

**CHAPTER 2**  
**REVIEW OF LITERATURE**

## **2.1 Introduction**

The concerned literature with the research work is presented below to spotlight the work done on the subject in India and abroad i.e. empirical and theoretical studies related to educational expenditure, public expenditure and economic growth, which proved useful to delineate the various issues and methodologies adopted.

## **2.2 Theoretical Studies**

**Wagner (1893)** introduced his hypothesis with connecting to the public expenditure. His idea is also known as ‘Wagner’s Growth of Public Expenditure’. He published his book titled “Law of the Increase of State Activities”. In his hypothesis, he analyses the relationship between growth of an economy and public expenditure. According to Wagner, there is a fundamental cause and effect relationship between economic growth with respect to the growth in public expenditure.

**Peacock and Wiseman (1961)** hypothesis in public expenditure is based on their empirical study conducted in United Kingdom, during the period 1890 to 1955. The hypothesis talks about the relationship between growth of an economy and public expenditure. But there is wide difference between these two theories. Here, Peacock and Wiseman says that, public expenditure will increase with respect to the growth of an economy. But the growing trend will not as like in the Adolf Wagner’s theory. Further, it will be in a step like manner.

**Lucas (1988)** assumes that investment in education leads to the production of human capital which is the important determinant in the growth process. Uzawa developed an endogenous growth model based on investment in human capital which was used by Lucas. He makes a distinction between the internal effects of human capital where the individual worker undergoing training becomes more productive, and external effects which spill over and increases the productivity of capital and of other workers in the economy. It is the investment

in human capital rather than physical capital that has spill over effects that increases the level of technology.

### **2.3 Empirical studies**

**Quan and Beck (1987)** approaches the complication of economic growth by investigating changes in the level of wages, employment, and state per capita income because of educational expenditure in North east and Sunbelt region. Variables taken in the study are; personal income, population, total state and local taxes, per capita expenditure for local school and higher education. The study uses a pooling time series and cross section data for estimation purpose and uses a general log- linear model for regression analysis taking the annual data for each state for fiscal year 1964 to 1983. The findings of the study tell that, effect of educational expenditure on the level of wages and employment differ in the north east and sun belt, education expenditure have positive and significant effects on the level of wage and employment in the northeast while the reverse is true in sunbelt and there is positive relationship between wages and employment suggesting a migration to the sunbelt.

**Butt and Sheikh (1988)** analysed the gap between demand for and supply of higher education in Pakistan by estimating the degree and trend of gap. To estimate the extent and trend gap, data on number of application (demand side) and the number of candidate actually admitted (supply side) for five years (1982-87) has been collected for five different departments of University of Punjab. The major findings of the study show demand for higher education is inversely related to its direct private cost, demand for higher education increases to the extent higher education is subsidized, and demand for education is an indicator of social status.

**Jorgenson and Fraumeni (1992)** measured the impact of investment in education on U.S. economic growth. The study uses data on output, input and productivity of sources of economic growth, educational as well as non-educational sector for a period from 1948 to 1986. The

major findings of the study conclude that, the appropriate value of investment in education is given by its impact on the individual's lifetime labour income, the relevant concept of labour income must not be limited to market activities alone since many of the benefits of education accrue in the form of enhanced value for non- market activities.

**Monteils (2002)** undertake the critical reading of the theoretical contribution of new growth theories and to present an empirical testing of Lucas model for France in 19<sup>th</sup> and 20<sup>th</sup> century. Data collected for several years ranging from 1834 to 1996 for different variables like; duration of training as explanatory variables and human capital stock (literacy of men & women, diplomas, conscript literacy, level of schooling, wages) as explained variable. The study uses correlation analysis, DW test and logistic regression to analyse the data. The result is surprising and so in contradiction with the hypothesis of the new growth theories. Human capital returns are decreasing and thus knowledge produced by education cannot be the engine of self-maintained economic growth.

**Czynski and Zeira (2003)** examined the factors influencing the extent & composition of expenditure on education in Israel and analysed the relation between various demographic, economic & political explanatory variables. The study is based on Secondary data from for a period of 1962-98 and different variables like; Population size, age distribution, distribution of student population in to ethnic group, per capita GDP, relative price of education, distribution of income across the population, return on education, overall budgetary pressure are used to analyse the data. The study adopts the methodology with Correlation, regression analysis and cointegration test to test and analyse the data. Major findings of the study show Per capita GDP positively affects educational expenditure, distribution of income doesn't affect public spending on education & distribution of income does affect private spending on education, spending on education was not correlated with the party in government.

**Musila and Belasi (2004)** investigated the relationship between government education expenditure per worker & economic growth in Uganda. The study uses Secondary time series data for the period 1965-1999 for variable like Logarithm of Real GDP, gross fixed capital information, govt education expenditure per worker of employment and uses Cointegration test and error correction model to analyse the data. The findings of the study depict that, capital and labour input are some of the key variable that seems to affect the long run growth performance of the country, the average education expenditure per worker is positively correlated with economic growth.

**Hussain et al. (2004)** analysed the priority accorded to education by the federal as well as provincial governments. A comparative analysis of performance of public sector education in four provinces of Pakistan has been carried out in the study to examine the disparities in budget allocation to education in the provinces. Secondary cross-sectional data for the year 2001-02 has been taken for different budget allocation variables like educational budget as a percentage of total budget. Representation index and Gini coefficient are used in order to show the degree of representation of groups and to measure the disparities in the allocation of resource to the educational sector. The findings of the study conclude that, no disparities between districts on allocation of funds to the educational sector and there exists a positive correlation between the districts literacy rates and fund allocation.

**Chakrabati and Jogelkar (2006)** examined the patterns and changes in the allocation of government funds for higher education over the period 1980-81 to 1999-2001. Data for two decades were collected from 15 major states of India. Different variables related to economy, demography and policy has been interpreted and analysed. The study also incorporates a basic panel fixed model and a generalised least square estimates. The result of the study shows state with higher per capita income was found to spend more on education, income elasticity at each

level of education is found to be less than one, grants from centre induces a positive significant impact of public expenditure on education both at aggregate level and individual level.

**Al-Yousi et al. (2008)** examined the nature and direction of the relationship between educational expenditure as a proxy of human capital and economic growth. The study uses Secondary time series data for a period 1977- 2004 and Real per capita GDP, ration of government educational expenditure to GDP as variables. The study incorporates Unit root test, Cointegration test, Ganger causality test with an error correction framework in the analysis of data. The findings of the study conclude that, the causality between Educational expenditure and economic growth is a bidirectional one, results are country specific and vary with the proxies.

**Dey and Endow (2008)** analysed the major trends in public financing of education in India, including expenditure by the central govts, state govts, other local bodies and NGO sector in India for seven major states. It uses Secondary data on: Govt. expenditure on education by different department and schemes, expenditure by state and centre on education, per capita NSDP, infrastructural facilities, foreign aids etc. And the methodology includes Discussion on source of finance and problem of estimation, trend and composition of aggregate expenditure on education, mechanism of flow of fund and analysis of centre state relation in education finance. The findings of the study are: CSS which are partly funded by external aid have been a critical part of the centre to state transfer, For the less developed states recent changes in education expenditure have improved access, but retention and learning achievements remain low.

**Omwami and Keller (2010)** examined the unit cost of primary education in sub-Saharan Africa countries in order to establish the need to realise universal access. The study is based on secondary data collected from UNESCO and UNDP data base and variables used are total

primary school enrolment, public school enrolment, gross and net enrolment rates, no. of children out of school, GDP and GDP per capita. This study incorporates the unit cost analysis and also employed a reverse computation procedure in order to arrive at the unit dollar cost and total primary education budget projection for each country. The findings of the study show, governments of sub-Saharan region spend less in US dollars per unit cost on primary education than do developed countries.

**Soren (2010)** highlighted the dropout rate of primary education and explored the situation of dropout of primary education in Odisha. Qualitative Case Study Article was conducted. 20 Schedule Tribe student from two blocks of Mayurbhanj district has been taken for the case study. The major reason influencing school dropout were found to be: household work, lack of parental guidance in studies, socio-economic condition of the family, punishment by the teachers etc. are the main source of drop out children at primary school level.

**Conard (2011)** empirically examined education's level specific contribution to economic growth in select Caribbean countries. The study uses Secondary time series data for the period 1970-2004 collected on Public funds per pupil at basic and advance stage, annual public expenditure per pupil at basic and advance stage, human capital output at basic and advance stage, and depreciation of human capital. This study is an adoption of two sector economy approach introduced by Lucas (1998). The findings of the study show Human capital accumulation has level specific effect on output in manufacturing & service sector in Barbados, Guyana, Jamaica, and Trinidad & Tobago, Human capital formation remains on an upward trend in these countries.

**Ray et al. (2011)** evaluated the association between economic growth and expenditure in India. The study uses Secondary data which has been collected over a period of 1962 to 2010. Real GDP is used as a proxy of economic growth with expenditure on education. For the analysis

and data testing the study uses Unit root test, Cointegration test and Error correction model. The findings of the study show Economic growth & educational expenditure are cointegrated indicating the existence of long run equilibrium relationship, the Granger Causality test results confirms that there doesn't exist any causality in short-run between economic growth and education & vice versa.

**Mukharjee (2012)** analysed the expenditure in the department of school education and literacy and the department of higher education under MHRD, and provided a comprehensive assessment of role of 11th FYP on education sector. Comparative analysis of expenditure in different years under 11th FYP and scheme wise distribution of expenditure has been analysed. The study suggests increasing privatisation of education and implication for financing, and public private partnership for educational sector which will enhance the educational quality.

**Tewary et al. (2014)** analysed and estimated the per student expenditure on children enrolled in the government school and per student private expenditure on children on private school. The study uses Secondary for the year 2011-12 and variable such as private & government expenditure on students, total enrolment in government & private schools, GDP deflator & inflation. In this study, the public expenditure on education, per student expenditure both at government and private level has been estimated. The findings of the study indicate: Richer states spent less on educational expenditure as a % of their GDP but more in terms absolute amount compared to the poorer states. Preliminary analysis indicates a strong relationship between per student expenditure and learning level.

**Halder (2016)** investigated the scenario of location of schools, habitation wise distribution of schools, Infrastructure of schools and attainment of students in schools. Secondary data are collected from different sources and school mapping exercise was carried out through GPS Survey. Different component of physical infrastructure parameters has been reduced to a



comprehensive Index of physical Infrastructure and Ranking method has been used to create a composite index of physical infrastructure with the help of SPSS. Bivariate analysis like spearman's ranking correlation have been used to show the relation between educational attainment and the aggregative index of physical infrastructure. The findings of the study show that type of road plays an important role in schooling facility, Spatial distribution of school is found to be very close, Schools of under privileged children are under equipped. The study found attainment of children in schools is very much related to quality of schools.

#### **2.4 Research Gap**

There are studies available in which the quality of education is assessed in Odisha which are normally based on primary data but, there has been no study conducted to examine the effect of educational expenditure on economic growth and there has been no significant work found on infrastructural development related to education.

Thus, various researchers have used different methods to analyse educational expenditure and its effect on economic growth, most of the study have anticipated the causality analysis in their respective studies, in which the effect of expenditure on economy growth has been examined. Further the result of most of the study reveals the long-term association between educational expenditure and economic growth.