = Professional, Technical and Related Workers, 1 = Administrative, Executive and Managerial Workers, 2 = Clerical Workers, 3 = Sales Workers, 4 = Farmers, Fishermen, Hunters and Related Workers, 5-8 = Miners, Quarrymen, Transport and Communication, Craftsmen and Production Workers, 9 = Service and Recreation Workers, 10 = Workers not Classified by Occupation.

Source: 1961 Population Census, Vol. 4, Table 5 and 1971 Population Census, Vol. 2, Table 20.

difference, however, would certainly lead to sharp contrast in implementing the economic plans in each region. Administration in the western and far western region comprise mainly of government civil servants working in public administration, rather than workers in production management.

6.6 Regional Differences in the Socio-economic Status

1. Classification of the labour force by socio-economic status (employers, own account workers, employees and family workers) presented in table (6.17) gives the impression of the predominance of small-sized establishments in industry and fragmentation of holdings in agriculture, accompanied by a strong inclination to ownership of holdings, rather than running agriculture through a rented basis*. While it was expected that, in the course of development, the proportion of salary and wage earners (employees) would accordingly increase, this proportion dropped from 16.19 percent in 1961 to 9.34 percent to give rise to the other three categories, particularly, own account and unpaid family workers. As the own account and family workers categories re interchangeably mixed, a clear-cut distinction between them could hardly be performed, and they should be treated as one item. The proportion of these tow categories increased from 82.59 percent in 1961 to 90.21 percent in 1971.

It might be true that a portion of employers possessing relatively large size holdings, who could not intensively use hired hands, or due to lack of capital, have abandoned employing workers, allowing the proportion of employers to drop from 0.71 percent

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* It should be reminded that "small holdings limit the application of capital to land and lack of capital restricts capacity to shift among crops."

† Moore, W.E., Economic Demography of Eastern and Southeastern Europe, Princeton, Princeton N.J. 1945 p.77 ff.

in 1961 to 0.45 percent in 1971.* The tiny proportion of employers-disregarding deviation in response or classification

Table 6.17 – Economic Status of the Economically Active Persons in 1961 and 1971 Censuses by Sex, and Mode of Living

Sex/Mode of Living	Employer	Own Account Worker	Emplo-yees	Family Workers	Not Stated
1961					
Both Sexes	0.71	76.33	16.19	6.26	0.51
Males	0.92	75.65	20.15	2.80	0.48
Females	0.40	77.34	10.36	11.35	0.55
Urban (Total)	1.33	33.78	53.80	7.36	1.24
Males	1.36	35.95	58.05	3.51	1.23
Females	1.23	37.27	39.79	20.09	1.62
Rural (Total)	0.69	77.49	15.10	6.23	0.49
Males	0.91	77.14	18.72	2.78	0.45
Females	0.38	78.00	9.88	11.20	0.53
1971					
Both Sexes	0.45	85.92	9.34	4.29	0
Males	0.55	84.66	11.69	3.10	0
Females	0.21	88.98	3.65	7.16	0
Urban (Total)	0.84	43.94	52.38	2.84	0
Males	0.86	42.10	54.78	2.26	0
Females	0.74	56.17	36.35	6.74	0
Rural (Total)	0.44	87.21	8.02	4.33	0
Males	0.54	86.27	10.05	3.13	0
Females	0.20	89.42	3.21	7.17	0

Source: 1961 Census Vol. 4, Table 9, 1971 Census Vol. 2 Table 25.

* It was stated elsewhere that not only are funds inadequate to meet credit needs, but a real problem involved in that fairly large amounts of land holdings or other assets are required as collateral to qualify for credit. Rana, Ratna Shumshere, J.B. Agriculture in Nepal: Some Viewpoints, Nepal in Perspective, P. Shumshere (ed) ch. 12 p. 191 ff.

of 1961 and 1971 censuses- indicates in general, the lack of big enterprises which can accrue financial potency, accumulate investment in capital goods, stimulate production and raise entrepreneurial initiatives.

2. In the industrialized countries 70 to 80 percent of the workforce, or even more, are now wage and salary workers. In Nepal, this group (employees) covers only 9.24 percent and differs substantially between urban and rural populations and among sexes in both areas. For total population, the proportion of employees was about 9.3 percent in 1971 (11.7 percent females and 3.6 percent for females). In the urban area, this proportion was 52.4 percent (54.8 percent for male and 36.3 percent for females) as against 8.0 percent (10.0 percent for males and 3.2 percent for females) in the rural area. The low proportion of female employees is mainly caused by the low rate of literacy among females on one hand and by the nature of their role as unpaid family workers in the household enterprise on the other.

3. Taking regional differences into account, proportion of employers' increases in zones stretched over the Terai where comparatively larger size holding are cultivated, but it decreases in zones situated in the north. The highest proportion of employers (males) was seen in Kosi zone (0.91 percent) followed by Rapti zone (0.83 percent) and Narayani zone (0.78 percent). In the inlands (Dhaulagiri, Karnali and Gandaki) the employers proportion is considerably low (Table 6.18).

4. With regard to the economic structure of the country it is of interest to outline that the substantial differences in employees (wage and salary-earners) between the rural and urban communities have in effect, direct implications on the velocity of money circulating in the market, and consequently on the turn-over of goods, and the average propensity to consume. In other words the low proportion of employees in the rural area, and where the own account workers category comprised mainly agriculture workers; the money economy in the rural area seems to be unsatisfactory. The proportion of wage and salary earners in the western and far western zones is remarkably lower than the corresponding proportion in the central and eastern zones table (6.19).

Table 6.18 – Economic Status of the Economically Active Males in 1971 by Development Region and Zone

Region	Total	Employer	Own Account Worker	Employees	Family Workers
Nepal (Males)	**100.00**	**0.55**	**84.66**	**9.34**	**4.29**
East Dev. Reg.	100.00	0.64	76.58	17.15	5.62
Mechi	100.00	0.77	70.79	17.73	10.70
Kosi	100.00	0.91	70.28	22.09	6.73
Sagarmatha	100.00	0.40	83.55	13.62	2.43
Central Dev. Reg.	**100.00**	**0.59**	**82.09**	**15.52**	**1.80**
Janakpur	100.00	0.53	80.42	18.12	0.94
Bagmati	100.00	0.50	81.15	15.13	3.22
Narayani	100.00	0.78	85.22	13.10	0.90
Western Dev. Reg.	**100.00**	**0.40**	**90.94**	**5.61**	**3.04**
Gandaki	100.00	0.40	92.71	3.81	3.08
Lumbini	100.00	0.45	89.27	7.25	3.04
Dhaulagiri	100.00	0.23	92.01	4.83	2.92
Far Western Dev. Reg	**100.00**	**0.52**	**91.85**	**5.20**	**2.42**
Rapti	100.00	0.83	89.10	6.23	3.84
Karnali	100.00	0.17	96.10	1.33	2.20
Bheri	100.00	0.37	91.16	7.49	0.98
Seti	100.00	0.59	93.09	4.18	2.14
Mahakali	100.00	0.25	93.67	3.39	2.69

Source: 1971 Census, Vol. 2, Table 25.

5. There is no doubt that fundamental changes in the structure of the economically active population have been taking place in the intercensal period, which are by and large in favour of the progress in the quality of labour force. The shift from economically active to inactive population was mainly involved in raising the proportion of school-going inactive population from 4.15 percent to 13.57 percent in the same period, for total population six years of age and over. Table 6.20 reveals, on the other hand, that the proportion of students reported as inactive, increased from 2.7 percent in 1961 to 12.7 in 1971.

Table 6.19 – Males 15-24 Years of Age by type of Economic Activity in Regions and Zones

Region	Economically Active					In-active	
	Total	Employer	Employees	Own Account Worker	Family Workers	In School*	Others
1961 (Total)	**99.99**	**0.35**	**17.21**	**70.00**	**6.49**	**4.15**	**1.79**
1971 (Total)	**100.00**	**0.49**	**10.50**	**67.00**	**4.17**	**13.57**	**4.27**
East Dev. Reg.	**100.00**	**0.53**	**14.52**	**57.59**	**7.56**	**14.82**	**4.98**
Mechi	100.00	0.68	15.01	51.52	14.98	13.61	4.20
Kosi	100.00	0.68	18.24	50.71	9.43	16.30	4.65
Sagarmatha	100.00	0.34	11.56	65.88	2.16	14.41	5.65
Central Dev. Reg.	**100.00**	**0.52**	**14.28**	**65.36**	**2.25**	**13.52**	**4.07**
Janakpur	100.00	0.37	16.27	68.20	1.10	10.54	3.52
Bagmati	100.00	0.46	13.96	60.88	3.76	16.92	4.01
Narayani	100.00	0.76	12.49	69.20	1.18	11.56	4.80
Western Dev. Reg.	**100.00**	**0.39**	**5.42**	**69.93**	**3.59**	**16.32**	**4.35**
Gandaki	100.00	0.38	3.68	69.11	3.62	18.75	4.47
Lumbini	100.00	0.44	6.98	69.80	3.70	15.08	4.00
Dhaulagiri	100.00	0.27	5.61	73.49	3.03	12.34	5.26
Far Western Dev. Reg.	**100.00**	**0.50**	**4.99**	**77.45**	**3.11**	**9.54**	**4.41**
Rapti	100.00	0.71	6.01	75.33	5.12	9.02	3.81
Karnali	100.00	0.18	2.42	83.60	3.19	7.33	3.28
Bheri	100.00	0.31	6.61	77.11	1.12	9.39	5.46
Seti	100.00	0.69	3.77	80.40	2.57	8.61	3.96
Mahakali	100.00	0.26	3.79	74.20	3.20	13.36	5.19

NOTE : * Out of the 602,150 persons reported as enrolled in school 178,668 persons have some sort of economic activity.

Source : 1971 Census Vol. 2, Table 31.

Table 6.20 – Economically Inactive Population by Reason, and Sex 1961 and 1971 (Percentage)

Year	Housewives & Domestic Workers	Students	Old Age	Chronic Disease	Lepers	Invalid Crippled	Insane	Prison Inmates	Pensioner	Not Stated	Total
1961											
Total	75.62	2.73	14.82	0.68	0.18	1.43	0.12	0.25	0.69	3.47	99.99
Males	3.74	20.79	44.95	2.91	1.05	6.35	0.61	1.80	2.95	15.21	100.00
Females	85.32	0.30	10.76	0.38	0.06	0.76	0.05	0.04	0.45	1.89	100.00
1971											
Total	69.32	12.73	11.02	0.48	0.13	0.39	1.14	0.11	0.19	5.49	100.00
Males	0	50.48	21.56	1.32	0.38	1.14	0.42	0.46	0.79	23.44	99.99
Females	88.02	2.55	8.18	0.25	0.06	0.19	0.06	0.01	0.03	0.64	99.99

Sources: 1961 Census, Vol. 4, Table 3 and 1971 Census Vol. 3, Table 31.

6. The classification of inactive population by reasons for remaining inactive could be essentially unreliable due to false responses particularly with regard to causes which might affect the social position of the family in the society such as leprosy, tuberculosis, invalids and insanity. Nevertheless, for the social and health planning purposes and in the absence of adequate social statistics, it might be, to some extent, useful to include such data in the census. Poor health conditions, widespread infectious diseases, poliomyelitis, congenital malformations, and many other diseases, are powerful deterrents not only to the public health in general but also to the nation's manpower in particular. Although the proportion of lepers has declined from 0.18 percent in 1961 to 0.13 in 1971, the number of lepers increased from 2385 to 4318 in the same period. A remarkable increase has occurred in the age group 10-14. The number of insane also increased from 1585 to 4536 in the intercensal period. The number and proportion of pensioners over age 45 was 1.25 of total inactive population as against 0.74 percent in 1971 in the same age group. Ex-soldiers in the Gorkha regiment, who are forming the preponderance of pension recipients, are declining in numbers due to mortality and the government employees who retire, usually prefer the immediate benefits of gratuity to retirement pension.

6.7 Longevity of Working Life in Nepal

1. Before concluding this part of the analysis it would be of particular interest to give, in brief, a description of the average length of economically active life for males in Nepal. The gross active years for population 10 years of age and over in Nepal were 50.18 and 19.26 for males and females respectively.* The net

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* The gross years of working life represent the average number of economically active years for those men out of a generation who do not die before retirement age. It is calculated by applying the age specific activity rates to the age interval and summing up the products. Therefore, countries are quite similar in the gross years of active life except where basic variation in activity rates after age 15 exists.

years of working life is a refined measure which indicates the number of working years curtailed by mortality. Taking the active population 10 years of age and over, the calculation of this measure is as follows:

	Active Years at Ages	
	10 and over	**15 and over**
1. Gross Years of Active Life	50.78	47.82
2. Expectation of Active Life at Birth	25.62	24.62
3. Loss of Active Years by Mortality	26.15	23.20
4. Expectation of Active Life at Age 10	36.56	34.40
5. Loss of Active Years by Mortality after Age 10	14.22	13.42

2. Compared with other countries these findings tend to agree with the pattern of activity life in the agricultural countries. The loss of activity years in Nepal amounted to 13.42 years in 1971 as against 14.4 in India, (1953-54) and 16.4 in Thailand (1956) and 11.9 in The Philippines (1958).*

3. Net entry from the inactive to active status in the age group 10-14, is remarkably high due to the high participation rate in this age group. The accessions to labour force rates presented in the working life table for males table (6.21) were biased toward the age group 20-24, because of the effects of sharp differences in participation rates in the first three of four successive age groups. Similarly withdrawal from the active to inactive status reaches its maximum at the age group 55-59.

4. Applying the age specific participation rates to the actual labour force and inactive population the crude rate of entry to the labour force, retirement and losses by death were 36.6, 6.9 and 15.1 per thousand respectively. The losses from labour force due to mortality are by far higher than losses due to withdrawal from the

* UN's Demographic Aspects of Manpower, Report 1, Sex and Age Pattern of Participation in economic activities, table 1. A 7. p. 69 ff.

Table 6.21 – Abridged Working Life Table for Males 1971 (a)

Age	Stationary Population					Average Active Years Per Active Survivor of Age x	Components of Change	
		In Labour Force						
	In Population	Number	% of $_nL_x$	% of Life	In Labour Force		Accessions to labour force per 1000 $_nL_x$	Net Retirement into In-active Life
	$_nL_x$	$_nL_wx$	$_nw_x$	^8L_x	$^oe^w_x$	$_nS_x$	$_nA_s$	$_nR_x$
	Within	Age Groups			At Beginning of Age Group		Between Successive Groups	
10-14	332,900	197,076	59.2	44.3	36.6	41.0	333.2	0.0
15-19	323,880	245,117	75.7	40.2	34.4	26.9	125.7	0.0
20-24	311,333	279,577	89.8	36.5	31.7	33.1	191.1	0.0
25-29	296,405	281,881	95.1	33.1	28.6	29.5	143.1	0.0
30-34	280,373	270,840	96.6	29.7	25.2	26.0	72.6	0.0
35-39	262,655	255,826	97.4	26.4	21.8	22.4	23.7	0.0
40-44	242,662	235,867	97.2	23.1	18.4	18.9	0.0	22.2
45-49	220,270	213,221	96.8	20.0	15.0	15.4	0.0	103.3
50-54	194,862	183,170	94.0	17.0	11.6	12.1	0.0	63.2
55-59	165,988	154,867	93.3	14.2	8.3	8.8	0.0	444.6
60-64	133,167	85,360	64.1	11.5	4.8	6.1	0.0	153.5
65-69	96,970	39,273	40.5	9.3	2.5	4.9	0.0	84.3
70 & over	117,998	19,470	16.5 (b)	7.5	1.2	4.4	0.0	32.8

NOTE: (a) Based on abridged life table number 3.24.
(b) Extrapolated from curve.

active to the inactive population and the expectancy of working life at age 10 (36.56) is comparatively low. There is no doubt that substantial reduction in mortality level would basically increase the expectation of working life, and improve the efficiency of the labour force. It does not necessarily imply a starting point for improving economic conditions in the country while fertility remains essentially unchanged, since it is fertility rather than mortality which is the primary determinant of the population age structure.

PART VII

Conclusion and Recommendations

1. The population and housing census is a huge and very costly operation in which a considerable amount of money is invested. Generally, three groups of institutions are usually involved in the census undertaking, namely, the Central Bureau of Statistics as the planning, organizing and executing agency, the different ministries and departments of the government and finally the public. As a national project, the census requires for its success the closest cooperation of the above mentioned groups. For the greatest utilization of the census operation, other ministries and departments such as the Ministry of Education, the Ministry of Agriculture, the Ministry of Health, the Ministry of Work and Power and the Department of Land Survey, should be consulted on the subjects for whom data are to be collected including tabulation programme. For the coming census, we recommend, therefore, that a *Census Committee* or a *Census Advisory Board* be constituted under the chairmanship of the *National Planning Commission* comprising all ministries and departments concerned. The functions o this Board will be mainly to give advice on the census programme, as well as, to recommend, and make available to the Executing Agency (the C.B.S.) all necessary funds, transportations, materials and personnel. Evidently, the close involvement of the other governmental departments in the census planning and preparation would not only give the participants the opportunity to acquaint themselves with the population data of this country but also will render help in smoothing out all possible difficulties that may be encountered during the census undertaking.

2. One of the important aspects of a national population

census in addition to providing comprehensive data on the population characteristics is to make provision for coherent data on housing. Various characteristics of the housing unit such as structure, type of construction, number of rooms, source of water, tenure, kitchen and bath-room appliances, and many other statistics would give a clear picture of the present housing conditions, as well as providing helpful indicators to the planners for deciding the prospective housing requirements of the country.

3. Reviewing 1971 census method, it should be outlined that the census schedule was partially pre-coded. Admittedly, all preparatory work, training of personnel, and the field work leads to the completion of the schedule. Moreover, the post-enumeration work including the post-enumeration check, editing, coding and tabulation of the results is based on what the schedule contains. A pre-coded schedule- which is very often used in KAP (Knowledge, Attitude and Practice) studies- requires highly qualified and well-trained personnel who can carefully and efficiently carry out the interview. This type of schedule is unfamiliar to a nation-wide census due to the fact that wrong entries in a pre-coded schedule cannot easily be detected edited and corrected in the office. Therefore, *in a nation-wide census, the conventional simple questionnaire should be used. All individual items can then be recorded in writing, and edited by cross-checking the entries*. It allows the verifications of all entries on the spot before the enumeration is over. Coding can afterwards be accomplished by a well-trained group of coders. Although this procedure may add to the volume of work, finally, it will secure better results.

4. No post-enumeration methodological reports have been written for either 1961 or 1971 censuses. A post-enumeration report is mainly concerned in describing planning, organization, frame, field work, data processing and editing and coding procedures of the census. Of course this report should rely upon systematic recording of all procedure, changes in definitions, and difficulties of the enumeration. It should also evaluate tentatively the experience gained, co-operation of the various organizations and the

efficiency of the census operation. This report will be of prime importance not only as a landmark to other censuses, but also for the analysis of the census returns.

5. The investigation on the age and sex composition of the population and on fertility statistics has revealed certain omissions and inconsistencies. Under-reporting of children below age five, particularly males, was common among all administrative zones with varying magnitude. Omissions of births, children ever born and children still alive were apparent for women passing age 40. Age reporting on the other hand, has shown a strong tendency towards concentrating on ages ending in "0" and "5" particularly age 20, 40 and 60. Perhaps, the people in some instances were intentionally or unintentionally, reluctant to give accurate statements of their individual characteristics, but it should be borne in mind that, however, competent and efficient the enumerators may be, correct reporting of age unavoidably depends upon the people achieving a certain level of educational, cultural and social development. Yet, improvement in data collection methods can be sought in devising a new set-up at the lowest level of the census organization. In 1971 census there were two types of enumerator responsible for collecting the data.

The *Kharidar* who prepared the household list, and further supervised the enumerators (the Mukhiyas) assigned to his area, and the enumerators (the Mukhiyas) who filled-in the census schedule. Since the minimum requirements for recruiting a Mukhiya were his ability to read and write, one should expect that a considerable proportion o the 12,000 enumerators recruited in 1971 were unqualified to fill-in the census schedule and carry out the enumeration and code the items properly. The Kharidars who have completed the S.L.C. level were in fact better fit to do the latter job. However, it is evident that the Mukhiyas due to their very low educational standard could not carry out the enumeration as it should be done. We shall present here some proposals which came out from direct investigation into this matter and which could be only of a transient nature if more qualified enumerators were

made available to the coming census. For 1981 census we recommend the following procedures:

(a) The Kharidars are more qualified to carry-out the primary enumeration and fill the census schedule during a specified period (not more than three months), before the census day. (b) The duty of the Mukhiyas, who should be given an intensive training course, will be mainly to check the entries on the census day by crossing out the names of persons depleted by deaths and out-migration, and jot down the characteristics of new births and in-migrants occurring during the enumeration period. In this case the Mukhiya will find in front of him few cases in which he has to write down further details in a schedule which already contains the particulars of the household members. Besides that, the Mukhiya can verify all omissions which occurred in the primary enumeration.

6. Inspite of the fact that various fertility and mortality measures can be derived from a population census, a census is no substitute for vital statistics. Accurate and comprehensive vital statistics are of basic importance not only for demographic research, but for almost all fields of social, economic and health policy. Government planning authorities, and executing agencies involved in public health, maternal services, education, food supply and housing depend for their activities on reliable information on birth a death statistics in order to keep their activities in line with the present and prospective needs of the population.

7. By ways of mathematical procedures it was rather difficult to graduate the severe irregularities in the age structures of 1961 and 1971 censuses, due to the extraordinary shifting of ages from one age group to another and the heaping of ages in digits ending in zero and five. A graphical method was therefore used for smoothing the data. Substantial differences in the age and sex composition of the population of various regions have been found. The influx of migrants to the Terai has considerably distorted the balance among sexes in other regions. Out-migration of males particularly from the mountain districts to outside the country has also played an apparent role in the excess of female population

in the mountain areas. Regional differences in the proportion of population under (15) years of age can be attributed to differences in under-reporting rather than to genuine differences in fertility and mortality levels.

8. One of the most outstanding aspects of the population distribution by locality in Nepal is the dispersion of population in small localities. More than 83 percent of total population is living in localities comprising less than 5,000 persons. Dispersion of the population in small localities over a very wide area carries certain social and economic difficulties. It either implies excessive costs for constructing roads and other infra-structures such as schools and public health clinics, or unbalanced economic growth where localities accessible to the centre or to the main trading and manufacturing cities will have better changes of economic growth, while the remote areas will remain in a stagnant situation of underdevelopment.

9. In the absence of vital statistics we arrived at the level of mortality by three independent approaches. These are first, the estimation of mortality based on the records of population growth between 1952/54-1961 and 1961-1971 censuses and the age distributions provided by 1961 and 1971 censuses. Second, the stable population analysis for 1961 and 1971 age distributions and third, the estimation of mortality based upon information on children ever-born and children surviving in 1971 census. Crude birth and death rates for total population estimated by stable population analysis for 1961 turned out to be 42 and 27 per thousand respectively, while estimates according to 1971 age structure were 41 per thousand crude birth rate and 21 per thousand crude death rate. This result seems to agree closely with the present trend in developing countries, that is, constant or slightly declining fertility and gradually declining mortality.

10. After we were able to assess the approximate death rates for the periods under discussion we constructed two sets of life tables. For the period 1952/54-1961 expectation of life at birth was 37.4 years and 35.1 years for females and males respectively, and for the period 1961-1971 expectation of life at birth was 39.9

years for females and 37.0 years for males. As revealed by the constructed abridged life tables Nepal has gained only 0.25 years per year in the male expectation of life and 0.20 years per year in the female expectation of life.

11. Natural growth was about 2 percent per annum in the period 1961-71. Actual growth rate has been slightly smaller because of emigration, but disregarding the minor reduction, the trend is clearly upward. Mortality has slightly declined over the period 1961-71. The decline will accelerate in the near future as a response to social, health and economic development. But as long as fertility keeps its present high level, the population growth rate will rise.

12. Marriage is universal in Nepal. Almost every female marries before reaching age 30 and every male marries before reaching age 35. Child marriage was common among the Nepali people. However, the statistics have shown a substantial decline in early marriage. A widow is not allowed to remarry according to Hindu Traditions, but recently laws have eliminated such types of restrictions. Divorce on the other hand is more frequent than the conjugal distribution of the population has revealed.

13. The age composition of the population provided by 1971 census does not reflect a prevalence of high fertility rates. Child/women ratio (587 per 1000) is substantially lower than the corresponding value given by censuses of India, Pakistan and Sri Lanka. Total fertility rate calculated from information on number of births reported to have occurred in the year preceding 1971 census amounted to 3.08 children per woman. The gross reproduction rate turned out to be (1.5) and the net reproduction rate below replacement. Regarding the marital distribution and on the assumption that fertility control has an insignificant effect, one should assume a much higher level of fertility than the tables on children ever born have suggested. Brass' technique was used in deriving fertility measures in Nepal after the elimination of age miss-reporting for women in the age groups 15-50: total fertility rate 3.06 and the net reproduction rate 1.70. The intrinsic rate of growth is 1.8 percent per annum.

14. It should be emphasized, however, that mortality and fertility indicators of which the census could give only certain approximate measures need to be studied more intensively in order to arrive at the actual demographic indicators and their influences on the future demographic course of changes. A population census cannot help but keep within its frame a limited number of facts which can easily be collected in a single short interview. The demographic sample survey and the recording of vital events which at present are carried out independently, investigate by a different approach and more coherent manner the occurrence of births and deaths. The successive rounds of these surveys would finally give more consistent and detailed data on the levels of fertility and mortality in the country. Enough time can now be devoted to the interview in these follow-up surveys than in a single round in a census. The single round because of the very nature of a census undertaking is very short and limited to certain facts. However, it should be ascertained that the demographic sample survey and the vital registration system are indispensable means to substantiate the more general findings of the census. But, demographic data collection which is a function of time is dealing with people of different incentives, motives and ways of thinking. Therefore, unless these surveys gain rapport with the population included in the survey, the results will only approximate, to a certain limit, the actual rates. But ardent work, supervision, and close follow-up of the survey will ultimately arrive at the actual fertility and mortality levels.

15. Proportion literate 10 years of age and over in 1971 was 14.32 percent for total population (24.72 percent for the males and 3.66 percent for the females). Rural-urban and inter-regional differences in the level of literacy are widely pronounced. In urban areas literacy proportions for the population 10 years of age and over amounted in 1971 to 46.95 percent, while in rural areas the proportion literate was 12.90 percent. Nevertheless, the comparison between 1961 and 1971 census has shown that a tremendous effort aiming at raising the standard of education in one decade has been made.

16. Inspite of the arduous efforts being made for providing education to both sexes in the elementary and middle secondary stages, enrolment rates are substantially low. It amounted to 23.91 percent and 6.56 percent for males and females respectively in the age group 6-14. Although information on the drop-out rates is lacking, child labour and many other statistics give the idea of high drop-out rates. On the whole, school enrolment in the urban sector is extremely higher than school enrolment in the rural sector. Educational facilities including buildings, trained teachers and educational materials are generally urban privileges.

17. The qualities of education needed for a successful implementation of the national economic development plans, and to promote the social and economic standard of living of the population in a prosperous economy, comprise a fairly high amount of general knowledge, understanding of the ultimate goals underlying the social and economic plans and appropriate working attitudes of a highly qualified labour force in addition to specific administrative and organizational capacities. The wide variety of technical and vocational institutes in the country denote that a build-up of technical labour fore is in progress.

18. Reviewing the educational statistics available for Nepal, the main source of these statistics are 1961 and 1971 censuses. Statistics on school enrolment as given by 1971 census may not give exactly the actual total enrolment, because the census measures enrolment at a certain point of time rather than investigating the current number of students over a completed academic year. The second source of information on educational statistics is the Ministry of Education. The statistical reports published by the Ministry for the years 1965-66 and 1966-67, although they contained very useful information on the number of students enrolled by district, age, sex and educational cycle, were far from being based on a complete coverage of all the 8,434 schools in the country. However, strenuous efforts are being made to arrive at 100 percent coverage of all schools in the country. The urgent need for comprehensive annual statistics on education does not need to be emphasized.

19. In order to maintain immediate publication of the results, the computerization of data processing in co-operation with the C.B.S. should preferably replace the present manual data processing.

20. The preceding analysis was based on 1961 and 1971 censuses and could, therefore, not take into consideration, educational, health and occupational and industrial developments that occurred after 1971. In the field of education further remarkable improvements have taken place both in the number of students enrolled at all levels and in the number of schools opened in various parts of the country. In addition to that, new designs for tabulation programme should be developed to agree with the divisions of the new system.

21. The classifications of the economically active population by industry, occupation, socio-economic status and educational attainment furnish at a certain point of time, a statistical inventory of the nation's manpower and its' utilization. Certain inconsistencies can be traced in the labour force participation rates and in the socio-economic status primarily due to difference in the classification between 1961 and 1971 under the inactive category of housewives while they might have been practicing farming or assisting in retail trade activity. It could cause great difficulties to arrive at specific definitions of economic activity essentially because all family members form a unique production unit. Every member of the family would have been engaged for a certain period of time in a certain activity either in the field or in other activities related to agricultural production. The classification of economic activity into primary and secondary activities would provide a clearer picture of the industrial and occupational composition of the labour force.

22. Under the existing economic conditions, the highest proportion of the labour force is engaged in agriculture. Beyond that varieties of jobs and skills are very limited. The very low supply of professional, technical, administrative and managerial workers reflect, in some ways, the past educational opportunities provided for the population and in some respects the present economic and

industrial structure of the country. Compared with other developing countries in the ESCAP region, Nepal has a fairly low proportion of professional and managerial workers and skilled labourers. A detailed list of the labour force by occupation and educational level would give a better idea of the technical and professional labour force in the country.

23. Exactly half of the population in the age group 10-14 are said to be engaged in economic activity. Employment of young people is in many ways related to the amount of schooling they have received before entering the labour market. Child work is economically disadvantageous and socially unacceptable. It is anticipated that progressive developments especially in primary education will bring about a fundamental drop in children participation rates in economic activity.

24. The industrial and occupational compositions of the labour force are characterized by a predominance of workers engaged in primary economy. The primary sector, that is, agriculture and zrelated industries as well as mining and quarrying, comprises 94.4 percent of the economically active population. The secondary sector which covers all activities engaged in the process of primary products, disregarding the stage of production such as manufacturing, construction and public utilities comprises a tiny proportion of 1.20 percent of economically active persons. Finally, the tertiary sector is offering employment for 4.42 percent of total labour force.

25. The proportion of labour force in agriculture declines as a country advances in economic development, from a proportion over 80 percent for the least developed, to 11.20 percent for the most developed countries, and 5 percent in the case of Britain and Belgium which import a considerable proportion of their food. Concerning Nepal, agriculture has a highly intensive labour force with probably very high disguised unemployment. Inquiries among farm holders based on a uniform questionnaire could provide evidence on primary and secondary occupations, number of days per year spent in agricultural activity, average duration of employment, and man/land ratios in cultivated areas. The

unemployment situation needs to be studied from surveys either concerned with agriculture or from household surveys. The latter would be more appropriate if comprehensive unemployment levels are to be considered.

26. In the preceding analysis we tried to find out inter-regional differences in demographic characteristics and to discuss changes which have occurred in the inter-censal period in population size, distribution, education and labour force. It has become obvious that Nepal has much linguistic, racial, religious, cultural, educational and climatic diversity. The people in the Terai differ in their racial and linguistic origins from the people spread over the sub-Himalayan regions, as well as, in their social, cultural and marital norms. Furthermore, there are basic differences between the north and south in agricultural production, and working habits. Data of 1971 census was not exactly comparable to cross-classifications of 1961 census due to the fact that 1971 census has followed a completely different administrative division, which has taken into consideration the representation of the three ecological regions, namely, the mountains, hills and Terai in each zone where it was possible. Broader classifications by development region have led to the concealment of differences among regions. In addition to tabulations by administrative divisions summary tables by mountains, hills and Terai will serve to make inter-regional differences more evincible.

27. To conclude this part Nepal is anticipated to witness rapid demographic changes which demand continuous observation and investigation by new techniques and methods of research developed in demographic and social sciences. Four main topics are at present in need of follow-up studies, namely, fertility and mortality, education, labour force and employment and migration. *A multi-purpose household survey* on a moderate scale combining these topics would serve to provide continuous information on these subjects. The analysis should be mainly concerned with factors underlying population change, and the existing problems, and further would suggest ways and mean of solving these problems. The multi-purpose household survey can in the same time

raise new questions on different topics for further investigation to supplement the census returns, since the varying needs of the society and government bodies for detailed information is a perennial task.

28. In the census of 1971 C.B.S. had to face difficulties in locating villages and delineating district, panchayat and ward boundaries. The C.B.S. must acquire and maintain good quality maps properly delineating district panchayats and ward boundaries approved by Home and Panchayat Ministry in order to conduct the census efficiently and smoothly. The map should contain in minute details the location of each and every villages and the access to them. In absence of these maps, enumeration becomes very difficult resulting in the repetition and omission of villages. In order to facilitate the works of C.B.S. it is suggested that prior to making any changes in the administrative divisions of the country C.B.S. should also be consulted.

Appendix I

(1961 Population Census Notification)
Section 10 Kathmandu, 21 Chaitra 2017 No. 48

His Majesty's Government
Ministry of Finance and Economic Affairs

The following "notification issued by HMG is published for the purpose of public information.

In exercise of the authority vested in the "Statistical Act 2015", Section 4, HMG is issuing the following notification:

1. Name and Commencement:-

1. The name of this notification "is statistical (Population) census notification."
2. This Notification shall come into force with immediate effect.

2. Definition:-

1. Unless otherwise interpreted according to the context, in this notification.
   a. Act, shall mean, the Statistical Act 2015
   b. The Department, shall mean, Central Bureau of Statistics, as established by HMG.
   2. The words and phrases given in this Notification, but not defined here, shall be interpreted according to law.

3. Compilation o Census Data:-

1. After the commencement of this Notification, the Director of the "Department", or the officers deputed by him, shall collect

the information stated in the schedules from every individual, family and household all over the Kingdom of Nepal.

2. The following personnel, or his subordinates, shall provide necessary assistance to the Officers engaged in census under taking, as mentioned in the previous clause (1)

a. The Military, Police, and Air Commanders
b. The Landlords, Birtawars of Rajya, Trust, and Birtas
c. The Managers and Chiefs of Public Institutions like (Charity House, Mental Hospitals, Leprosy Sanitoriums, and Religious Monastries).
d. Semi-official personnel, (Thari, Miukhiyas, Jimmawals), Zamindars, Patwaris……etc.)
e. Village Panchayats
f. Managers and Chiefs of Hotels, Boardings, Barracks, Factories, and Mills.

4. The Authority of Specifying Boundaries:-

The Director of the Department can specify the boundaries of a census enumeration area to each officer for the purposes of conducting the census according to clause (3)

5. Census Publication:-

1. To publish the census findings, and the census report, upon the request of official and semi-official, institutions or research workers for publication of data including either the whole country, district, or thums, the Director can allow the persons concerned to copy the required information against remittance specified by law:
2. The Director can prepare, and publish any number of copies of the census findings as deemed necessary by him.

6. Inter-Departmental Cooperation:-

The Department can directly appeal to all ministries, departments, and other governmental offices of HMG on the subject matter of the census, and accordingly request for cooperation. It shall be

the duty of the above mentioned bodies to comply with such a request.

7. Facilities of Transportation:-

It shall be the duty of the District Police Officer, or other offices, to make all necessary arrangements for providing all requested transport facilities to the census officers for moving from one place to another.

8. Security Arrangements:-

While in course of their duties during the census operation, the officers can request help from the Police and Magistrates for the sake of their individual security, and it shall be the duty of the concerned offices to provide the requested help.

9. Actions against Instigators:-

It shall be the duty of local magistrate to put in custody or to take immediate action against any person trying to hamper the census operation, or instigate the people against the enumeration.

Appendix II

(1971 Population Census Notification)
Section 10 Kathmandu, 6 Baisakh, 2028 Vol. 1
Notified by the National Planning Commission Secretariat

In pursuance of the authority vested in Statistical Act 2015, Section 4, HMG have issued the following Notification:-

1. Name and Commencement:-

i. This shall be called the "Statistical (Population) Census Notification" 2027.
ii. This Notification shall come into immediate effect.

2. Definition:-

Unless otherwise interpreted according to the context in this Notification.

a. Act Shall mean the "Statistical Act 2015".
b. Department shall mean the Central Bureau of Statistics.

3. Compilation of Census Data:-

The Department shall compile data on every individual, family, and household as given in the schedule within a specified period of time.

4. Appointment and Nomination of the Officers:-

For the purpose of conducting the census, the Director can appoint or employ as officers, the members or employees of the Village or Town Panchayats, or members of the Class Organizations below the District Panchayat or their employees, or the teachers and employees of middle Schools recognized or aided by HMG, or Zamindars, Patwaris, Talukdars, Jimmawals, Tharis and Mukhiyas.

5. Functions, Duties, and Right of the Officers:-

i. The Officers engaged in census operations mentioned in (3) shall collect the necessary data as required by the schedules on every individual, family, household or neighbouring households or families with a specified period of time, and in a specified area, and it shall be the duty of all concerned to provide the necessary information and cooperation.
ii. These officers shall, after collecting the data as requested in the schedule, send them in specified time to a specified officer or office.
iii. The Officers shall provide statements on the appropriate enumeration forms after compiling the necessary information in a correct manner.
iv. The Officers engaged in census operation shall be entitled to remunerations, daily and travel allowances as specified by HMG for the census period.

6. The Procedures for Compiling the Census Data:-

i. The ward members of the village or town panchayat should be consulted for considering documentary evidence, if any is available, under the possession of a household resident,
ii. The enumeration of household should respectively follow the numbers of households in each block in the ward so as not to miss any one of them,
iii. Persons not having any permanent residence in the Kingdom of Nepal, shall be enumerated as where they are found,
iv. Persons having permanent residence in the Kingdom of Nepal shall be enumerated as belonging to the permanent residence shall be enumerated as belonging to the permanent residence of that panchayat even if they are found to be residing temporarily in a different place, for the sake of services, trade, schooling and tourism.

7. Cooperation for the Census Operation:-

It shall be the duty of the government officials, the members and workers of Panchayats, and class organizations, to provide necessary cooperation to the Department or the officers deputed by the Department for census operation.

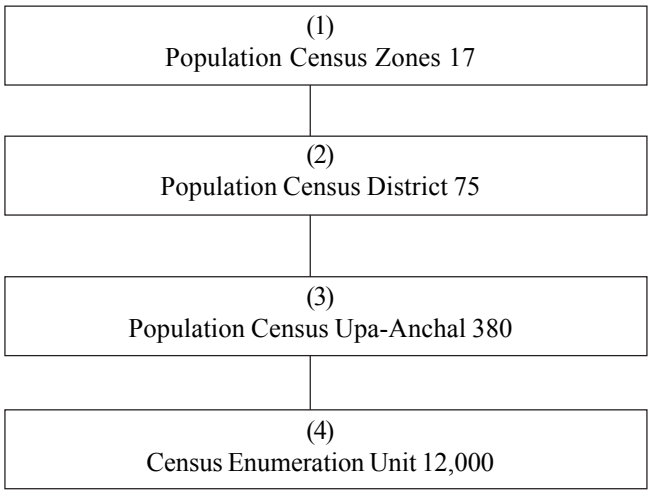
8. Uses of Compiled Data:-

The Department shall present to HMG a report on the census after compiling, editing, and processing the census data. The census report shall be published thereafter.

Even before the publication of the census report the Department, if it deems proper, can provide the whole data, or parts thereof to special institutions or research workers under the fulfillment or certain conditions.

Appendix III

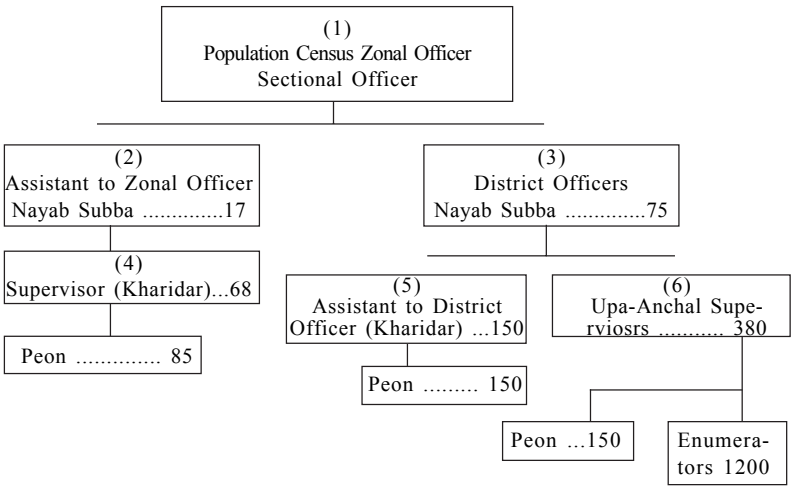
Census Organization Proposed Regional Organization For National Population Census of 2028



NOTES: 1. The 14 administration zones have been divided as 17 census Zone from the view point of convenience transportation, communication and also on the basis of population density etc.

2. The administrative districts have been maintained as they are.
3. Taking 10 Panchayats to be equivalent to one Upa-Anchal, nearly 3,800 Village Panchayats have been taken as 380 Upa-Anchals.
4. There are 34,200 wards in nearly 3,800 Village and Town Panchayats. The area of 3 wards have been taken as a census enumeration unit.

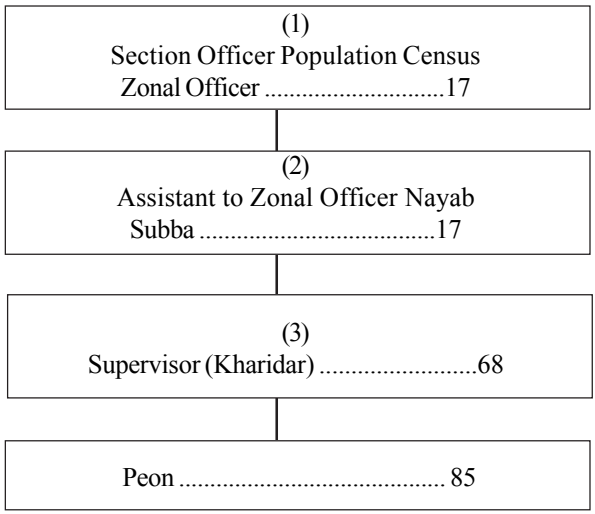
Proposed Staff for Organization Chart
For National Population Census of 2028
Zonal Office, District Office, Upa-Anchal Office



NOTES:
1) The zonal Officers should take the entire responsibility of supervision and guidance regarding the census operation in the Zones.
2) The Assistants to the Zonal Officers should assist him in administrative as well as technical works.
3) The District officers should take administrative as well as technical responsibilities.
4) The supervisors should assist in the administrative works of the Zones besides helping the Upa-Anchal Supervisors in the rural and urban areas.
5) The Assistant to Direct Officers should assist in the district administration as well as help to Upa-Anchal Supervisors if necessary.
6) The 380 Upa-Anchal Supervisors should take the entire responsibilities of census enumerations in their specified area with specified time.
7) ……

Proposed Staff Organization Chart
For National Population Census of 2028

Zonal Office



NOTES:
1. Every Zonal Officers should take the entire responsibilities of census enumeration in their respective zones including supervision and guidance.
2. The assistant to Zonal Officers should assist the later in administration as well as technical works.
3. The Supervisors (Kharidars) should assist in the Zonal administration as well as help the Supervisors of the Upa-Anchals.

Appendix IV

A – 1961 Census Tabulations

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Appendix V

List of the Languages Recorded in the Censuses

	Languages Recorded in 1952/54 Census	Languages Recorded in 1961 Census	Languages Recorded in 1971 Census
1	Nepali	Nepali	Nepali
2	Maithili Pradesh Dialects	Maithili	Maithili
3	Tamang or Lama	Bhojpuri	Bhojpuri
4	Eastern Terai Dialects	Tamang	Tamang
5	Newari	Abadhi	Abadhi
6	Tharu	Tharu	Tharu
7	Maithili Pradesh Dialects	Newari	Newari
8	Magar	Magar	Magar
9	Mid Western Terai Dialects	Rai-Kirati	Rai-Kirati
10	Rai-Kirat	Gurung	Gurung
11	Gurung	Limbu	Limbu
12	Limbu	Bhote-Sherpa	Bhote-Sherpa
13	Morang Pradesh	Morang Pradesh	Rajbansi
14	Hindi	Rajbansi	Satar
15	Bhote-Sherpa	Satar	Sunuwar
16	Far Western Terai Dialect	Sunuwar	Danuwar
17	Rajbansi or Tajpuri	Danuwar	Santhali
18	Urdu	Santhali	
19	Sunwar	Bengali	
20	Satar	Chepang	
21	Bhojpuri	Jhangar	
22	Chepang	Thami	
23	Thami	Dhimal	

	Languages Recorded in 1952/54 Census	Languages Recorded in 1961 Census	Languages Recorded in 1971 Census
24	Bengali	Madwari	
25	Danuwar	Majhi	
26	Majhi	Thakali	
27	Dhimal	Pahari	
28	Jhangar	Hindi	
29	Majwari	Ziral	
30	Kumkale	Urdu	
31	Thakali	Kumal	
32	Darai	Darai	
33	Jirel	Lapache	
34	Bgansi	Macha	
35	Raji	Raji	
36	-	Udissa	