

Social Cost-Benefit Analysis of Real Estate Project

Snehal Misal¹, Asst. Prof Alka Kote²

¹PG Student, Department of Civil Engineering, Dr. D.Y. Patil Institute of Technology, Pune, MH, India

²Asst. Professor, Department of Civil Engineering, Dr. D.Y. Patil Institute of Technology, Pune, MH, India

Abstract – the study introduces probabilistic social-cost benefit analysis and encourages their uses in Real Estate Project. The social cost-benefit analysis is a valuable tool to evaluate a project from the viewpoint of society. It is the analysis of the costs and benefits that a society may have to avoid or get from the proposed project. Social cost-benefit analysis is an efficient and cohesive strategy to overview all the impacts caused by an (urban) development project or another policy measure, not only financial effects but also social effects like legal aspects, pollution, safety (direct and indirect), indirect market impacts, environment, etc. The real estate industry is the most important industrial sectors in the world. Real estate industry largely contributes development and long term growth path in the world's economy. The real estate market in India is one of the fastest growing sectors in the world. A recent study done by Harvard researchers, India has the potential to become the world's fastest growing economy in the next ten years. Real estate sector in India is predicted to reach a market size of US\$ 1 trillion by 2030 and contribute 13 per cent of the country's GDP by 2025. In recent global financial disasters, we witnessed how private sector decisions can have a terrible effect on the rest of the economy. If the private sector choices sway the entire country, then Social Cost Benefit Analysis (SCBA) should be used to evaluate the efficiency of private sector projects.

1. INTRODUCTION

The social cost-benefit analysis is a significant tool to evaluate a project from the viewpoint of society. It is the analysis of the costs and benefits that a society may have to abide or get from the proposed project. Social cost-benefit analysis is an efficient and cohesive strategy to overview all the impacts caused by an (urban) development project or another policy measure, not only financial effects but also social effects like legal aspects, pollution, safety (direct and indirect), indirect market impacts, environment, etc. The project analyses the application of social cost-benefit analysis on Real Estate Projects. SCBA is based on the theory of welfare economics. SCBA is used for evaluating public investments in many countries to maximise the benefits of investments. Nowadays SCBA is becoming important in private sectors or investment as this kind of projects can bring adverse impact to society. Social cost-benefit analysis can be referred to as Economic Analysis.

The real estate industry is the most important industrial sectors in the world. Real estate industry largely contributes development and long term growth path in the world's

economy. The real estate market in India is one of the fastest growing sectors in the world. India has the potential to become the world's fastest growing economy in the next ten years. Indian Real estate sector is to reach a market size of US\$ 1 trillion by 2030 and contribute 13 per cent of the country's GDP by 2025. The Government of India alongside the administrations of the separate states has taken a few activities to provoke the improvement in the area. The Smart City Project, where there is an arrangement to construct 100 brilliant urban communities, is a prime open door for the Real Estate sector.

It is not only effectively attracting domestic real estate developers but foreign investors as well. The growth of the industry is credited mainly to the large population base, rising income level, and rapid urbanisation. The sector comprises of four sub-sectors – Residential, commercial, industrial and land while residential contributes to 5% to 6% of the country's gross domestic product (GDP).

The real estate sector has transformed from being unorganised to a dynamic and organised sector over the past decades. Considering the development of real estate in the country, it is necessary to consider the impacts of the industry on society. It is essential to weigh projects advantages and disadvantages most likely benefits and costs to the nation as a whole. As the real estate sector largely influence society, the need for a social cost-benefit analysis arises.

1.1 Objective of Study:

This paper review on the principles and a technique of social-cost benefit analysis used in the construction industry to identify:

- To understand the large scale Real Estate Projects and the growing need for same in Indian Scenario.
- To identify various constraints which affect or benefits the society because of the real estate project.
- Economic benefits of real estate projects in terms of social values
- The contribution of the project to improve the standard of living in a society

1.2 Present scenario of construction:

Indian Real estate sector is expected to reach US\$ 1 trillion by 2030. By 2025, it will contribute 13 per cent of the country's GDP. The emergence of nuclear families, rapid urbanisation and rising household income, are likely to remain the key drivers for growth in all spheres of real estate, including residential, commercial and retail. Rapid urbanisation in the country is pushing the growth of real estate. Urban areas will contribute 70 per cent by 2020.

Cross-border capital inflows to India's real estate sector have increased 600 per cent during 2012-17 to reach US\$ 2.6 billion. In 2017, India ranked 19th out of 73 countries in attracting cross-border capital to its property market. Private Equity and Venture Capital investments in the sector have grasped US\$ 4.1 billion between Jan-Nov 2018. Between 2015 and March 2018, the real estate in Indian realty attracted private sector investments of around Rs 5,500 crore (US\$ \$853.4 million)

In the past years, many researchers have worked on the social cost-benefit analysis of construction projects, but the study leads the public sector projects. In the global financial crisis, we saw how private segment choices could devastatingly affect the remainder of the economy. If private investors choices sway the entire country, at that point, Social Cost Benefit Analysis (SCBA) ought to be utilised to assess the productivity of private segment ventures.

Social cost-benefit analysis encourages the business administrators to take strategy choices based on the determined dangers included if the task is executed. The examination gives a clear picture among expense and advantage circulation giving the directors a chance to take an educated choice. Toward the finish of the SCB analysis, we can close how the project will affect the business openings and way of life of the general public.

The effect of social cost-benefit can be positive or negative. The positive effect is called a social advantage, and the adverse effect is named as a social cost. SCBA is not the same as CBA as in it has a broad view since it attempts to think about the social estimations of the whole society as opposed to considering the benefit of people who are a segment of the general public.

2. Overview of Past Studies

The social cost-benefit analysis begins to integrate into the construction industry as a new method of construction projects management aiming at eliminating cost society has to pay from construction projects and continuing to help in identifying mechanisms that can maximise the benefit of the development project for social welfare. It is also establishing a decision making strategy for different projects and also providing a chance to apprehend social criticism.

Saeed Kamali and Yusuf Arayici [2017] had stated that many kinds of literature worked and defined the social cost-benefit analysis in construction projects in considering infrastructure projects which are mostly out of the congested areas. Therefore, the social cost is always low for such projects. However, there is a lack in the study of social-cost benefit analysis for urbanised construction projects. There is a need for the study in this sector as a living hood around these projects facing lots of adverse impacts of the construction site.

In this paper, social cost-benefit analysis is clearly defined, and analysis is done for the case study.

M N M Murti and Kishor Kumar Dhavala[2016] studied the social cost-benefit analysis for the Delhi Metro project. Various economic agents were identified which are affected by Delhi Metro for social cost-benefit analysis. In this study, they found various benefits of Delhi metro such as income gains to the government, public, passengers and unskilled labour while there are substantial income losses to the transporters because of the Metro. The social rate of return is calculated for comparative data. Various formulas and methods are used for analysis.

Chow Fah YEE highlighted how Social cost-benefit analysis is essential in the private sector. The author says that we have seen how private area choices can devastatingly affect the remainder of the economy in the ongoing worldwide emergency. On the off chance that private division choices sway the entire country, at that point, Social Cost Benefit Analysis (SCBA) ought to be utilized to assess the effectiveness of private part extends. The author uses SCBA to investigate the effect of deregulation on the Malaysian banking sector. Little & Mirrlees's Methodology is used to evaluate the social costs and benefits. He concluded that SCBA is used to evaluate the contribution of a sample of private sector firms to the country's social profits.

Rishi Shankar Pathak has an opinion that Capital is the limited resource in a developing economy like India and must be invested with utmost care. In this paper, social cost-benefit is done on a power project. The author makes the difference between social cost-benefit analysis and cost-benefit analysis. The paper suggests the key steps that can be taken to make the projects more lucrative. The UNIDO Approach for Social Cost-Benefit Analysis as prescribed by United Nation Industrial Development Organization (UNIDO) was applied to a thermal coal-based power plant and a hydro plant. UNIDO Approach is a five-stage methodology:

- Calculation of financial profitability measured at market prices.
- You are obtaining the net benefit of the project measured in terms of economic prices.

- Adjustment for the impact of the project on savings and investment.
- Adjustment for the impact of the project on income distribution.
- Adjustment for the impact of the project on merit goods and demerit goods

The author concluded that Social Cost-Benefit Analysis is an essential tool for analysing a project to reflect its positive and negative impact on society. Today, it has expanded to the evaluation of private projects as they are much more responsible for good and bad effects on society. SCBA differs from the financial analysis in the sense that it avoids market price and adopts shadow price to value the inputs and outputs of a project.

Dr. Shaikh Sirajuddin [2013] expressed that 'Benefit Maximization' is not any more any point of business. It is being felt that entrepreneurs, the business ought to advance parity in light of a legitimate concern for workers, clients, providers, government and the overall population. A business unit owes its very presence to the general public by utilizing society's assets as ascribes and by pitching the created products and enterprises to society. It is, in this way, fundamental that a business ought to work inside the general parameters dictated by society. The present study categorically analyses why social cost-benefit analysis technique to be introduced, rationality and importance of social cost-benefit analysis, indicators of cost-benefit analysis and methodology for evaluating the social cost and social benefit etc. The study attempts to show that social cost-benefit analysis is very much important for evaluating a project whether it is sustainable or not. No business could be allowed to exist if it is detrimental to the interests of society. Finally, the study comes to the conclusion that though social cost-benefit analysis has been accepted as an important tool of investment analysis, it is not a precise technique because of its inherent difficulties. In India, some companies in private and public sectors have started publishing social reports as supplementary information in the form of Social Income Statements and Social Balance Sheet though there is no legal obligation on companies to do the same.

Vipulesh Shardeo, Manu Raj, Harsh Srivastava [2015] articulates that Social cost-benefit analysis is an appraisal tool to evaluate a project from the viewpoint of society as a whole. It refers to the analysis of the costs and/or the benefits that a society may have to bear and/or get from the proposed project. It is a systematic and cohesive economic tool(method) to survey all the impacts caused by an urban development project. It is a study of the feasibility of a project in terms of its total economic Cost and total economic Benefits, not just the financial effect (investment cost like tax and fees, etc but all the social effects like pollution, safety indirect (labor) market, legal aspects, etc. The paper analyses the application of Social

Cost-Benefit Analysis on Expansion of Jamadoba Coal washery based on Mines plant and tries to highlight the social costs and benefits associated with each project.

Dr. Arshad ali ajmad [2005] author has an opinion that we are living in a civilized society which demands that much more thoughts should be given to all possible alternative schemes before arriving at the best solution obtainable. He further stated that our old price mechanism is purely set on profitability and perfectly copes with the situation where financial costs and returns are the only considerations. His opinion is that today's civilized society cannot accept that everything is governed purely by profit. Society wants better facilities for health, education and to preserve the environment in which it lives.

History of cba as an appraisal technique:

The theoretical roots of CBA are found in the work of Dupuit (1844). His substantial contribution to the theory regarding CBA was a concept central to the idea of net social benefit, consumers' surplus; it is the additional utility that a consumer enjoys when their WTP for a good is greater than the actual price they pay for it. Dupuit argued that while the minimum benefit of a project is the price multiplied by the quantity of the goods produced by it, this can be exceeded since some consumers may be willing to pay more than the price, therefore enjoying a net welfare gain.

The modern practice of CBA began with the 1936 United States Flood Control Act. This act preceded the development of the appropriate welfare economic foundations, which later provided CBA's theoretical basis. The Act required that the benefits of a flood control project should exceed its costs, regardless of their incidence. However, while the Act stipulated the inclusion of all benefits, in treating project costs it only referred to construction costs rather than welfare losses.

Pearce (1998:87) describes how subsequent development of the ideas contained in the Act continued in the 1950s, spurred on by concern for efficiency in government spending. The sub-committee of the Federal Inter-Agency River Basin Committee issued the Green Book in 1950, which aimed to introduce a formal procedure for the comparison of costs and benefits.

In 1952, the Bureau of Budget tried to further guide project evaluation, in Budget Circular A-47. Both the Circular and the Green book were criticized for not considering income distribution concerns and emphasizing measurement of gains in terms of Gross National Product (GNP) whilst ignoring costs and benefits not captured by it (Sassone & Schaffer, 1978:4-5).

The application of CBA spread from the United States of America (USA) to the United Kingdom (UK), and other

developed and developing countries (Dasgupta & Pearce, 1972:13).

In the late 1960s and 1970s, international institutions developed guidelines for CBA, with a particular focus on developing countries. Little and Mirrlees compiled the Organization for Economic Co-operation and Development (OECD) guidelines for conducting CBA in 1969 (revised in 1974).

In 1972, the United Nations International Development Organisation (UNIDO) guidelines prepared by Marglin, Sen, and Dasgupta were published, and in 1975, the World Bank guidelines by Squire and van der Tak (Pearce, 1983:18). Further, numerous textbooks regarding CBA have been written, applied to both developed and developing countries, such as those by Campbell and Brown (2003) Pearce (1983), Gittinger (1982) and Sassone and Schaffer (1978).

In South Africa, the original national guidelines for CBA entitled Manual for Cost-Benefit The analysis in South Africa was prepared by the Central Economic Advisory Services (CEAS) in 1989. A revised version of this manual was published in 2002, prepared by Conningarth Economists, entitled A Manual for Cost-Benefit Analysis in South Africa with Special Reference to Water Resource Development. A second edition (updating the manual with 2006 prices) was produced in 2007.

3. SOCIAL COST-BENEFIT ANALYSIS

A social cost-benefit analysis is a systematic and cohesive method to survey all the impacts caused by an (urban) development project or another policy measure. It comprises not just the financial effects (investment costs, direct benefits like profits, taxes and fees, et cetera), but all the societal effects, like: pollution, environment, safety, travel times, spatial quality, health, indirect (i.e. labour or real estate) market impacts, legal aspects, et cetera. The main aim of a social cost-benefit analysis is to attach a price to as many effects as possible in order to uniformly weigh the above-mentioned heterogeneous effects. As a result, these prices reflect the value a society attaches to the caused effects, enabling the decision maker to form an opinion about the net social welfare effects of a project.

To make a scientific and systematic social cost-benefit analysis of projects, it is necessary to weigh each project's advantages (benefits) and disadvantages (costs) to the society or nationals a whole. Thereafter, various projects under consideration are ranked on the basis of social cost-benefit ratio and the final decision about the selection of a project is taken based on the score in ranking. In other words, social costs benefit analysis is a vital tool for comparing economic alternatives.

3.1. Rationality And Importance

For determining the rationality of investment in any project, whether commercial or a project undertaken for social upliftment as a whole, cost-benefit analysis is necessary. The commercial evaluation of a project is concerned only with private costs and benefits and does not take into account the existence of externalities in returns and costs. Such an evaluation, usually, does not coincide with social costs and benefits which need to be evaluated with respect to society's welfare and national objectives. Social cost-benefit analysis is the evaluation of investment proposals in terms of their estimated net impact on the economy. It measures the economic, social and environmental costs and benefits to the society expected to arise from the implementation of the projects. The underlying principle is that a project should be accepted only if the total benefits from the project are greater than its total costs

3.2. CBA vs. SCBA

In general, any project appraisal must distinguish between three components: Financial, Economic, and Social Appraisal

- Financial Appraisal examines the financial flows generated by the project itself and the direct costs of the project measured at market prices.
- Economic Appraisal adjusts costs and benefits to take account of costs and benefits to the economy at large, including the indirect effects of the project that are not captured by the price mechanism.
- Social Appraisal examines the distributional consequences of project choices, both intertemporal concerns (i.e. effects over a period of time, today versus the future); and also intra temporal concerns (e.g. concerns between groups in society at a specific point in time).

Cost-Benefit Analysis can only perform the financial appraisal wholly for evaluating a project. In some instances, it can adjust costs and benefits to the economy except environmental externalities. But in case of social appraisal, it is fully incapable to do so. On the other hand, SCBA is able to perform all of these three appraisals to judge a project.

3.3. Objectives of SCBA

The objective of social cost-benefit analysis is, in its widest sense, to secure and achieve the value of money in economic life by simply evaluating the costs and benefits of alternative economic choices and selecting an alternative which offers the largest net benefit. Therefore, it can be said that the main focus of Social Cost Benefit Analysis is to determine:

- Economic benefits of the project in terms of a price (shadow price) that reflect social value.

- The impact of the project on the level of savings and investments in the society.
- The impact of the project on the distribution of income in the society.
- The contribution of the project towards the fulfillment of certain merit wants (self-sufficiency, employment etc.)

3.4. Need of a study

India being one of the developing countries having second largest population in the world i.e. 1.3 billion, having GDP of \$2.65 trillion, standing 7th in the world rank with per capita GDP of \$1852 and having a fortunate gain of the GDP growth rate to 7.2% which is predicted to increase in the upcoming year. And the real estate industry contributes largely to Country's economy. There is a large investment in this sector. Real estate industry has a direct impact on society and there is a possibility for this kind of projects to bring adverse impact to society. To secure and achieve value for money in economic, SCBA is necessary.

3.5. Advantages

- The capacity to recognize the ventures that amplify the welfare of the nation.
- The ability to objectively assess and quantify the purpose projects in relation to community needs.
- Exposure of the basis for decision-making for projects and opportunity for public criticism.
- Ability to rank and prioritize limited resources so that the maximum benefit is realized.

3.6. UNIDO Approach for SCBA

- I. Calculation of the financial profitability of the project measured at market prices.
- II. Obtaining the net benefit of the project measured in terms if economic (efficiency) prices.
- III. Adjustment for the impact of the project on savings and investment.
- IV. Adjustment for the impact of the project on income and distribution.
- V. Adjustment for the impact of the project on merit goods and demerit goods whose social values differ from their economic values.

4. Conclusion

From the above study it is observed that the number of researchers used and applied Social cost benefit analysis in their projects to reduce the social impacts of the construction project but it is seen that the only few of the researchers used SCBA for private project, Some of the researchers work on SCBA of public sector projects. One of the other researcher from above reviewed paper mentioned the importance of the SCBA in private. Therefore from this literature review the gap is observed that no one has applied this method to real estate sector and the real estate sector largely influence the society. So I find the need of social cost benefit analysis in Real Estate sector.

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