

EXECUTIVE SUMMARY

Power utilities in India are primarily involved in the distribution of electricity across the concerned area. There are a number of public and private organizations involved in it. There are many companies emerging strong in Power Utility sector. But off lately the performance of the companies in this sector has not been up to the standards as it was expected. If we compare the performance of Power Utility sector in India from the period of 2009-2012, we will find that overall the sector is not flourishing in terms of financial stability. Therefore it emerges a need to study the ways in which these financial losses can be minimized.

The primary objective of this study is to identify interrelationships between factors affecting power utilities distribution system and develop potential solutions to help distribution companies to overcome financial losses. Although there are large number of distribution systems existing in India, but still current reforms in India are not viable enough to fill the gaps between the required and available capacity. It is a need of an hour to have a utility model to ensure viable business entity with least financial burden on Government and effective distribution of power. The study aims to create awareness of the problem faced by Distribution power utility in the current scenario and formulate strategies & policies to regulate the supply and simultaneously control the cost of power function. The prime objective of this study is to recommend strategies to improve the Business Sustenance of Power Utility in India.

The analysis of the various studies and research reports reveals a common issue with the Power Utility model in India and that is Financial Sustainability. After clearly understanding the pre-established literature, it talks about significance of technology up gradation for power utility business model but does not propose any strategy for suitable strategy for business sustenance. Methods to enhance customer satisfaction and means by which power purchase cost can be reduced are not provided in the literature. Literature

discusses about Privatization and deregulation but doesn't focus on the best business model for sustenance. Manpower competencies in lieu with the Technology advancement and need for training on this technology is missing in the literature. Literature is scanty for the need based Employee engagement initiatives. Strategies for sustenance in this competitive environment were not focused. There is no comparative study of reforms across the world to have a gist of the reforms which can be implemented directly in India. Therefore, a new study design needs to be contributed, bridging the gaps found in the literature. Based on the above gaps, the following Research Problem, Research Questions and Research objectives are derived.

Research problem

Increasing Gap between Power purchase cost ARR and tariff Income is leading to losses to the power utilities and making its business sustainability difficult. There is an emerging need to critically examine factors responsible for this loss and formulate strategies to help power distribution Utility business to overcome this loss and sustain in the competitive business environment.

Research Objective

The following are the objectives of the research work

- To identify factors affecting power sector utility business for different models
- To identify strategies for attaining business sustainability of a power utility company in one power utility

Research Questions

Based on the research objectives mentioned above, the following research questions have been identified that needs to be answered through the following research work.

- What are the areas influencing the power sector distribution utility business?
- What are the strategies for attaining business sustainability of a power distribution utility company in India?

Data has been statistically analysed using SPSS and PHStat. Initially Cronbach's Alpha test will be used to check the reliability of the data. Further the data will be reduced to identify the factors after performing the KMO-Bartlett's test. All the factors will undergo Shapiro Wilk Test to check the normality of the data. Based on the Normality of the data Parametric or non-parametric test will be formed. For empirical results and statistical inferences Factor Analysis, One way ANOVA (Kruskal-Wallis test for non-parametric data) were used to report the findings. For strategic analysis, IE Matrix analysis and SWOT analysis will be used based on the Quantitative data analysis of best performing model. In the current research major objectives of arithmetical analysis were to reduce the set of variables into smaller number of controllable factors and then use those factors as independent variables to forecast the impact on the dependent variable. Factor analysis is a multivariate technique used to examine the interdependence amongst the variables of the study. The variables considered in the study were categorized and reduced to derive the factors. After identifying factors different models were compared for different factors to report if there exist any significant difference between utilities with respect to these factors. Furthermore, SWOT, IE analysis, IFE and EFE matrix were used as strategic management tools for analysing major strengths and weaknesses in functional areas of businesses and propose the optimal business strategy in core and non-core business areas to overcome financial losses.

The study examines various utility models and impact of several influential factors on the overall performance of the utility model. The quantitative analysis is performed in two stages to critically analyse the utility business and important factors influencing its operation. Quantitative analysis-1 helps to identify 10 no's of key important factors influencing the business sustainability of power utility business such as Technology adoption, Asset Optimization, Capacity building, Business Prospects, Customer Satisfaction, Power Reforms, Competitiveness, Employee contentment, Political Proposition, and Corporate Social Strategy.

As the PPP model results are favouring, the Quantitative analysis-2 was carried out for TPDDL respondents to identify the factors favouring the PPP Model. SWOT analysis and IFE & EFE analysis were performed in this study to identify several internal and external factors influencing performance of TPDDL where PPP model is in place. This analysis helps us to identify 10 no's of Internal and external factors influencing the performance of TPDDL namely Customer Satisfaction, Business opportunity, Policy on Renewables, Regulatory Environment, Expertise in Distribution and Brand value, Strong Business Processes, Technology Leader, Social participation, and Employee Engagement. This analysis backs to understand several strategies for business expansion in core and non-core areas

Business expansion in Core and Non-core area not only enhances the business sustenance but also it benefits the consumers and the benefits are also distributed to the customers in term of Tariff reduction. Performance management of Power Utility further highlights and corroborates the above results regarding the success story of TPDDL resulting in sustainable business at granular level.

The current study has been able to address issues affecting power distribution business in India. Detailed study of two utilities, namely, TPDDL and MSEDCL, were done on initiatives taken on social participation and CSR. The results were encouraging that it improves the utility performance in terms of reliability, customer satisfaction and loss reduction through input billing rate and revenue collection. It has also been able to recommend optimal solutions for TPDDL to overcome financial losses and develop sustainable strategies for fulfilling the electricity needs of forthcoming generation. Study also draws attention of power sector in identifying Renewable Integration and its full potential to obtain viable solutions to meet the power demand. Power sector should focus on utility performance, while simultaneously minimizing costs and generating revenue. Cross-border strategies were studied and comparative analysis of such kind helps in delivering optimal solutions to overcome the shortcomings in current distribution business.