

CHAPTER II

REVIEW OF THEORETICAL LITERATURE

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2.1 INTRODUCTION:

The science of human resources takes birth in demography. The 'manpower' or 'Human Resources' may be thought of as 'the total knowledge, skill, creative abilities, talents and aptitudes of workforce.' Of all the 'M's in the management (i.e., the management of material, men, machines, methods, markets, money). The most important is 'M' for man or human resource. It is the most valuable asset which appreciates with the passage of time. Human Resources are utilised to the maximum possible extent in order to achieve individual and organisational goals. The socio-economic performance and resulting productivity of particular village, are directly related with the quantity and quality of its human resources. The man is rather unique factor of production because he has capacity to think, to feel, to conceive, to plan etc. Such type of capacity is not found in any other factor of production.

Manpower is also known as an 'Economically Active Population'. It is that part of the total population which furnishes supply of labour for the production of economic goods and services. The study of economically active population occupies an important place, and in recent times, there is increasing interest shown in the study of various aspects of rural manpower. This is due to the fact that economic and social development of nation as also of rural area depends on the number of persons who are economically active, their quality of work, regularity of their employment etc.

2.2 OPERATIONAL DEFINITION:

Operational definitions of the terms to be used in the study are provided. This is mainly to avoid terminological confusion regarding term like, 'Population', 'Manpower', 'Labour Force,' etc.

(a) Population:

Population refers to all living people. Manpower is a part of total population. The term 'working population' is used to denote population of working ages, i.e., from 15 to 59 years. Labourforce can be regarded as a derived concept from the original concept of 'working population.' The concept of working population is primarily based age limit criterion, while the labourforce concept is based on the criterion of participation in economic activities in a given specific period to be called as reference period. Of course, in labourforce concept also the lower age limit is prescribed. The persons who do not participate in economic activities are also included in 'working population' but not in labourforce even if such persons fall in the age group of 15 - 59.

(b) MANPOWER:

The term 'manpower' still goes closer to the term labourforce. The difference between the two is so thin that unless needed specifically, the distinction remains a theoretical exercise. Manpower refers to potential or maximum available labourforce. In manpower concept, no specific reference period is prescribed. The emphasis is not on person's participation or non-participation in economic activities. Manpower attempts to

account for all persons capable of doing any kind of work. It reflects the aggregate human resources that could be put to use.

2.3 CONCEPT OF MANPOWER:

Basically manpower concept is a macro concept, which is applied to a well defined rural area i.e., village Khanapur of Belgaum District. The study attempts to investigate the changing pattern of manpower rate of generation and ratio of manpower utilisation in Village Khanapur. The manpower and labourforce as it is understood in the literature of demography are taken as synonymous terms. Because both manpower and labourforce signify economically active population.

2.4 DEFINITION OF MANPOWER:

According to United Nation's Document 'Principles and Recommendation for National Population Census' defines manpower as follows:

"Manpower involves all economically active population either male or female who furnish the supply of labour for production of economic goods and services. It also includes both employed and unemployed people adopted in the census during the time reference period."

It is specifically considered that production of economically goods and services comprises all production and processing of primary and secondary product. Whether for market, or for barter or for own consumption.

2.5 HISTORICAL BACKGROUND OF MANPOWER:

The broad stages in the development of concept of manpower are as follows:

- (i) In ancient times people of all ages, with the exception of a few young children, had to work. This was necessary in that period of subsistence economy. The manpower as distinct from total population was virtually not in existence. In pre-industrial societies, almost all the economies were agricultural, with a few indigenous industries. People were engaging work without any formal system of wages and salaries. Labour market, in the strict sense of the term, was not prevalent. In the early stage of the development of trade and commerce, there was a sort of specialisation of the people among the various economic activities, but the manpower as a formalized concept, could not in any way be observed.
- (ii) During the Merchantilist Period, European states exercised to some extent, a control over the working force in the interest of the national policy. The rise of *Laissez-faire* policy, however led to the lessening of the interest in the population problem on the part of the government. The utilization of manpower was left entirely at the mercy of the operations of market economy, without any intervention by the state. It was presumed that the *laissez-faire* doctrine had an built-in harmony which implied an optimum allocation of all economic factor, including the labour.
- (iii) In the 19th century, many countries of the world started conducting population censuses. The statistics of manpower occupied a central place in national population censuses. The industrial and occupational distribution was taken as a criterion for the measurement of industrial growth. The subject like unemployment in rural and urban

areas, rural backwardness and urbanisation, over-concentration of industries and people in cities and the problem of population have come to increase the importance of collecting and analysing the manpower statistics.

(iv) The Great Depression of 1930's had proved that the problem of unemployment became one of the serious problems demanding urgent attention. It was thought necessary to solve this problem by some action on the part of the government. There was, a lack of satisfactory measurement of unemployment.

(v) The most well defined objectives of the First Five Year Plan (1951-56) was the maximum utilization of idle manpower in the country and the creation of employment opportunities in rural area through improvements in agriculture, development of cottage and small-scale industries.

2.6 EMERGENCE OF MODERN CONCEPT OF MANPOWER:

'Economically active population' or 'manpower' has its origin in demography. Demography is science of human resource in the course of its study of economic functions of population, development the concept of economically active population or manpower.

In this recent time, most of the people do engage work either of this or that. Quite a few people, particularly very young, sick, aged and handicapped, due to their inability or disability do not engage in work. Some people are engaged in what is called 'socially undesirable' or 'anti-social' activities. Such people rarely report their true work roles. Excluded from the total population, such few select groups of the people. Others certainly perform or attempt to perform socially acceptable jobs. the manpower, however, is not a

sum total of all these people engaged or attempting to engage in socially acceptable jobs. In real sense of the term “manpower refers only to that portion of the people, who participate in the activities of market economy and thereby influence the process of economic development.” the concept of manpower gets developed in the process of overall economic development and the development in the size, nature and structure of manpower, helps to give directions to the process of economic development. The transition of an economy from subsistence stage to market economy immediately gives precise dimensions to the concept of manpower.

In the subsistence economy, people mainly work for satisfying their own consumption needs. Marketable surplus is almost nil. The labour market does not exist. There is no participation of the people in the work for the purpose of offering their labour for price. The manpower is mixed up with the total population in such a way that it is highly difficult to determine who performs economic activities and who performs non-economic activities. In the market economy, the labour market develops in which people can prefer their labour for the price or profit. They work to earn income or profit with the help of which they can purchase the consumer goods they need. The working of people under such circumstance can be determined and designated either as economic or non-economic (household). Those who engaged or attempt to engage themselves in economic activities of the market constitute the manpower. It is in this way that the transformation of subsistence or agricultural economy into industrial or market economy results into emergence and growth of the manpower. The following are some of the important factors which actively operate in the emergence of modern concept of manpower.

2.7 FACTORS OF EMERGENCE OF MODERN CONCEPT OF MANPOWER:

1) Technological Development:

This is a most important factor that has assisted modern concept of manpower to come into existence. Technology improves the productivity of labour. The rest of the people, particularly young children and the old persons, are relieved from working and only the able-bodied adults can manage to produce the required amount of economic goods and services. Again improvement in productivity due to technological advancement helps to reduce working hours, without affecting the supply of economic goods and services.

2) Division of Labour and Specialisation:

Due to the application of these principles, output per worker increases. It also increases the dependence of one worker on the other. Exchange of goods and services gets momentum and the old system of barter exchange is replaced by modern exchange based on money. Price of the labour is paid in cash. The concept of manpower acquires its final shape. Manpower in such conditions refers to an aggregate of persons who participate in the work to earn income or profit.

3) Control over Means of Production.

In the pre-industrial economics, the means of production were under the control and possession of actual workers. Technology made the modern process of production capital-intensive. Workers due to division of labour and specialisation, lose their earlier capacity of independently carrying out the complete job. Workers remain only the suppliers of labour. A new class of capitalist and entrepreneurs emerge to control the other means of production. This helps the development of labour market on scientific lines of demand supply mechanism.

4) Exchange Economy Based on Cash:

It is again one of the pre-conditions of the modern manpower. Employers start hiring labour from the labour market. The exchange value is paid in cash. The workers can purchase goods and services which they need with such cash. In this money exchange economy, the manpower becomes a part of the bargaining system of the labour market.

5) Finally, a notion of free-contract is a necessary condition underlying the concept of manpower. The individual is free to contract his labour as he desires. A labour can decide at which level of price and in which area of economic activities, he is to offer his labour. If required so, he can also demand the written terms and conditions of his working from his employer, either individually or through his union. The discretion of a worker to have his own choice of economic activity with the help of the system of collective bargaining has significantly affected the structure of the manpower.

2.8 SCOPE OF MANPOWER CONCEPT:

The economical active population or the manpower concept is very broad. The whole population is classified into various groups and sub-groups. To understand the scope of the concept of manpower, it is necessary to see how the population is divided into several groups. The primary classification for National Population Census is as follows:

(I) Basic Groups:

- (A) Economically Active Population.**
- (B) Not Economically Active Population.**

(II) Optional Groups:

- (A) Economically active population**
 - 1) Employed**
 - 2) Unemployed.**
- (B) Not Economically Active Population**
 - 1) Home Workers / Home Makers**
 - 2) Students**
 - 3) Persons in Penal and Mental Institution**
 - 4) Income recipients**
 - 5) Others**

2.9 MEASUREMENT OF MANPOWER:

The data on economically active population have now become a regular feature of population census in almost all countries of the world. The measurement of manpower by suitable methods and techniques serves many important purposes.

- 1) Manpower measurement by way of censuses is important especially in the countries which do not have very high developed systems of economic and social statistics. Periodic measurement of persons, their occupational and industrial division provide the quantitative information about the characteristics of national economy. Such database regarding manpower is as essential for pre-requisite for devising suitable administrative programmes for socio-economic development.
- 2) Even where the data from the other sources are available statistics on manpower activities are needed for 'bench mark'. The non-census continuing series of estimates of the economically active population, employment and unemployment can be further carried out on the basis of these 'bench mark data' provided by the census manpower statistics.
- 3) The census gives economic data of the whole population including the segments like self-employed, unpaid family workers, domestic servants, etc. The non-census measures of data collection may not be comprehensive enough to cover all the groups of the population.
- 4) Manpower measurement contains the information which may not be available from other sources. For example, data classified by sex, age, marital status, dependency status, etc. These statistics are useful for manpower planning. Planning for development

particular class of people, e.g., agricultural labourers, non-agricultural labourers, women workers, etc.

5) Manpower employment and unemployment data given by the census is available not only for the nation as a whole but for regions, states, districts, villages, etc. This facilitates rural, regional and block-level planning.

6) The data on economically active population in the population census is based on the actual count of all people. The data includes information about employed, self-employed, employees, family workers, persons working on two or more jobs, unemployed persons, etc. The data are collected virtually in all the aspects of individuals. This provides comprehensive inventory of human resources of a village.

2.10 CLASSIFICATION OF MANPOWER:

The manpower concept is considered more comprehensive, through the economic data collected and tabulated in Indian census. The total population is divided between the workers and non-workers, and the workers were further divided into industrial sectors and relevant industrial categories.

INDUSTRIAL CLASSIFICATION:

The present study is to investigate the qualitative and quantitative dimensions of manpower in Khanapur village. The industrial classification of rural areas is helpful to understand the stage of economic development of the Khanapur village and provides further guidelines for the utilisation of the manpower in a desirable direction. The studies

of this kind of classification are useful for improving manpower quantity, raising productivity and minimizing unemployment and under-employment.

‘Industry’ refers to the activity of the establishment in which the manpower works. In fact, thousands of individual industries may be reported in the census. Some scheme of combining them into selected number of usable groups is required to be devised. This kind of grouping is called ‘Industrial Classification.’

As per the data available through the government census record of Khanapur village. It helps to serve the purpose of comparative studies of changing pattern of rural manpower utilisation. Some important ways of summarised classification of industrial division are as follows:

‘Industrial classification’ of manpower under India Census:

- I) Cultivators.
- II) Agricultural Labourers.
- III) Livestock, Forestry, fishing, hunting, plantation, orchards and allied activities.
- IV) Mining and quarrying.
- V) Manufacturing, processing, servicing and repairs.
- VI) Construction.
- VII) Trade and Commerce.
- VIII) Transport, Storage and Communication.
- IX) Other Services.

(A) TWO SECTOR ANALYSIS:

(1) Agriculture Sector:

Which includes cultivators and agricultural labourers (i.e., I and II)

(2) Non-agricultural Sector:

Which includes all division (from III to IX) except I & II division. i.e., livestock, forestry, fishing, hunting, plantation and orchards, mining and quarrying, manufacturing, processing, servicing and repairs, construction, trade and commerce, transport, storage and communication and other services.

(B) THREE SECTOR ANALYSIS:

(1) Primary Sector:

It includes, cultivator, agricultural labourers, livestock, forestry, fishing, hunting, plantation and orchards and allied activities, mining and quarrying etc. i.e., division from I to IV.)

(2) Secondary Sector:

Which includes manufacturing, processing, servicing and repairs and construction etc. (i.e., division V and VI.)

(3) Tertiary Sector:

It includes, trade and commerce, transport, storage and communication and other services. (i.e., from the division VII to IX.)

INDUSTRIAL CLASSIFICATIONS UNDER DIFFERENT SECTOR:

Two Sectors	Three Sectors	Nine Sectors
I. Agricultural. II. Non-Agricultural	I. Primary Sector. II. Secondary Sector. III. Tertiary Sector (Service Sector.)	I. Cultivators II. Agricultural Labourers. III. Livestock, forestry, fishing, hunting, plantation, orchards, allied activities. IV. Mining and quarrying. V. Manufacturing processing, servicing and repairs. VI. Construction VII. Trade and Commerce. VIII. Transport, storage and Communication. IX. Other Services.

**2.11 CONCEPT OF MANPOWER GENERATION RATE'S AND
MANPOWER UTILISATION RATIO'S:**

Manpower is a prime source for productive segment from the population. The growth of manpower measured by using the well-known technique of the manpower generation rate's (MGR's) and manpower utilisation ratio (MUR). The manpower generation rate influenced by the growth of population on one hand and several socio-economic factors on the other. The determinants of the dynamics of manpower of village are examined by exposing the generation rate of manpower to the critical and analytical framework which involves the division of manpower into male and female segments. The study further extends towards the similar analysis for examining the utilisation of

percentage of manpower into relevant categories of industrial activities and other economic sectors.

The present study attempts to measure the changes of manpower generation rate's (MGR) and the Manpower Utilisation Ratio (MUR) at village. So before going to verify how the manpower is being generated and utilised during the period from 1971 to 1996, by using suitable techniques of MGR's and MUR's. It is essential to understand the concept of the both techniques i.e., manpower generation rate and manpower utilisation ratio.

2.11.1 Concept of Manpower Generation Rate's (MGR's):

The Manpower Generation Rate refers to the ratio which expressed as a percentage of the manpower to population. It is a relation between manpower and population. It is nothing but the labourforce participation rate. Some people may remain economically active while others are non-economically active. Manpower Generation Rate is an important technique to measure the size and pattern of changes in the manpower i.e., economically active population. Manpower Generation Rate has assumed unique importance to examine dimensions of human resources.

The following are the important types of Manpower Generation Rate's which are commonly used.

- (a) Crude Manpower Generation Rate.
- (b) Sex specific Manpower Generation Rate.

(a) Crude Manpower Generation Rate:

This is a primary measure of the broad dimensions of the total (including male and female) manpower. It is expressed as a percentage of manpower to population. In other words crude manpower generation rate is a number of economically active person's expressed as a percentage of total population. It is also known as 'Crude Activity Rate'. This rate measures the size of the manpower in relation to the size of the population. This crude activity rate is generally calculated for male and females separately, in order to show the extent to which two sexes contribute to the stock of incomes providing workers.

The rate is useful to indicate simply the number of persons in the population who are working. The crude generation rate has an economic significance due to the fact that, higher this rate, higher the level of income per head that can be achieved under given conditions of productivity and employment.

This rate is calculated as under:

$$(A) \quad \text{Crude Manpower Generation Rate:} = \frac{\text{Total Manpower}}{\text{Total Population}} \times 100$$

It is also calculated separately for male and female rate's in the sex specific manpower generation rate method.

(b) Sex-Specific Manpower Generation Rate:

Sex is an important variable influencing the manpower generation rate's. When the Manpower Generation Rate's are computed separately for male and females. Such rates

are known as sex-specific manpower generation rate's. It is desirable to calculate these rates separately for males and females. Because males are economically more active than females. The male manpower generation rates are higher than Manpower Generation Rate's of females. The males remain more active than females on account of the following reasons:

- i) The traditional division of labour between male and females usually considered males are workers outside home, while females are house wives. This picture is changing in the course of time the rate of change is very slow.
- ii) The attachment of females to the manpower is not regular and consistent due to marriage, migration, motherhood etc.
- iii) The role of female is not easily demarkable as economic and non-economic activity, because women are active especially in the category of unpaid family workers

Due to these reasons the rate of manpower generation of male and female are necessarily different. This rate is calculated as under:

$$(B) \text{ Male Manpower Generation Rate} = \frac{\text{Total male manpower}}{\text{Total male population}} \times 100$$

$$(C) \text{ Female Manpower Generation Rate} = \frac{\text{Total female manpower}}{\text{Total female population}} \times 100$$

2.11.2 Concept of Manpower Utilisation Ratio (MUR):

The manpower is deployed in various sectors of the economy. The manpower utilisation ratio is an important technique to measure utility of human resources. The manpower utilisation ratio is also known as labourforce distribution rate's. Manpower Utilisation Ratio's aim at examining the flow of manpower in various industrial sectors and relevant industrial categories. This ratio will be very much helpful to understand the sectoral allocation of the manpower. This manpower utilisation (Distribution) among various industrial categories of village is referred to as manpower utilisation ratio of village. The economic prosperity of any region is correlated with manpower utilisation in the process of economic growth. Considering the widespread prevalence of poverty and the deficiency in development process, manpower should also be made to contribute their share in the production of goods and services. With the rapid growth of population, the manpower in the category of working age group (15 to 59 years) is also growing in number.

The study of the classification of the manpower is very useful for many purposes. The sectoral utilisation (distribution) of labour and the change in it is certainly an important indicator of the structural changes taking place in the economy in the course of economic development. The industrial classification for example, can throw light on the qualities and skill of manpower. Moreover, all these issues are very much relevant and important for economic policy in general and policy of human resource development in particular. The issues like development of scarce human skills, the absorption of unemployed manpower, the problem of surplus labour, the direction of shifts of the

manpower from one sector to another of the economy etc. are the few examples which can be tackled only if the analytical data on the manpower utilisation and movement in such utilisation over the period of time are compiled systematically. As a matter of fact, the data on the economic activities of industrial main worker are collected through the Indian censuses, 1971, 1981, 1991 and the data for the year 1996 is collected by way of field survey.

2.11.3. Framework of Manpower Utilisation Ratio (MUR) into Broad Industrial Sectors and Industrial Categories:

1) Calculation of Manpower Utilisation Ratio into Two Sector:

(I) Agricultural Sector =

$$(A) \quad \frac{\text{Total Agricultural Workers}}{\text{Total workers (manpower)}} \times 100$$

$$(B) \quad \frac{\text{Total Male Agricultural Workers}}{\text{Total Male workers (manpower)}} \times 100$$

$$(C) \quad \frac{\text{Total Female Agricultural Workers}}{\text{Total Female workers (Womanpower)}} \times 100$$

II) Non-Agricultural Sector =

$$(A) \quad \frac{\text{Total Non-Agricultural Workers}}{\text{Total workers (manpower)}} \times 100$$

$$(B) \frac{\text{Total Male Non-Agricultural Workers}}{\text{Total Male workers (manpower)}} \times 100$$

$$(C) \frac{\text{Total Female Non-Agricultural Workers}}{\text{Total Female workers (Womanpower)}} \times 100$$

2) Calculation of Manpower Utilisation Ratio into Three Sector:

I) Primary Sector =

$$(A) \frac{\text{Total No. of Workers in primary sector}}{\text{Total workers (manpower)}} \times 100$$

$$(B) \frac{\text{Total No. of male workers in primary sector}}{\text{Total Male workers (manpower)}} \times 100$$

$$(C) \frac{\text{Total No of Female Workers in Primary sector}}{\text{Total Female workers (Womanpower)}} \times 100$$

II) Secondary Sector =

$$(A) \frac{\text{Total No. of workers in Secondary Sector}}{\text{Total workers (manpower)}} \times 100$$

$$(B) \frac{\text{Total No. of male workers in Secondary Sector}}{\text{Total Male workers (manpower)}} \times 100$$

$$(C) \frac{\text{Total No. of female workers in Secondary Sector}}{\text{Total Female workers (Womanpower)}} \times 100$$

III) Tertiary Sector =

$$(A) \frac{\text{Total No. of workers in tertiary sector}}{\text{Total workers (manpower)}} \times 100$$

$$(B) \frac{\text{Total No. of male workers in tertiary sector}}{\text{Total Male workers (manpower)}} \times 100$$

$$(C) \frac{\text{Total No. of female workers in tertiary sector}}{\text{Total Female workers (Womanpower)}} \times 100$$

The division of two and three sectors of main industrial workers are made as per the classification of manpower which is presented earlier. In case of two sector industrial classification involves agricultural workers and non-agricultural workers. In agricultural workers comprises only cultivators and agricultural labourers, whereas non-agricultural workers includes all categories of workers except cultivators and agricultural labourers, i.e., it includes workers engaged in livestock, forestry, fishing, hunting, plantation, orchard, and allied activities, mining and quarrying, manufacturing, processing, servicing, repairs, construction, trade and commerce, transport, storage, communication, other services, etc. Similarly, in case of three sectors industrial classification involves primary

sector, secondary sector and tertiary sector. In primary sector includes, cultivators, agricultural labourers, workers in livestock, forestry, fishing, hunting, orchards, plantation and allied activities, mining and quarrying. In secondary sectors workers engaged in manufacturing, processing, servicing, repairs, constructions etc. and in tertiary sector includes, workers engaged in trade and commerce, transport, storage, communication and other services.

3) Calculation of Manpower Utilisation Ratio into Nine Sector:

I) Cultivators -

$$(A) \quad \frac{\text{Total Cultivators}}{\text{Total workers}} \times 100$$

$$(B) \quad \frac{\text{Total male cultivators}}{\text{Total Male workers}} \times 100$$

$$(C) \quad \frac{\text{Total female Cultivators}}{\text{Total Female workers}} \times 100$$

II) Agricultural Labourers =

$$(A) \quad \frac{\text{Total Agricultural Labourers}}{\text{Total workers}} \times 100$$

$$(B) \quad \frac{\text{Total Male Agricultural Labourers}}{\text{Total Male workers}} \times 100$$

$$(C) \frac{\text{Total Female Agricultural Labourers}}{\text{Total Female workers}} \times 100$$

III) Livestock, Forestry, Fishing, Plantation, Hunting, Orchards, and allied Activities =

$$(A) \frac{\text{Total Workers in LFFHPO and Allied Activities}}{\text{Total workers}} \times 100$$

$$(B) \frac{\text{Total Male Workers in LFFHPO and Allied Activities}}{\text{Total Male workers}} \times 100$$

$$(C) \frac{\text{Total Female Workers in LFFHPO and Allied Activities}}{\text{Total Female workers}} \times 100$$

IV) Mining and Quarrying =

$$(A) \frac{\text{Total Workers in Mining and Quarrying}}{\text{Total workers}} \times 100$$

$$(B) \frac{\text{Total Male Workers in Mining and Quarrying}}{\text{Total Male workers}} \times 100$$

$$(C) \frac{\text{Total Female Workers engaged in Mining and Quarrying}}{\text{Total Female workers}} \times 100$$

V) Manufacturing, Processing, Servicing and Repairs =

$$(A) \frac{\text{Total Workers of Manufacturing, Processing, Servicing and Repairs}}{\text{Total workers}} \times 100$$

$$(B) \frac{\text{Total Male Workers of Manufacturing, Processing, Servicing and Repairs}}{\text{Total Male workers}} \times 100$$

$$(C) \frac{\text{Total Female Workers in Manufacturing, Processing, Servicing and Repairs}}{\text{Total Female workers}} \times 100$$

VI) Construction =

$$(A) \frac{\text{Total Workers in Construction}}{\text{Total workers}} \times 100$$

$$(B) \frac{\text{Total Male Workers in Construction}}{\text{Total Male workers}} \times 100$$

$$(C) \frac{\text{Total Female Workers in Construction}}{\text{Total Female workers}} \times 100$$

VII) Trade and Commerce =

$$(A) \frac{\text{Total Workers in Trade and Commerce}}{\text{Total workers}} \times 100$$

$$(B) \frac{\text{Total Male Workers in Trade and Commerce}}{\text{Total Male workers}} \times 100$$

$$(C) \frac{\text{Total Female Workers in Trade and Commerce}}{\text{Total Female workers}} \times 100$$

VIII) Transport, Storage and Communication =

$$(A) \frac{\text{Total Workers in Transport, Storage and Communication}}{\text{Total workers}} \times 100$$

$$(B) \frac{\text{Total Male Workers in Transport, Storage and Communication}}{\text{Total Male workers}} \times 100$$

$$(C) \frac{\text{Total Female Workers in Transport, Storage and Communication}}{\text{Total Female workers}} \times 100$$

IX) Other Services =

$$(A) \quad \frac{\text{Total Workers in Other Services}}{\text{Total workers}} \times 100$$

$$(B) \quad \frac{\text{Total Male Workers in Other Services}}{\text{Total Male workers}} \times 100$$

$$(C) \quad \frac{\text{Total Female Workers in Other Services}}{\text{Total Female workers}} \times 100$$