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Introduction, Research Methodology and Review of Literature

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Chapter - 1

Introduction, Research Methodology and Review of Literature

1.1 Introduction

Economic development is the sole or unique goal of economic or productive activities. To achieve rapid and all-round economic development is desired by each and every individual as well as country of the world. Because it provides superior standard of living to human beings and also converts an underdeveloped economy into developed one. Income or National Income is a frequently used indicator of measuring economic development. National income and the concepts associated with National Income such as GDP, GNP, Per Capita GDP/GNP are also used to estimate economic development of the economy or a country. Likewise, State Income and District Income are used as an indicator of state and district economic development respectively. Like the National Income, State Income is also estimated regularly. However, no rigorous and scientific attempts are made to estimate correctly the District Income by adopting an appropriate methodology.

At present District Income is estimated in the state like Maharashtra by the Directorate of Economics and Statistics (DES). But estimating of District Income for all the productive sectors or may be concerning a single productive sector will facilitate comparison between

this estimated District Income and the income estimated by the DES of concerned state. This is also useful in finding out lacuna, drawbacks, difficulties in estimating District Income. This places before us the need for estimating District income alternatively or may be income generated by one productive sector.

Maharashtra is one of the developed states in India. Likewise, Kolhapur is one of the progressed districts in the state of Maharashtra. Hence, it will be appropriate to estimate income of Kolhapur district. However, as it is difficult and complex to estimate income for the whole district economy. It will be suitable and rational to estimate the income generated by a single productive sector of the district economy like the secondary sector. It is in this overall background, the present study attempts to estimate income generated by secondary sector of the Kolhapur district economy for the year 2000-01.

1.2 Methods of Estimating Income

Gross Domestic Product (GDP) is defined as the value of all final goods and services produced within a concerned locality (which may be a nation, state or even smaller sub divisions of a state) irrespective of whether the income is earned by persons inside or outside the region under consideration.

There are three methods of measuring GDP i) Production or Value Added Approach/Method, 2) Income Approach, 3) Expenditure Approach. The sum of value added of all the products produces the GDP. The formula is : Value Added = Total Revenue one gets from a product -

the cost of inputs or intermediate. The second alternative is to approach it from the income side by determining the income generated from economic activity in a given geographical area or economy. Domestic Income is equal to all variables that comprise to income generate. The formula is :

$$\begin{aligned} \text{Total Income Generated} &= \text{Gross Domestic Product} \\ &= \text{Wage Income} + \text{Profit Income} + \\ &\quad \text{Interest Earnings} + \text{Tax Income} \\ &\quad \text{(Indirect)} \end{aligned}$$

The third approach is to arrive at the same through the expenditure side. In this method, one must consider all the expenditure in a given economy. The formula for ascertaining GDP through this approach is :

$$\begin{aligned} \text{Total Expenditure} &= \text{Gross Domestic Product} \\ &= \text{Consumption Expenditure} + \text{Investment} \\ &\quad \text{Expenditure} + \text{Government Expenditure} + \\ &\quad \text{(Export - Import)} \end{aligned}$$

In the present study, have adopted the Value Added Method or Approach to measure income generated by secondary sector of the Kolhapur district economy.

1.3 Secondary Sector

Like the economy of a country District economy's income is, generated and thereby economic development is achieved by the number of productive activities classified into three important productive sectors

namely, primary, secondary and tertiary. Secondary sector is that productive sector which produces goods in factories or industries. The broad categories of secondary sector consist of Manufacturing - registered, Manufacturing - unregistered or unorganised sector, construction, electricity, gas and water supply. Secondary sector in general and manufacturing sector in particular plays a vital role in generating income as well as economic development. The world economic history shows that industrially developed economies have been emerged out as economically developed countries in the world. Therefore, the present study attempt to estimate the income generated by secondary sector of the Kolhapur district economy for the year 2000-01.

1.4 Objectives of the Study

The objectives of the present study are enlisted below :

1. To study the state of manufacturing sector development of Kolhapur district.
2. To examine the contributions of both the registered and unregistered/unorganised sector in the progress of manufacturing sector of the district under study.
3. To review the relative shares of the productive activities like construction, electricity, gas and water in the development of secondary sector of the Kolhapur district.
4. To estimate the income generated by secondary sector of the Kolhapur district economy.

5. To make comparison of income generated by secondary sector estimated by Directorate of Economics and Statistics (DES), Maharashtra and the present study.
6. To find out difficulties in estimating District Income especially income generated by secondary sector and make necessary suggestiond.

1.5 Hypothesis of the Study

The hypothesis of the present study is as follows :

"Secondary sector plays an important role in generating income and thereby achieving economic development of the region or locality. The regions or localities having developed secondary sector also would be economically developed one."

1.6 Database and Research Methodology

The present study mainly relies on the secondary data. It was not necessary to collect the primary data. Likewise, as per requirement interviews of the necessary respondents were conducted. The necessary secondary data to the extent required was collected from the sources like Annual Survey of Industries (ASI) by Field Operations Division (FOD) of the National Sample Survey Organisation (NSSO), Fourth Economic Census 1998-99, NSSO Survey data 56th Round, Directorate of Economics and Statistics (DES), Maharashtra, District Statistical Office (DSO), Economic Survey of Maharashtra and Publications of Union and State Government of Maharashtra, Chief Inspector of Factories (CIF),

Maharashtra. The secondary data was collected from Gokhale Institute of Politics and Economics, Pune, Indira Gandhi Institute of Development and Research (IGIDR), Mumbai, Office of Directorate of Economics and Statistics, Maharashtra, Mumbai, Barr. Balasaheb Khardekar Library, Shivaji University, Kolhapur and Rajaram College Library, Kolhapur.

The secondary sector is divided into two broad categories as (a) Manufacturing - registered and (b) Manufacturing - unregistered or unorganised sector. India introduced the Factories Act of 1948, which comes into force from 1st April 1959. All companies registered under the Act comprise the registered Manufacturing sector. Data about this sector is routinely collected by the Field Operation Division (FOD) of the National Sample Survey Organisation through the Annual Survey of Industries (ASI). Data of relevant variable for factories are collected by the National Industries Code (NIC). Under the sampling strategy adopted by NSSO in effect from ASI 2000-01, factories (as defined in Factories Act 1948) are separated into two categories : (a) all factories engaging 100 and more workers (Census Sector), (b) all factories engaging less than 100 workers (Sample Sector). For census sector, gross value added needs to be considered for all factories belonging to the District and then added up. Relevant data from sample sector covers through ASI and a sample basis. By appropriately pooling, the results of the ASI sample pertaining to a given district and the state sample units Total Gross Value Added (GVA) for the sample. Total Gross Value Added for the sample divided by the total number of workers in the sample provides the GVA

per worker for that sample. GVA per workers as estimated above multiplied by the total number of workers in the sample sector yields the Total Gross Value Added for the sample sector. Data collected under the Fourth Economic Census 1998-99 was used to estimate the total number of workers in the factories in the sample sector pertaining to a district gives the two value added figures for a district, one from the census sector and the other from the sample sector. Total Value Added obtained by adding the two values. Like the manufacturing registered sector, for unregistered manufacturing sector, we estimate Total Gross Value Added. The data sources again are NSSO survey data (56th round) and the corresponding data from the state sample. District being the strata for rural areas, GVA per worker for the unregistered/unorganised rural sector at the district level can be calculated by appropriately pooling the state and central samples. This GVA per workers multiplied by the total workforce in the unorganised rural sector of the district gives Total GVA for unorganised rural sector. By separating out enterprises belonging to a district from the central and state samples and pooling them together, one can arrive at GVA per worker for the urban sector belonging to a district. This, multiplied by the total number of workers gives the Total GVA for the urban sector. Total GVA for the unorganised sector in urban sector plus Total GVA for the unorganised sector in rural sector gives Total GVA for the unorganised sector taken together.

Construction sector comprises all activities ranging from masonry to carpentry as well as construction work related to the building of roads and bridges, power and telecommunication transmission lines, dams and canals etc. Data on wage rates of construction workers can be collected at the district level through surveys. The 55th round NSSO Socio-economic Survey data was used. NSSO regional level estimates allocated to the district according to the total number of workers engaged in construction activity. State level values allocated to districts using appropriate indicators for categories of construction workers not captured through the NSSO Survey (Construction activities of power and telecommunication lines etc.) Districtwise data on salaries and wages available with the State Electricity Boards (SEBs) was collected from the administrative records available with SEBs. The state level value added from this sub sector was distributed to the district in proportion to districtwise salaries and wages. To capture wage disparity indicators based on salaries and wages was of more meaning. State level value added from biogas was distributed in proportion to the number of biogas plants in each district. From the remaining gas sector, state level estimates were allocated to the district on the basis of work force engaged in this activity. State level value added was allocated to districts in proportion to the districtwise salaries and wages collected from local bodies located in the district.

Wherever necessary suitable statistical tools like Simple Growth Rate (SGR), Ratio Analysis and others were used. Likewise, the study used computer software packages such as Excel.

The present study has also used the secondary data published in the Economic Survey of Maharashtra and Socio-Economic Survey of Kolhapur District, both are being published by the Directorate of Economics and Statistics, Government of Maharashtra. The necessary data was separated from these publications and adjusted in accordance with the necessity and the necessary calculations enabled us to arrive at the necessary figures, which facilitated us in calculating the figures concerning the income generated from the sub-sectors of the secondary sector and the income from secondary sector of the Kolhapur district.

1.7 Chapter Scheme

Following is the chapter scheme of the present study.

- Chapter - 1 : Introduction, Database and Review of Literature
- Chapter - 2 : Estimating Income Generated by Secondary Sector of Kolhapur District
- Part - A : Estimating Income Generated by Manufacturing Sector
(a) Organised Sector, (b) Unorganised Sector
- Part - B : Estimating Income Generated by Construction, Electricity, Gas, Water
- Part - C : Estimating Income Generated by Secondary Sector of Kolhapur District

- Part - D : Difficulties in Estimated Income by Secondary Sector
- Chapter - 3 : Kolhapur District Income from Secondary Sector Estimated by the DES
- Chapter - 4 : Comparison of Income Generated by Secondary Sector Estimating by present study and the DES
- Chapter - 5 : Conclusions and Suggestions

1.8 Review of Literature

According to Ram Krishna Mandal (2007)¹ in his article, "State Income in Arunachal Pradesh : Trend and Growth", Economists use Gross Domestic Product (GDP) as a standard measuring device to measure the progress of a country, but the world body UNDP has adopted a new measuring device that is the Human Development Index (HDI). It combines a number of factors like life expectancy, adult literacy and GDP. This is a realistic indicator of progress. He emphasises on Human Development because it incorporates all aspects of individual well being from their wealth status to their Economic and Political Freedom.

Ronald A. Mo and Edward F Szczeponik (1956)² in their book the "National Income of Hong Kong" published by Oxford University Press, London gives the case history of Hong Kong's Economy which plays very important role in Asian trade and development. The detailed data relating to total value of social income, rate of growth, composition and pattern

of distribution is given. A detailed account of the work of the European Payments Union with its main features of the operations is given in this book. A lot of statistical data adds to the usefulness of the book.

An attempt is made by N. V. Sovani (1954-55)³ in his article "National Income in 1954-55 of the Region to be irrigated by the Hirakud Dam". To estimate the total income of the areas to be irrigated by the Hirakud Dam. He studied the areas that were Bargarh in Sambalpur and Kndropoda in Cuttack and from the survey of them. He found that their occupational pattern and the level of per capita income were markedly higher than the surrounding rural area. The final estimate has derived in the National Income of the regions or income paid out to the factors of production.

S. K. Bose (1951)⁴ in his article "National Income of Bihar" made an attempt to estimate National Income of Bihar. He took into consideration the value of agricultural product by the season and crop report for Bihar and value of livestock products from the report on the livestock census of Bihar. He also took into account the value of forest product. This study of the National Income of Bihar has revealed the deficiencies that still exist in the statistical methods on which a computation of National Income must to be based.

Pong S. Lee (1972)⁵ in his paper "An Estimate of North Korea's National Income" estimates National Income and Gross Output Value of Social Production (GVSP) in North Korean between 1946 and 1966 on the basis of Kim's disclosure and published indices of these National

accounts. He compared the published budget size and fixed investment with computed National accounts. He also furnished some insight into the absolute level of the components of National accounts. Such as output values of industry, agricultural and other sector.

Edward C. Budd (1956)⁶ in his paper "Methods of National Income Estimation" has explained various methods of estimating National Income, various concepts and definitions related to National Income estimation are explained. He has also explained various problems in estimation of National Income. The first chapter is concerned with estimates from the income side by distributive share or income accruing to the factors of production, in second chapter estimates from the product or expenditure side is discussed. The last chapter is devoted to the estimation of the industrial origin of income.

Aloke Kar, Gulab Singh and A. C. Kulshreshtha (1977-78)⁷ in their paper "Multiple Employment and its Implications for Estimation of Gross Domestic Product" study the various economic activities of service sector and their contribution to GDP and employment, during the period 1977-78 to 1999-94. They have also examined the sectoral shift in employment and the impact of multiple employments on the estimates of GDP. According to them, service sector had been growing at a substantially higher rate than the primary sector. Both in terms of GDP, and employment, share of service sector has increased continuously from 35 percent in 1977-78 to 43 percent in 1993-94, the share of the service

sector employment in total work force has increased from 15.6 percent to 20.6 percent i. e. by about 5 percentage, point in the span of 16 years.

B. N. Mukherjee (1959)^E in his paper "On Measurement of Depreciation in Indian Income and Wealth Estimates" has made an attempt to point out the need for more comprehensive measure of capital consumption in the calculation of National Income in India and indirectly emphasise the desirability of a Gross National Product. His discussion is divided under three following heads, of them, first one is the significant for measuring capital consumption or depreciation in the process of national income generation country's wealth or productive asserts are used. Therefore, it is necessary to make a deduction similar to that of productive assets from the Gross Product. In the second part, methods of measuring capital stock and depreciation are taken into consideration. In this, he has explained the ways of measuring capital stock of them. First, one is original cost, property price adjusted and depreciated on the basis of the expected assets. In the second one, it can be measured at its market value or a value, which may be near substitute to it. In the third part, basis of measuring capital consumption in Indian income and wealth estimates is explained.

According to K. R. G. Nair (1982)⁹ in his article any discussion on regions has to sort out, at the very initial stage, the definition of the region to be considered. The finding of many, including the Father of Regional Analysis, Walter Isard, is that there are no ideal regions for all types of regional studies. This article hence considers sub-national

regions, which are basically administrative in character. It is true that some of these are neither nodal nor homogeneous regions. However, these are the regions for which income estimates are being increasingly attempted by the world over these days. The object here is to focus attention on some of the broad issues that crop up in the process in the light also of the Indian experience in this regard.

Mahesh Chand (1957)¹⁰ in his article "National Income Statistics - Source and Method" said National income statistics stand for the whole body of statistics and relating to national income. Expenditure and output and to the social accounts. His paper is divided into thirteen chapters and a number of appendices. The first is devoted to a discussion of the concepts of the sources of statistics briefly and the various parts and tables of the blue book. The other chapters are devoted to a detailed consideration of the different aspects of U. K. economy as covered by the various groups of tables in the blue book. There is a separate chapter on capital accounts and capital formulation. In each chapter, an attempt is made to indicate an estimate of reliability. The concepts that the statistics are designed to measure are themselves obstructions from the complicated realities of economic life and the statistic may often appear remote and artificial until experience has been gained in their use of instruments for interpreting real economic situation.

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