

## COST ANALYSIS AND COST MANAGEMENT: AN OVERVIEW

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### ABSTRACT

*Cost analysis and cost management is currently a somewhat controversial set of methods in program evaluation. One reason for the controversy is that these terms cover a wide range of methods, but are often used interchangeably. At the most basic level, cost allocation is simply part of good program budgeting and accounting practices, which allow managers to determine the true cost of providing a given unit of service. At the most ambitious level, well-publicized cost-benefit studies of early intervention programs have claimed to show substantial long-term social gains for participants and cost savings for the public. Since, these studies have been widely cited and credited with convincing legislators to increase their support for early childhood programs, some practitioners advocate making more use of cost-benefit analysis in evaluating social programs.*

**KEYWORDS:** *Cost Analysis, Cost Management, Accounting Practices, Childhood Programs.*

### Introduction

Cost allocation, cost-effectiveness analysis, and cost-benefit analysis represent a continuum of types of Cost analysis and cost management which can have a place in program evaluation. They range from fairly simple program-level methods to highly technical and specialized methods. However, all have specialized and technical aspects. If a person is not already familiar with these methods and the language used, he should plan to work with a consultant or read some more in-depth texts his before deciding to attempt them. Followings are the main types of Cost analysis and cost management:

- Ñ **Cost Allocation:** Cost allocation is a simpler concept than either cost-benefit analysis or cost-effectiveness analysis. At the agenda or agency level, it basically means setting up budgeting and accounting systems in a way that allows program managers to determine a unit cost or cost per unit of service. This information is primarily a management tool. However, if the units measured are also outcomes of interest to evaluators, cost allocation provides some of the basic information needed to conduct more ambitious cost analyses such as cost-benefit analysis or cost-effectiveness analysis.
- Ñ **Cost Effectiveness and Cost-benefit Studies:** Most often, cost-effectiveness and cost-benefit studies are conducted at a level that involves more than just a local program (such as an individual State Strengthening project). Sometimes they also involve following up over a long period of time, to look at the long-term impact of interventions. They are often used by policy analysts and legislators to make broad policy decisions, so they might look at a large federal program, or compare several smaller pilot programs that take different approaches to solving the same social problem. People often use the terms interchangeably, but there are important differences between them.
- Ñ **Cost Effectiveness Analysis:** Cost-effectiveness analysis assumes that a certain benefit or outcome is desired, and that there are several alternative ways to achieve it. The basic question asked is, "Which of these alternatives is the cheapest or most efficient way to get this benefit?" By definition, cost-effectiveness analysis is comparative, while cost-benefit analysis usually considers only one program at a time. Another important difference is that while cost-benefit

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analysis always compares the monetary costs and benefits of a program, cost-effectiveness studies often compare programs on the basis of some other common scale for measuring outcomes. They address whether the unit cost is greater for one program or approach than another, which is often much easier to do, and more informative, than assigning a dollar value to the outcome.

¶ **Cost Benefit Analysis:** The basic questions asked in a cost-benefit analysis are, "Do the economic benefits of providing this service outweigh the economic costs" and "Is it worth doing at all"? One important tool of cost-benefit analysis is the benefit-to-costs ratio, which is the total monetary cost of the benefits or outcomes divided by the total monetary costs of obtaining them. Another tool for comparison in cost-benefit analysis is the net rate of return, which are basically total costs minus the total value of benefits. The idea behind cost-benefit analysis is simple: if all inputs and outcomes of a proposed alternative can be reduced to a common unit of impact (namely dollars), they can be aggregated and compared. If people would be willing to pay dollars to have something, presumably it is a benefit; if they would pay to avoid it, it is a cost. In practice, however, assigning monetary values to inputs and outcomes in social programs is rarely so simple, and it is not always appropriate to do so.

### **The Present Study**

The present study is based on the cycle industry in India. The cost of cycle industry increases in last year's due to this reason, a study of Cost analysis and cost management and management in this field was required to know the actual financial situations of cycle industry in India. Following are the main contents of the study.

### **Objectives of the Study**

Followings are the main objectives of the study:

- To study the cost components of the cycle industry in India.
- To study the financial performance of the cycle industry in India.
- To identify the major factors of cost increments of cycle industry in India
- To find out the proper cost ratio for financial growth.
- To find out the proper cost programme for the growth of the cycle industry.

### **Hypothesis of the Study**

The main hypothesis of the study is as follows:

**H<sub>01</sub>:** There is no proper cost allocation in the selected cycle companies in India.

**H<sub>02</sub>:** There is no proper cost management system in the selected cycle companies in India.

### **Methodology of the Study**

Research methodology means those techniques, which are applied in discovering certain new facts. It would be appropriate to mention here that research projects are not susceptible to any one complete and in flexible sequence of steps and the type of problem to be studied determines the particular steps to be taken and their order too.

This study is primarily to be based on the secondary data have been collected from various sources e.g. books, articles & papers published covering various aspects of the topic, annual reports and other published material available for public use by the companies selected for the study. The data and information collected from various sources will require classification, tabulation, analysis and interpretation and then the result of the research will be issued to test hypothesis in qualitative and quantitative terms.

### **Scope of Study**

The present study will cover a period of five years i.e. the financial years from 2009 -10 to 2018-19. The primary purpose of the present study has been to obtain a deep insight into and full familiarity with the Cost analysis and cost management and cost management in cycle companies in India. The changes that have taken place in during the study. This study is an attempt to bring into focus the role and contribution of the selected cycle companies in India to investors and to society. It is always necessary to confine the research work to a certain area so that detailed and intensive study can be carried out. Keeping this in view, the proposed study seeks to cover the following selected cycle companies in India.

- Atlas Cycle Limited
- Hero Cycle Limited
- Hercules Cycle Limited

#### **Limitations of Study**

Following are the main limitations of the study:

- The study is based on the specific time period which may cause variation from the actual research.
- The study is based on only four selected cycle companies.
- The tools and technique used under the study may also considered as a limitations.

#### **Tools and Techniques of Study**

The following are some important tools and techniques which are will be used to draw conclusion.

- Comparative and common size balance sheet analysis.
- Ratio Analysis
- Trend Analysis
- Statistical Tools

#### **History of Cycle Industry of India**

With sales of 12 million units a year, India is the second-largest player, after China (50 million units), in the approximately 100-million-unit global bicycle market. The Indian bicycle market comprises two segments: "standards" and "specials". Standards are the workhorses of the rural economy. These cheap and rugged bicycles have remained unchanged for decades. The specials or "fancy" segment comprises new generation bicycles, which are more expensive. Differentiation is the name of the game here. Standards, which accounted for over 90% of the market in the early 1990s today account for only 66% of cycle sales in the country. This is mainly because:

- New classes of bicycles called juveniles, which are categorized in the specials segment, have over-taken the standards. The juvenile is, in effect, a standard bicycle with a more urban look, which is targeted at the rural and semi-urban youth. Its popularity can be gauged from the fact that while standard bicycles registered a compound annual growth rate (CAGR) of 2.7% between 2016-17 and 2017-18, juveniles raced ahead at 12.6% in the same period.
- Manufacturers have also increasingly attempted to wean away consumers to the specials segment through greater marketing push and by attractively pricing specials. This has, to an extent, hurt standard sales in semi-urban areas.
- To some extent, standards sales have also been affected by the irregular monsoons in recent years since rural incomes are dependent on the monsoons and standards are predominantly sold in the semi-urban and rural areas. In the last six years, standards achieved double digit growth (12%) in just one year, 2018-19, due to unusually large purchases by the state governments of Gujarat and Andhra Pradesh for free distribution.

In the last six years, specials have posted a higher CAGR of 14% chiefly on the back of product innovations and pricing. Since specials offer higher top line growth and profits, domestic players have pushed the sales of these bicycles at the expense of standards. In a bid to differentiate their products, bicycle manufacturers have also used the experience gained from exporting "specials" to developed countries to introduce innovative features and improve quality. This has resulted in a slew of new products hitting the market. In the last few years, players have also imported cheaper parts from China, which has enabled them to lower their prices without compromising on quality.

#### **Role of Cycle Industry in India**

The size of the Indian bicycle industry stands at US \$1.2 billion. The number of units (finished bicycles including all segments) produced is around 12 million, according to an industry source. Of this, the number of units exported annually is about two to three million, which points to a huge demand in the domestic market. According to figures from the Engineering Exports Promotion Council, in 2007-08 India exported bicycles and components worth US \$185.42 million. The market for the premium or the lifestyle bikes targeted towards the lifestyle consumer is just about emerging.

The definition of high end bikes itself is changing. Earlier the high-end bikes were considered as those selling between Rs. 5000 to 8000. However now with global brands moving into the country this definition is also changing with price-points starting from Rs.15000 to as high as a few lakhs. The country today is on the threshold of globalisation and teeming million are looking for higher level of growth together with equitable distribution of income to improve their lots. Generally the economic signs appear to be favorable for the country to improve its performance and in turn improve the lot of its people. Obviously; this improvement is going to reflect upon the Bicycle Industry in particular and transport segment in general. With customers of the country aspiring for higher and higher the current Bicycles users will be graduating to auto two-wheelers, but there will be a new population looking to the bicycle as means of transport. Similarly a new generation of buyer will look to bicycle as a mean of leisure recreation and good way to keep fit. We, therefore, see a healthy sustained growth of cycle industry. Presuming that growth of last 3-4 years is sustained for next 10 years i.e. the time we reach the year 2010, the Indian bicycle industry would need to produce about 1.75 crore bicycles to plug the demand and supply gap. However, there will be a change in the demand pattern linked with consumer changing aspiration and choice giving way to latest technology and newer marketing concepts. Industry is already witnessing this to some extent. The new millennium has brought new challenge of opening up of import of Cycles.

The manufacturers in India agree to the point that Indian Bicycle Industry does not foresee any problem as the product offered today by Indian manufacturers in the market are best suited to Indian conditions and are most economical and value for money products. On the whole the future for Indian industry including Bicycle will be challenging. The domestic market will be open to good and services from global companies with low tariffs. Protection will be a thing of the past. The companies that will survive will be those which successfully restructure and modernise to achieve global competitiveness in terms of both quality, cost and distribution system.

#### **Analysis of Cost in Cycle Industry**

There are mainly 6 sources of cost in cycle companies regarding Cost analysis and cost management which are as follows:

- Raw Materials
- Power and Fuel
- Employee Cost
- Other manufacturing expenses
- Selling and distribution expenses, and
- Other

All the three companies are showing details of six types of cost or expenses their annual reports and accounts. All the 6 types of costs during the study period is shown in table 3.1 to 3.21 for all the four companies under study. It is clear that the raw material of Atlas Cycle Limited amount was Rs. 525.75 crores in 2015-16 which increased to Rs. 639.44 crores in 2016-17. Thereafter it increased to Rs. 713.98 crores in 2017-18 and after this year it firstly decrease to Rs. 542.92 crores and then increased to Rs. 543.06 crores in 2018-19. Maximum cost of raw materials was Rs. 713.98 crores and minimum cost of raw material was Rs. 525.75 crores. The overall range is 188.23 during the period of study. Overall, the trend was fluctuating. On the other hand, the index number of raw material was 100 in 2015-16 which increased to 121.62 in 2016-17. Thereafter it increased to 135.80 in 2017-18 and after this year it firstly decrease to 103.27 and then increased to 103.29 in 2018-19. Overall, the trend was fluctuating during the period of study.

The amount of power and fuel cost in year 2015-16 was Rs. 7.58 crores and then it slightly increased to Rs. 8.64 crores in 2016-17, after that it again increased to Rs. 9.12 crores and then decreased to Rs. 8.08 crores and then finally increased to Rs. 9.93 crores in year 2018-19. Maximum amount of power and fuel cost was Rs. 9.93 crores, minimum amount of power and fuel cost was Rs. 7.58 crores. The overall range is 2.35 during the period of study. Overall, the trend was fluctuating. And the index number in 2015-16 was 100 which then increased to 113.98 in 2016-17 again increased to 120.32 after that it firstly decreased to 106.60 and then increased to 131.00. The index number of this cost was 100 in 2015-16 which increased to 116.56 in 2016-17, then again increased to 128.56 in 2017-18 and after that it continues decreasing to 122.22 and 118.54 in 2018-19. Overall, the trend was fluctuating. Index number of this cost was 100 in 2015-16 then decreased to 65.14 and then increased to 641.35 in 2017-18 after that it firstly decreased to 270.81 and then increased to 281.08 in 2018-19. Overall, the trend was fluctuating.

Index number is measured to 100 was 2015-16 then after that it kept on increasing to 109.38 in 2016-17, 135.26 in 2017-18, 136.63 in 2018-19. Overall, the trend was increasing. Overall, the trend was increasing. On the other hand, index number of miscellaneous cost was 100 in 2015-16 and after this year it was marked increasing to 106.69 in 2016-17, 126.23 in 2017-18, 130.36 in 2018-19. The index number of raw materials cost in Hero Cycle Limited was 100 in 2015-16 then it increased to 119.37 in 2016-17 and 137.84 in 2017-18. Then decreased to 109.22 in 2018-19. The maximum amount of power and fuel cost was Rs. 181.10 crores, minimum amount was Rs. 100.47 crores and forming a range of 80.63. Overall, the trend was fluctuating. And the index number of power and fuel cost was 100 in 2015-16 which then decreased to 55.48 and then continues increasing to 62.21 in 2016-17, 71.33 in 2018-19.

And the index number of employee cost was 100 in 2015-16 and after this it continues increasing to 110.46 in 2016-17, 131.27 in 2017-18, 146.51 in 2018-19. Overall, the trend was increasing. The Index number of manufacturing expenses was 100 in 2015-16 which then decreased to 90.21 in 2016-17 and 11.36 in 2017-18 and after this it increased to 23.18 in 2018-19. On the other hand, the index number of selling and administration expenses ratio is 100 in 2015-16 which then increased to 123.24 in 2016-17 and after this also it kept in increasing simultaneously to 142.12 in 2017-18, 152.59 in 2018-19. Maximum of miscellaneous expenses was Rs. 2339.09 crores, minimum was Rs. 280.64 crores and range is 2058.45. Overall, the trend was increasing. And the index number of this cost was 100 in 2015-16 and after this it continuous increasing to 121.30 in 2016-17, 138.80 in 2017-18, 721.68 in 2018-19. Maximum of total expenses was Rs. 23860.23 crores, minimum was Rs. 13184.44 crores and forming a range of 10675.79. Overall, the trend was increasing. Index number of total expense ratio was 100 in 2015-16 and then it continues increasing to 127.40 in 2016-17, 151.94 in 2017-18, 166.12 in 2018-19. Overall, the trend was increasing.

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