

Factors Affecting Electricity Debtors' Non-Payment in the Service Area of the Provincial Electricity Authority, Region 1 (Northern Region), Chiang Mai Province.

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Abstract

This research aims to investigate the factors influencing non-payment of electricity bills among customers in the service area of the Provincial Electricity Authority (PEA) Region 1 (Northern Region), Chiang Mai Province. The study focuses on customers in Chiang Mai Province who have outstanding electricity bills not exceeding 8,000 Baht during the period from 2020 to 2021, totaling 735 cases. The study found that the majority of PEA customers in arrears were residential customers in Chiang Mai Province. Most had electricity bill arrears ranging from 1 to 5 billing cycles, with an average outstanding electricity bill of 2,104.17 Baht per customer. The average electricity bill per billing cycle for customers with outstanding bills was 386.48 Baht. Chi-square test results indicate that the type of electricity rate, the branch of the electricity authority where the customer resides, and the number of overdue billing cycles (Group 1 : Customers who paid their electricity bills within 1 to 5 billing cycles. Group 2 : Customers who had overdue bills beyond 5 billing cycles.) are significantly related to the payment status of electricity debtors at a significance level of 0.10. Based on the logistic regression analysis we obtained logistic regression equations representing the probability of an electricity debtor being in a non-payment status using electricity tariffs types, the provinces of types of electricity tariff, the province of the electricity authority branch where the user resides, and the number of overdue electricity bills.

Introduction

The Provincial Electricity Authority (PEA) is a state enterprise responsible for providing and distributing electricity in the regional areas of Thailand. It has continuously developed its services. PEA Region 1 (Northern Thailand) is based in Chiang Mai and oversees electricity services in six northern provinces.

In early 2020, the COVID-19 outbreak affected the economy, prompting the government to implement relief measures, such as reducing electricity and water bills. This led to a decrease in PEA's revenue from electricity sales and an increase in the costs of services and debt collection efforts.

The researcher is interested in studying the factors that cause electricity customers to delay payments, in order to find appropriate measures for improving debt collection strategies in the future.

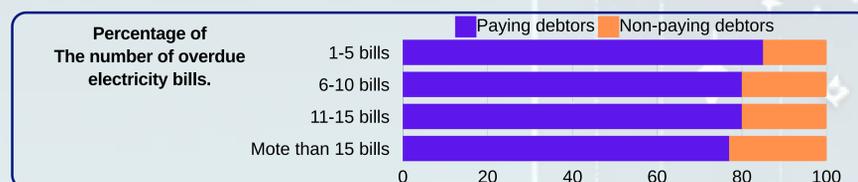
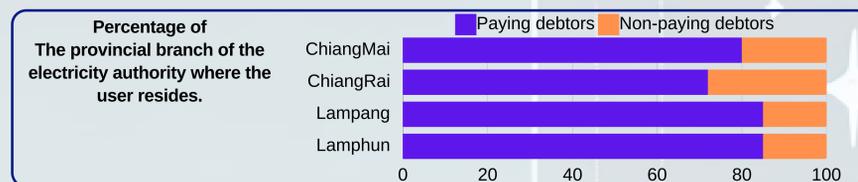
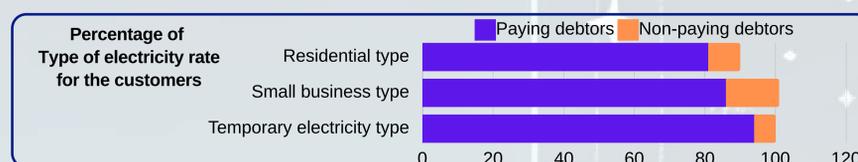


Method

The data used in this study is secondary data obtained from the Debt Management Department of the Provincial Electricity Authority (PEA) Region 1 (Northern Thailand), Chiang Mai, regarding electricity

customers who had outstanding bills between 2020 and 2021, with amounts not exceeding 8,000 baht, totaling 735 customers. This data will be recorded in Microsoft Excel to store and manage the basic data. Afterward, SPSS for Windows will be used for statistical analysis, such as chi-square tests and logistic regression analysis, to examine the factors affecting the non-payment of electricity bills.

Results



This study analyzes the factors influencing non-payment of electricity bills among debtors in the jurisdiction of the Provincial Electricity Authority, Region 1 (Northern), Chiang Mai Province. Using data from 735 debtors, it was found that the majority were residential electricity users (619 cases), while the lowest number of debtors were in the temporary electricity category (35 cases). The average total outstanding debt was 2,104.17 THB, with an average monthly debt of 386.48 THB.

The study identified a significant relationship between the type of electricity rate, the debtor's province, and the number of overdue bills with their payment status. Logistic regression analysis showed that the model could predict payment status with 82% accuracy, with residential users being more likely to default on payments than other groups. The findings suggest that the Provincial Electricity Authority can utilize this study to develop more effective debt collection strategies. However, further research should explore additional factors, such as income levels and economic conditions, that may also impact payment behavior to create a more comprehensive framework.

Conclusion

This study analyzes the factors influencing non-payment of electricity bills by debtors in the service area of the Provincial Electricity Authority (PEA), Region 1 (Northern Thailand), Chiang Mai Province, using data from 735 debtors with outstanding payments in 2020-2021. The factors found to affect non-payment include the type of electricity rate, the province and branch of the electricity authority where the consumer resides, and the number of overdue bills. When the number of overdue bills was categorized into two groups (1-5 overdue months and more than 5 overdue months), it was found that both the province of residence and the number of overdue bills were related to the payment status. The logistic regression model was able to predict the payment status correctly 82% of the time.