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# A Study on Value Addition and Business Diversification Practices and Their Impact on the Profitability of Tiruchengode Agricultural Producers Cooperative Marketing Society

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## ABSTRACT

Agricultural Producers Cooperative Marketing Societies (APCMS) play a vital role in enhancing farmers' income through value addition, market access, and diversified business operations. In recent years, value addition and business diversification have emerged as important strategies for improving the financial sustainability and competitiveness of cooperative marketing societies. This study examines the value addition activities, business diversification practices, and their impact on the profitability of the Tiruchengode Agricultural Producers Cooperative Marketing Society (TCMS), Tamil Nadu. The study adopts a descriptive and analytical research design using both primary and secondary data. Secondary data were collected from the audited financial reports of the society for the period 2020–2021 to 2024–2025, while primary information was gathered through structured interviews with society officials. Descriptive statistics, Pearson correlation, and multiple regression analysis were employed to analyze the relationship between value addition, business diversification, and profitability.

The findings reveal that TCMS has significantly expanded its value-added product portfolio through the processing and marketing of turmeric powder, oil varieties, pulses, rice, soap products, and neem cake powder. The society has also diversified into petroleum sales, LPG distribution, medical shop operations, iron rod sales, and seasonal retail activities to generate multiple revenue streams. Correlation analysis indicates a strong positive relationship between value addition and profitability ($r = 0.835$), whereas business diversification exhibits only a weak association with profit ($r = 0.098$). Regression analysis further demonstrates that value addition has a stronger positive influence on profitability ($B = 0.634$) than business diversification ($B = –0.019$), although the relationships are not statistically significant due to the limited number of observations.

The study concludes that value addition is a more effective strategy than business diversification for improving the financial performance of cooperative marketing societies. Strengthening processing facilities, product diversification, branding, packaging, and modern infrastructure can enhance farmers' income, improve market competitiveness, and ensure the long-term sustainability of agricultural cooperatives. The findings provide useful insights for policymakers, cooperative managers, and researchers interested in promoting value-added agricultural marketing through cooperative institutions.

**Keywords:** Agricultural Cooperatives, Value Addition, Business Diversification, Cooperative Marketing, Financial Performance

## INTRODUCTION

Agricultural cooperatives play a vital role in rural development by enhancing farmers' income, improving market access, and providing essential services such as input supply, storage, processing, and marketing. According to the International Cooperative Alliance (ICA), a cooperative is an autonomous association of persons who voluntarily unite to meet their common economic, social, and cultural needs through a jointly owned and democratically controlled enterprise.

Over the years, agricultural cooperatives have evolved from traditional marketing institutions into multi-functional organizations engaged in value addition and business diversification. Value addition through grading, processing, packaging, and branding enhances product quality, reduces post-harvest losses, and improves farmers' income. Similarly, business diversification enables cooperatives to generate multiple income streams, reduce market risks, and strengthen financial sustainability.

Despite these advancements, farmers continue to face challenges such as low price realization, inadequate processing facilities, poor infrastructure, and dependence on intermediaries. These issues highlight the need for strengthening cooperative marketing through value addition and diversified business activities.

Although previous studies have examined value addition and business diversification separately, limited empirical research has analyzed their combined impact on the financial performance of cooperative marketing societies at the micro level. Therefore, this study investigates the value addition and business diversification practices and their influence on the profitability of the Tiruchengode Agricultural Producers Cooperative Marketing Society (TCMS).

### Objectives of the Study

- To analyze the value addition activities undertaken by TCMS
- To examine the business diversification practices of the society
- To evaluate the impact of value addition and business diversification on the profitability of TCMS
- To study the growth pattern of value-added products and business activities

### Hypotheses of the Study

- **H1:** Value addition has a significant positive impact on profitability
- **H2:** Business diversification has a significant impact on profitability.

## REVIEW OF LITERATURE

### Value Addition in Agriculture

Value addition in agriculture has been widely recognized as a key strategy for enhancing farmers’ income and improving market competitiveness. According to Food and Agriculture Organization (2017), value addition through processing, grading, packaging, and branding significantly reduces post-harvest losses and enables farmers to capture a higher share of the consumer price. Similarly, Porter (1985) emphasized that value addition enhances product differentiation and market advantage.

Empirical studies have shown that value-added products improve shelf life, quality, and market access, thereby increasing profitability (Birthal et al., 2015). In the Indian context, Kumar and Singh (2018) found that value addition in agricultural commodities significantly contributes to rural industrialization and income generation. Thus, value addition not only enhances economic returns but also strengthens the overall agricultural value chain.

### Business Diversification in Cooperatives

Business diversification has emerged as an important strategy for agricultural cooperatives to ensure financial sustainability and reduce operational risks. According to the National Cooperative Development Corporation (2020), diversified cooperatives are better equipped to withstand market fluctuations and generate stable income streams.

Studies by Chaddad and Cook (2004) highlight that diversification improves organizational efficiency and reduces dependency on a single line of business. Similarly, Roy et al. (2017) observed that cooperatives engaged in multiple business activities such as agro-processing, dairy, and retail marketing demonstrate higher resilience and financial stability. Diversification also enables cooperatives to provide a broader range of services to their members, thereby improving participation and member satisfaction.

### Value Chain Development

Value chain development focuses on integrating various stages of production, processing, and marketing to enhance efficiency and value creation. According to Kaplinsky and Morris (2001), value chain integration strengthens linkages among stakeholders, including producers, processors, traders, and consumers.

The Food and Agriculture Organization (2014) emphasizes that agricultural cooperatives play a crucial role in value chain development by facilitating aggregation, storage, processing, and marketing of produce. Birthal et al. (2015) also found that effective value chain integration improves price realization for farmers and reduces the role of intermediaries. Furthermore, value chain development contributes to improved quality control, enhanced market access, and increased competitiveness in both domestic and international markets.

### Challenges in Cooperative Marketing

Despite their significant role, agricultural cooperatives face several challenges in marketing their products effectively. According to Singh and Pundir (2019), inadequate infrastructure, lack of modern processing facilities, and limited access to finance are major constraints affecting cooperative performance.

Studies by Trebbin (2014) highlight issues related to governance, transparency, and member participation, which weaken institutional efficiency. Additionally, market-related challenges such as price volatility, competition from private players, and continued dependence on intermediaries further constrain the effectiveness of cooperative marketing systems. Reports from the Government of India (2021) emphasize that these challenges hinder the growth and sustainability of cooperatives, thereby limiting their ability to enhance farmers' income.

Although existing literature highlights the importance of value addition, diversification, and value chain development, most studies focus on macro-level analysis or specific individual aspects. Limited empirical research has examined the **combined impact of value addition and business diversification on the financial performance of cooperative marketing societies at the micro level**. This study attempts to address this gap by analyzing TCMS.

## METHODOLOGY

This study adopts a descriptive and analytical research design. Both primary and secondary data were used for the analysis. Primary data were collected through structured questionnaires and interviews with employees and officials of the society. Secondary data were obtained from the audited financial reports of the society. The study covers a period of **five years from 2020–2021 to 2024–2025**, in order to analyze the trends in value addition and business diversification activities. The sample size for the study consists of **five observations (N = 5)**, representing annual data for the selected period. The limited sample size (N = 5) is due to the availability of consistent audited data for the selected period. The study is based on time-series secondary data; therefore, each year is treated as one observation for statistical analysis. Statistical tools such as descriptive statistics, correlation analysis, and multiple regression analysis were used to examine the relationship between value addition, business diversification, and profitability. The results are presented using tables and graphs for better interpretation.

### Value Addition and Business Activities of TCMS

The Tiruchengode Agricultural Producers Cooperative Marketing Society (TCMS) plays a significant role in enhancing farmers' income through value addition and diversified business activities. Unlike traditional cooperative marketing societies that primarily focus on procurement and sales, TCMS has expanded its operations by integrating value addition into its core activities.

Value addition in TCMS is carried out through activities such as processing, grading, packaging, and branding of agricultural commodities. Major products include turmeric powder, oil varieties, pulses, rice, soap products, and neem cake powder. These activities enhance the economic value of raw agricultural produce, improve product quality, and increase market demand.

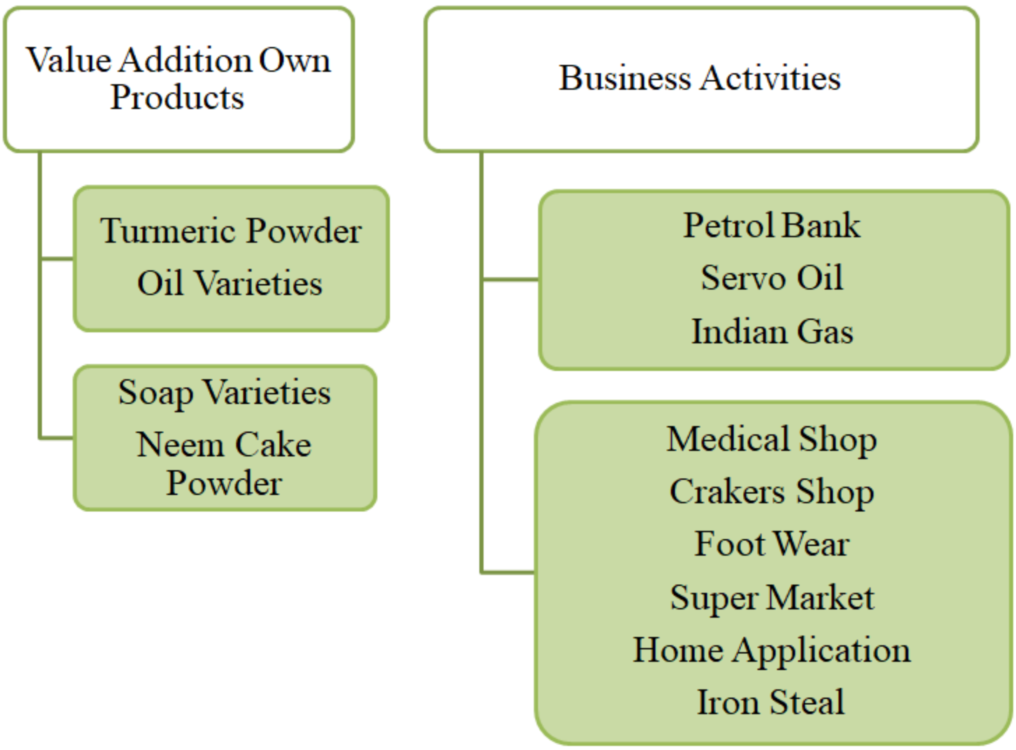
This indicates that TCMS has successfully integrated value addition into its marketing operations, enabling farmers to realize better prices and reducing dependence on intermediaries. In addition, value-added processing helps in minimizing post-harvest losses and improving the shelf life of agricultural products.

Apart from value addition, TCMS undertakes a wide range of business activities to strengthen its financial base and support member farmers. These include procurement and marketing of agricultural commodities, supply of agricultural inputs, storage and warehousing facilities, and retail business operations. The society is also engaged in non-traditional activities such as petroleum product sales, LPG distribution, medical shop operations, and other commercial services.

The diversification of business activities reflects TCMS's strategy to generate multiple income streams and ensure financial sustainability. However, the contribution of different business segments varies, with petroleum products contributing a major share to the total turnover.

Overall, the combined approach of value addition and business diversification has strengthened the operational efficiency of TCMS and improved its role as a market intermediary. This aligns with the study objective of examining how value addition and diversification influence the financial performance of the cooperative.

**Addition and Business Diversification Activities**




**Own products**

The own products of TCMS refer to the goods that are processed, produced, and marketed directly by the cooperative marketing society using agricultural commodities supplied by its farmer members. These products are manufactured through value addition activities such as cleaning, processing, grinding, oil extraction, and packaging. By producing its own branded products, TCMS increases the value of raw agricultural produce and

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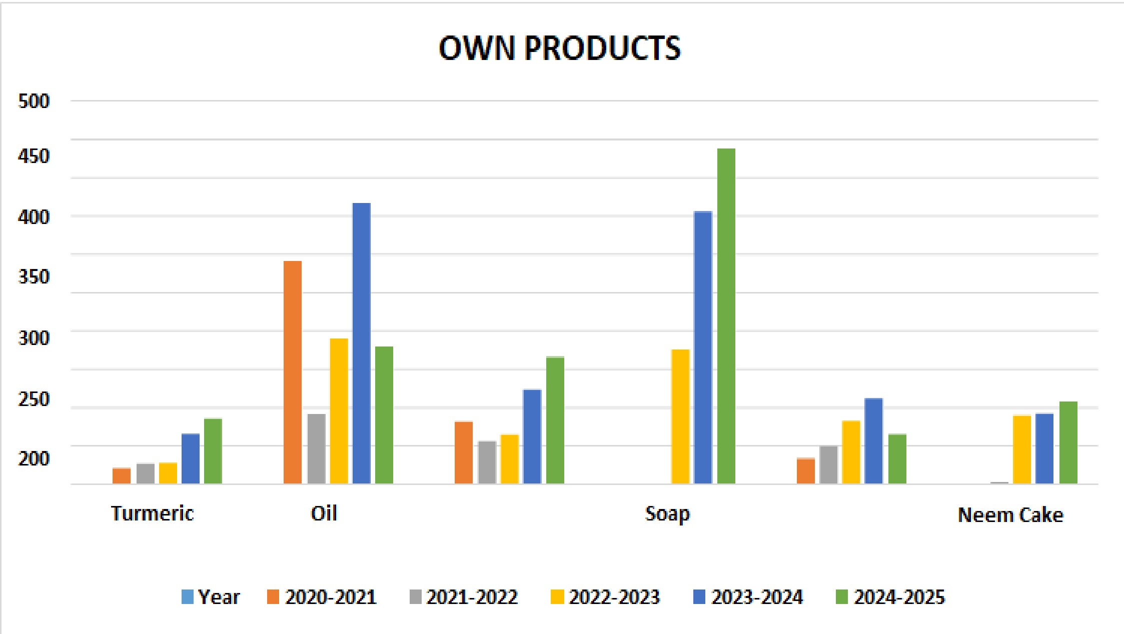
provides better income to farmers. TCMS mainly focuses on agricultural value-added products, especially those commonly cultivated in the Tiruchengode region. The society processes these commodities and sells them in the local market under its cooperative brand.

Table 1Own products Position of the Society (Rs. In Lakhs)

| Year | Turmeric Powder | Oil varieties | Pulses | Soap varieties | Rice | Neem Cake powder |
|---|---|---|---|---|---|---|
| 2020-2021 | 20.34 | 288.96 | 80.33 | - | 32.68 | - |
| 2021-2022 | 25.80 | 90.13 | 55.34 | - | 48.88 | 2.08 |
| 2022-2023 | 26.84 | 189.38 | 63.45 | 175.19 | 81.57 | 89.13 |
| 2023-2024 | 64.69 | 364.99 | 122.27 | 354.09 | 110.56 | 91.09 |
| 2024-2025 | 84.69 | 178.97 | 164.92 | 437.31 | 63.91 | 106.97 |

Source: Compiled from the audit reports of the Society.

The data shows a general upward trend in value-added products, indicating the growing importance of processing activities in TCMS. Turmeric powder sales increased steadily from 20.34 to 84.69, reflecting rising demand and effective value addition practices. Pulses also showed consistent growth, suggesting stable market demand. Oil varieties exhibited fluctuations, with a peak in 2023–2024 followed by a decline, indicating variability in market conditions. Soap varieties, introduced in later years, recorded significant growth, highlighting successful product diversification. Similarly, neem cake powder showed a gradual increase, indicating better utilization of by-products. Rice sales increased up to 2023–2024 but declined in 2024–2025, suggesting possible market or supply constraints. Overall, the trend indicates that TCMS has expanded its value addition activities, with strong growth in diversified products, thereby enhancing income generation and market competitiveness.




The chart clearly shows the growth and variation in value-added products of TCMS over the study period. Turmeric products exhibit a steady and consistent increase across the years, indicating stable demand and effective processing activities. Oil varieties show significant fluctuations, with a sharp rise in 2023–2024 followed by a decline, suggesting sensitivity to market conditions or raw material availability. Soap products demonstrate the most remarkable growth, especially in recent years, highlighting successful product diversification and expansion into non-traditional value-added items. Neem cake also shows a gradual upward trend, indicating improved utilization of agricultural by-products and growing acceptance in the market. Overall, the graph indicates that TCMS has strengthened its value addition strategy, particularly through diversification into new products like soap and neem cake, which contribute significantly to revenue growth and market competitiveness.

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**Business Activities**

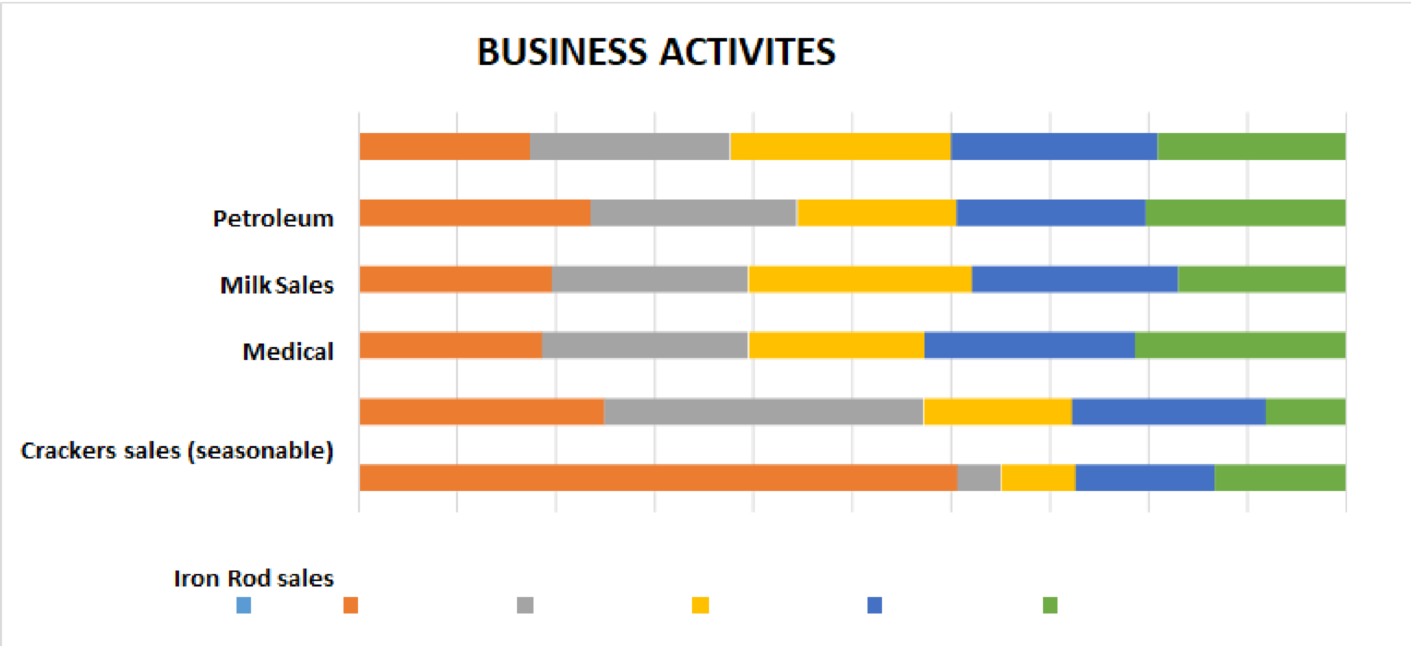
The Business activities of TCMS are aimed at improving the marketing system for agricultural producers and providing economic support to its farmer members. As a cooperative marketing society, TCMS undertakes various activities such as procurement, processing, storage, and marketing of agricultural commodities. These activities help farmers obtain fair prices for their produce and reduce the role of middlemen in the marketing process.

Business Activities  Position of the Society (Rs. In Lakhs)

| Year | Outright Sales | Iron Rod sales | Crackers sales (seasonable) | Medical Sales | Milk Sales | Petroleum Products |
|---|---|---|---|---|---|---|
| 2020-2021 | 378.57 | 170.50 | 71.66 | 153.46 | 43.75 | 4933.85 |
| 2021-2022 | 27.27 | 220.16 | 80.16 | 155.31 | 38.63 | 5729.12 |
| 2022-2023 | 47.11 | 102.44 | 68.54 | 177.17 | 29.94 | 6315.86 |
| 2023-2024 | 88.04 | 134.26 | 81.96 | 163.69 | 35.62 | 5939.33 |
| 2024-2025 | 82.55 | 55.04 | 81.95 | 132.51 | 37.51 | 5378.25 |

Source: Compiled from the audit reports of the Society.

The data indicates significant variation across different business activities of TCMS during the study period. Petroleum products consistently contribute the largest share of total sales, increasing from 4933.85 in 2020–2021 to a peak of 6315.86 in 2022–2023, followed by a gradual decline. This indicates that petroleum sales are the primary revenue driver of the society, though recent decline suggests possible market competition or demand changes. Outright sales show a sharp decline in 2021–2022 and then gradual recovery in subsequent years, reflecting instability in this segment. Iron rod sales fluctuate considerably, indicating irregular demand patterns. Crackers (seasonal sales) remain relatively stable across the years, showing consistent seasonal demand. Medical sales increased initially and then declined, suggesting moderate growth followed by stabilization. Milk sales show minor fluctuations but remain relatively stable, indicating steady but low contribution. Overall, the data suggests that while TCMS has diversified its business activities, the major dependence remains on petroleum products, and other segments show moderate or fluctuating performance. This indicates the need to strengthen non-petroleum business segments for balanced and sustainable growth.




The chart highlights the relative contribution of different business activities of TCMS, clearly showing the dominance of certain segments. Petroleum products occupy the largest share among all activities, indicating that this segment is the core revenue source of the society. This reflects TCMS's strong presence in fuel distribution and its significant contribution to overall turnover. Other activities such as milk sales, medical sales, crackers (seasonal), and iron rod sales contribute comparatively smaller shares, indicating their supportive role rather than primary income sources. Among these, medical and seasonal cracker sales show moderate contribution, while milk and iron rod sales remain relatively limited. This suggests that although TCMS has diversified into multiple business activities, the dependence on petroleum products remains very high. For long-term sustainability, there is a need to strengthen and expand other business segments to achieve a more balanced revenue structure.

## RESULT AND DISCUSSION

$$r = [\, \Sigma (x - \bar{x})(y - \bar{y}) \,] / \sqrt{[\, \Sigma (x - \bar{x})^2 \times \Sigma (y - \bar{y})^2 \,]}$$

To examine the relationship between key variables influencing the performance of the cooperative marketing society, correlation analysis has been employed. Correlation analysis helps in understanding the degree and direction of association between variables such as value addition, business diversification, and profit.

In the context of this study, it is essential to analyze whether activities related to value addition and business diversification are associated with improvements in the financial performance of the society. Therefore, Pearson's correlation technique has been used to measure the strength of the relationship between these variables. The results of the correlation analysis provide insights into how strongly value addition and diversification activities are related to profit and help in identifying the most influential factors affecting the performance of the cooperative marketing society.

Table: 3

| **Variables** | **Value Addition** | **Business Diversification** | **Profit** |
|---|---|---|---|
| **Value Addition** | 1 | 0.457 (0.439) | 0.835 (0.078) |
| **Business Diversification** | 0.457 (0.439) | 1 | 0.098 (0.876) |
| **Profit** | 0.835 (0.078) | 0.098 (0.876) | 1 |

The correlation analysis was conducted to examine the relationship between value addition, business diversification, and profit of the cooperative marketing society. The results indicate that there is a strong positive relationship between value addition and profit ($r = 0.835$).

This implies that an increase in value addition activities such as Processing and product development leads to a corresponding increase in the profitability of the society. However, the relationship is not statistically significant at the 5 percent level ($p = 0.078$), which may be due to the limited number of observations. In contrast, the relationship between business diversification and profit is very weak ($r= 0.098$) and statistically insignificant ($p = 0.876$). This suggests that diversification activities such as petrol bunk, gas distribution, and retail operations have minimal impact on the overall profit of the society. Further, the correlation between value addition and business diversification is moderate ($r = 0.457$) but not statistically significant ($p = 0.439$), indicating that these two activities are somewhat related but operate independently to a large extent. Overall, the analysis reveals that value addition plays a more important role in influencing profitability compared to business diversification.

### Regression

Regression analysis is a statistical technique used to examine the relationship between a dependent variable and one or more independent variables. It helps in understanding how changes in independent variables influence the dependent variable and is widely used for prediction and impact analysis. In this study, multiple regression analysis is employed to analyze the effect of value addition and business diversification activities on the profit of the cooperative marketing society. The technique enables the identification of the extent to which each independent variable contributes to variations in profit. By applying regression analysis, the study aims to determine the magnitude and direction of influence of value addition and diversification practices on the financial performance of the society. This provides a deeper understanding of which activities play a

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significant role in improving profitability.

Table: 4

| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate |
|---|---|---|---|---|
| 1 | 0.894 | 0.799 | 0.598 | 18.816 |

Table: 5

| Variables | Coefficient (B) | Std. Error | Beta | Sig. |
|---|---|---|---|---|
| Constant | 322.382 | 122.306 | — | 0.119 |
| Value Addition | 0.634 | 0.226 | 0.999 | 0.107 |
| Business Diversification | -0.019 | 0.019 | -0.358 | 0.421 |

Multiple regression analysis was carried out to examine the impact of value addition and business diversification on the profit of the cooperative marketing society. The model summary indicates that the correlation coefficient (R = 0.894) shows a strong positive relationship between the independent variables and profit. The coefficient of determination ($R^2 = 0.799$) reveals that 79.9 percent of the variation in profit is explained by value addition and business diversification activities. The adjusted $R^2$ value of 0.598 indicates that, after adjusting for sample size, the model explains 59.8 percent of the variation, suggesting a moderate fit. The regression coefficients indicate that value addition has a positive influence on profit (B = 0.634), meaning that an increase in value addition activities leads to an increase in profitability. The standardized coefficient (Beta = 0.999) shows that value addition is the most influential factor affecting profit**.** On the other hand, business diversification has a negative coefficient (B = -0.019)**,** indicating that diversification activities have a very minimal or slightly negative impact on profit**.** The Beta value (-0.358) also suggests a weaker influence compared to value addition. However, the significance values show that both variables are not statistically significant ($p > 0.05$), indicating that the results are not strong enough to confirm a definite relationship. This may be due to the limited number of observations (N = 5)**.** The lack of statistical significance may be attributed to the small sample size (N = 5), which limits the robustness of the results.

The findings from both correlation and regression analysis consistently indicate that value addition has a stronger influence on profitability compared to business diversification. While diversification contributes to revenue generation, its impact on profit remains limited. This suggests that strengthening value addition activities is more effective for improving financial performance in cooperative marketing societies.

**Policy Implication**

- TCMS should further strengthen its value addition activities by expanding processing facilities and introducing new value-added products
- The society should focus on branding and packaging to improve market competitiveness
- Efforts should be made to reduce over-dependence on petroleum products by strengthening other business segments
- Modern storage and processing infrastructure should be developed to reduce post-harvest losses
- Training programs should be conducted for farmers to enhance awareness about value addition techniques.

## CONCLUSION

The study concludes that value addition plays a crucial role in enhancing the financial performance of the Tiruchengode Agricultural Producers Cooperative Marketing Society (TCMS). The analysis of value-added products shows a steady increase in sales, indicating the effectiveness of processing, branding, and

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diversification strategies adopted by the society. In particular, the growth of products such as turmeric powder, soap varieties, and neem cake reflects successful expansion into value-added segments. The results of correlation and regression analysis further reveal that value addition has a stronger positive influence on profitability compared to business diversification. Although TCMS has diversified into multiple business activities such as petroleum sales, LPG distribution, and retail services, these activities show limited impact on overall profit. Thus, the study highlights that while diversification contributes to revenue generation, value addition remains the key driver of profitability and sustainable growth in cooperative marketing societies.

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