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| **5** | **Cost Management for  Specific Sector** |

**LEARNING OUTCOMES**

After studying this chapter, you will be able to:

* Apply Cost Management Techniques

**CHAPTER OVERVIEW**

**Cost Management for Specific Sector**

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| **Power Sector** |  | **Agriculture Sector** |  | **Information Technology (IT) Sector** |
| * Key Risks * A complex Network * Features * Application of Cost Management Techniques * Value Chain Analysis |  | * Features * Cost Management |  | * Engagement Model * Cost Optimization Framework |

**Power Sector**

Thermal Power Plants are one of the main sources of electricity in India. The variation in the thermal power stations is due to the different fuel sources (coal, natural gas, naptha, etc.). Apart from thermal power plants, there are other types of energy resources being used to generate electricity. The various types of energy sources include hydro- electricity, solar power, wind power, nuclear power, etc.

**Key Risks in the Sector**

**Highly Capital Intensive**

Power sector is a highly capital intensive business with long gestation periods before commencement of revenue streams (construction periods of 7-8 years) and an even longer operating period (over 25 years). Since most of the projects have such a longtime frame, there are some inherent risks in both the internal and external environment.

**Coal Supply Position**

More than 50 percent of India’s generation capacity is coal based. According to the Integrated Energy Policy, by FY31-32, India requires 2,040 million tonnes of coal for power generation, more than 5 times its current consumption levels. The shortage of coal is so acute that most of the power generation companies are looking at imported coal as a viable alternative to domestic coal.

**Electricity Distribution – A Complex Network**

Electricity is generated at power plants and moves through a complex system, sometimes called the grid, of electricity substations, transformers, and power lines that connect electricity producers and consumers. Most local grids are interconnected for reliability and commercial purposes, forming larger, more dependable networks that enhance the coordination and planning of electricity supply.



**Features of Power Sector**

* Limited number of suppliers of electricity.
* Tariff determination is based upon the rationality to determine the cost incurred at various points of operation.
* Stakeholders are existing and future consumers, industries, government, regulators, and investors.
* Continuous growing demand of electricity.
* Flexible Cost allocation.
* Distribution loss and inefficiency gaps between generation and consumption of electricity.
* In-disciplined consumer.
* Continuous network between generators, transmitters, distributors, and consumers.
* Mostly public sector undertakings closely regulated by government.
* Energy subsidies having direct impact on national treasury affecting long term growth potential of the economy.

**Application of Cost Management Techniques in Power Sector**

* For determining prices and regulating tariffs.
* Developing a flexible cost allocation.
* Distribution loss and inefficiency gap analysis.
* Multi-dimensional costing calculations.
* Powerful analysis and reporting.

**Value Chain Analysis**

This involves ensuring value creation in all the activities both inbound and outbound activities undertaken by the power company starting from electricity generation to the point of supply or distribution of the electricity supply.

**Generation & Trading**

· Virtual Power Plants

· Remote Monitoring and Control of decentalised Generation Digital Supply Chain

· Realtime Energy Trading/ Straight through Processing

**Transmission**

· Condition Monitoring

· Grid Stability Based Management of Renewable Generation

**Distribution and Metering**

· Smart Metering and Variable Energy Tariffs

· Smart Grids

· Condition Based Maintenance

· Digital/Mobile Workforce

**Storage**

· Integration of Decentralised Storage Facilities

**Marketing, Sales & Service**

· Self Service Portals

· Social Media Marketing

· App Based Mobile Service

· Analytics Based Customer Segmentation and Pricing

· Performance Marketing

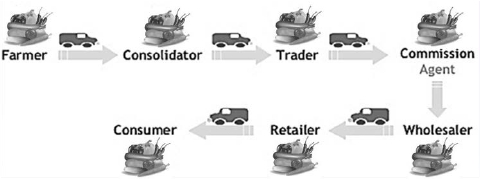
**Customer**

· Smart Home

· Demand Response Management

· Cross Energy Management/ Data Mining Based Energy Efficiency Analysis

**AGRICULTURE SECTOR**



**Features**

* Challenges associated with structure of the industry which is fragmented and unorganized
* Lack of understanding of costs
* Understanding the potential of working collaboratively
* Use of target costing techniques for price determination
* Imbalance of power across the supply chain

**Fragmented Structure of the Industry**

The structure of the agriculture sector is seen to be unorganized and fragmented in nature and thus lack of effective regulation in the given sector is also seen as one of the reasons why farmers seem to be exploited and have been operating at very low margins.

Lack of understanding of costs and prices by the farmers

One of the key reasons seen for the lack of appropriate cost management in the given sector is with regards to the lack of prioritization of the cost management among farmers because of lack of knowledge with regards to the same.

Understanding the potential to work collaboratively

The farmers need to be open to innovation in cost management and contracting techniques. Though there is scope for cost reduction in order to bring about improvement in the profit margins for the farmers, it is seen that generally the profits tend to get transferred to the customers and the only point of negotiation is in the contract pricing with the retailers which the farmers fail to reach.

**Target cost Management**

The target costing technique involves determining the cost by subtracting the required margin from the anticipated price for the agricultural produce. However, the anticipated price for the agricultural products fluctuates making the process of cost management using the target cost management system ineffective in the case of the agricultural sector Imbalance of power distribution With the fragmentation and the unorganized nature of the farmers operating in the agricultural sector, the power of bargaining seems to lie in the hands of the wholesalers purchasing the produce from the farmers resulting in overall low margins for farmers in comparisons to the margins earned by the wholesalers and the retailers operating in the said sector.

**Cost Management**

Cost Management focuses upon all the activities internal and external to the value chain process in order to help in cost reduction and cost control. In relation to the agricultural sector, the Activity Based Costing technique is being increasingly accepted for the purpose of cost management.

Large scale enterprises engaged in the agriculture sector that are engaged in the investment of high scale capital expenditure require efficient utilization of technology as well as the efficient use of production technology that are available at their disposal.

Thus, the Activity Based Costing as the name suggests provides a better manner in which the indirect costs associated with the processes carried out in the agricultural sector can be carried out in an efficient manner.

It is a step up from the target cost management technique where the fluctuation in the anticipated price which forms part of the formula might not result in appropriate determination of the target costs.

Therefore, ABC costing can help in allocation of the costs in relation to the various activities associated with the production based upon the cost drivers identified in relation to each production activity.

* Benefits of using ABC for cost management in the agricultural sector
* Adjustable costing technique
* Faster and more accurate
* Enables carrying out a more detailed cost analysis

**Minimum Support Price (MSP)**

In India, Minimum Support Price (MSP) was introduced by the Government of India to protect farmers against sharp dip of agricultural prices, which was usually observed during the harvest seasons. The harvest seasons are associated with huge supply, which overshadows the demand, and hence, in most cases the commodity prices hit the bottom. This forces the farmers, in necessity of money for repayment of debts, in selling their produce at losses or very little profits. Thus, the government fixes the MSP, as a part of government food grain procurement. Selling at MSP ensures profit margins for farmers and avoids distress selling situations.

**Information Technology (IT) Sector**

There are a number of challenges associated with the management of the costs associated with the Information Technology expenditures incurred by the Multi-National corporations. Thus, the complexity of the operating structure and the difficulty seen in the implementation of the cost allocation models, it is seen that in order to manage the IT costs, most organizations tend to develop centralized IT departments acting as cost centers for the purpose of managing the IT budgets as well as allocation of costs associated with along with the charging back of expenses that are incurred by the business units.

**IT Organization’s Engagement Model**

The question that needs to be addressed under the same is that whether the IT organization should be organized as a cost center to the organization or whether it should be seen as a strategic partner to the business. With more and more organizations whether large or small in nature, opting for third party allocation or opting for cloud computing services it can be seen that the internal IT departments are fighting hard for remaining relevant for the organization. In order to stay relevant, what the It department needs is a better visibility towards the IT needs of the organization. In order to do the same, organizations operating in the given sector can adopt what is referred as to the 4D framework.

**4D IT Cost Optimization Framework**

**Defining Organization Vision**

Any amount of spending carried out in relation to the Information Technology requirements of the organization needs to be aligned to the organizational vision and long term objectives. Business owners should have a sense of ownership and thereby control the IT costs in an effective manner.

The perspectives of the key stakeholders i.e. CEO, CFO and directors must be taken into consideration when deciding upon the IT consumption within the organization.

The additional visibility through the model needs to determine the appropriate method of cost allocation in relation to the IT cost burden. Thus, the allocation model that is chosen needs to be both flexible and at the same time avoid being too complex in nature. The organization can either opt for a simple method of dividing the entire IT cost by the number of hours consumed by each department or a more complex but accurate method of ABC costing could be used for allocation of the costs based upon the associated cost drivers associated with each set of activities.

**Documentation of the current state**

The next step involves documentation of the current state of the IT department implemented within the organization in order to identify gaps and potential weaknesses identified in relation to the current state for the purpose of identification of the appropriate pain points as well as identification of areas for potential automation

**Delineation of target business architecture**

Once the current state of the IT architecture has been documented, the next step is developing a target business architecture for the purpose of addressing the gaps and limitations identified and laying down the foundation with regards to the formation of the crux of the IT cost management framework.

**Decision: Build v/s Buy**

The last step understands whether the framework built is bought or custom built internally. The answer to the question involves a great amount of brainstorming and research taking into consideration the view point of all the strategic stakeholders involved

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