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Challenges And Sales Management Practices of Selected Solane Gas Station In Masbate City

Kaye Arevalo[1], Mae Ann B. Bulalaque[1], Rosemarie N. Dela Cruz[1], Mellon C. Lauren[1], Kyla Rechelle A. Manlapaz[1], Rafaella Gem C. Obeldo[1], Jonas P. Senser[1], Wilben S. Chavez[1]
[1]Liceo de Masbate Colleges Inc., Masbate, Philippines

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Email of Corresponding Author: kaye.merioles10@gmail.com

Abstract

Research on the operation and socio-technical management of the Solane Gas LPG station in the City of Masbate was done to study challenges (competition, management and workforce development) and management practices' (Sales Management Practices) effects on operational performance and sustainability of the facility. The Descriptive Research Design (DRD) was used to generate data through structured surveys with Management and staff members. Among the findings of this study is that Solane Gas LPG Station and the organization meet or exceed all operational standards as reflected by the perfect regulatory compliance, safety inspections and accessibility to standard operating procedures the location provides. The Solane Gas LPG Station faces stiff competition in terms of available customers; their competitive advantage is their physical location and their ability to use data-based, proactive, strategic sales targets, which are critical to maintaining Solane Gas LPG Station's position within the local energy market. Additionally, participatory leadership and effective communication are utilized by the management, to improve employee engagement and facilitate efficiency in operation efficiency. There are also some great examples of the importance of acting on customer feedback and strictly adhering to the rules, processes and procedures of liquid petroleum gas sales, in addition to the primary considerations for survivability for the Organization. The study recommends Solane Gas LPG Station to collect and formalize data on their sold product's inventory to assist with supplies and commits to improving their competitive advantages with Loyalty Programs.

Keywords: Customer Loyalty, Inventory Control, LPG Station, Market Competition, Operational Efficiency, Sales Management Practices

1. Introduction

Energy is essential for households, businesses, and industries worldwide, with liquefied petroleum gas (LPG) becoming a widely used source due to its efficiency and accessibility, yet operational issues such as inefficient inventory control, inconsistent sales practices, and poor customer service can reduce profitability, lower customer satisfaction, and weaken competitive positioning. These challenges, which also affect employee efficiency and increase operational costs, highlight the need to examine how Solane LPG manages pricing, customer service, promotions, and inventory to improve operational efficiency, sales growth, and customer satisfaction. Globally and in the Philippines particularly in semi-urban and rural areas like Masbate City LPG retailers face increasing competition, changing consumer demand, and logistical constraints, requiring strong sales management practices to maintain stable supply and performance (Keller, 2016). Despite existing literature, there remains a gap in research focusing on small-scale LPG retailers in these contexts, particularly in linking sales management elements such as pricing, inventory, service quality, and promotion to operational performance and customer satisfaction.

1.1 Global Challenges and Strategic Management in LPG Adoption and Supply Chains

Natural gas resources in Indonesia have the potential to be expanded through city gas programs, yet progress has been limited, with only 12% of the 2025 target achieved by 2019 due to constraints such as limited investment, inadequate infrastructure, regulatory complexities, and low customer satisfaction (Sadiyah et al., 2021). Globally, LPG has emerged as a critical alternative energy source, particularly in low-income and rural communities, as evidenced by initiatives in South Africa and Sub-Saharan Africa that highlight its benefits in reducing electricity demand, improving welfare, and lowering harmful emissions, despite persistent barriers related to infrastructure, policy implementation, affordability, and social acceptance (Annegarn & Kimemia, 2016; Black, 2021; Checkley et al., 2023). In developing regions such as Indonesia, Malaysia, and Zimbabwe, the LPG sector continues to face challenges including supply chain inefficiencies, regulatory pressures, fluctuating demand, and operational constraints, while also demonstrating its versatility across residential, commercial, industrial, and healthcare applications (Anggraeni et al., 2023; Shahrizan et al., 2022). Furthermore, broader issues such as household air pollution, limited access to clean cooking technologies, workforce

capability gaps, and the need for strong organizational culture and ethical practices underscore the importance of effective management strategies in ensuring sustainable performance, customer satisfaction, and long-term competitiveness within the LPG industry (Parikh, 2024; Imbrani, 2026; Kar et al., 2016).

1.2 Determinants and Strategies for LPG Adoption, Distribution, and Market Expansion in Developing Economies

The continued reliance on biomass fuels in developing countries presents significant health, environmental, and socio-economic challenges, prompting policymakers to promote transitions toward cleaner alternatives such as liquefied petroleum gas (LPG), although factors such as household wealth, income stability, and rurality strongly influence adoption patterns (Vahlne, 2017). Studies highlight that improving LPG supply chains, marketing strategies, and service delivery supported by government-private sector collaboration, ICT integration, and effective management practices can enhance operational efficiency, customer satisfaction, and sales performance, particularly in regulated and subsidy-driven markets like India and Indonesia (Agarwal et al., 2018; Anggraeni et al., 2023; Kusnandar, A.). At the same time, innovative approaches such as pay-as-you-go (PayGo) models, national LPG masterplans, and rural distribution programs in countries like Cameroon and Ghana demonstrate the potential to expand access, although challenges related to infrastructure, policy implementation, affordability, and stakeholder coordination persist (Aamaas et al., 2025; Bruce et al., 2018; Abeka, 2018). Furthermore, research emphasizes the critical role of marketing mix strategies, after-sales service, regulatory enforcement, safety compliance, and organizational practices in driving customer loyalty, market penetration, and sustainable industry growth, while persistent gaps in supervision, safety standards, and equitable distribution continue to hinder the full potential of LPG adoption across regions (Syers & Thanabordeekij, 2020; Correa, 2022; Chiluba et al., 2022; Djohanis et al., 2025; Guerra et al., 2026).

1.3 Drivers of Efficiency and Sustainability in the Liquefied Petroleum Gas (LPG) Sector

Gould and Urpelainen (2018) highlight that while liquefied petroleum gas (LPG) is widely recognized as a clean cooking fuel in rural India, its adoption remains constrained by high costs, leading many households to continue using firewood alongside LPG despite favorable perceptions of its convenience and efficiency. Effective inventory management and internal control systems are also critical in supporting business performance, as studies from Jamaica and other sectors reveal common practices such as physical inventory counts, ERP systems, forecasting, and classification, while weaknesses in standard operating procedures, reporting systems, and employee knowledge can lead to inefficiencies and financial risks (Johnson & Ruankaew, 2017). In LPG distribution, operational efficiency depends on logistics planning, data management, and technological integration, with systems such as vehicle routing algorithms, allocation information systems, and improved data processing enhancing service delivery and supply chain coordination (Coz et al., 2019; Ferri et al., 2023). Moreover, LPG demonstrates environmental advantages, including reduced emissions compared to conventional fuels, though accurate measurement systems, updated emission factors, and compliance with regulatory standards are essential for ensuring sustainability and reliability (Bellin et al., 2022; Adriany et al., 2025; Alvim & Cruz de Oliveira, 2026). Finally, studies emphasize that strong inventory control, adherence to operational procedures, and advancements in supply chain processes are necessary to maintain efficiency, reduce emissions, and support cleaner energy transitions, particularly as LPG continues to play a vital role across residential, industrial, and transportation sectors (Elmiar et al., 2023; Abrory et al., 2026; Baek et al., 2021; El-Halwagi & Ji, 2020; Nagar et al., 2020).

1.4 Integrating Advanced Risk Modeling and ICT Systems to Enhance Safety and Efficiency in the Liquefied Petroleum Gas (LPG) Supply Chain

The evolution of liquefied petroleum gas (LPG) supply chains in developing nations like India and Nigeria highlights a complex transition toward cleaner energy that must balance socio-economic accessibility with rigorous safety and operational standards (Bahago & Akanegbuba, 2025). While LPG is a critical transitional fuel for reducing reliance on "dirty" biomass, its proliferation in urban and industrial sectors necessitates the reconfiguration of supply chain networks through ICT integration, re-engineered logistics, and the elimination of subsidies to better serve diverse customer needs (Mittal et al., 2018). However, this expansion introduces significant safety risks, ranging from household burn injuries and accidental leaks to catastrophic maritime transportation hazards, requiring the implementation of sophisticated risk assessment protocols such as Fault Tree Analysis (FTA), Computational Fluid Dynamics (CFD), and multi-agent simulation models (Hadzihafizovic, 2025; Han et al., 2018). Effective mitigation strategies in cities like Port Harcourt now rely on technological advancements such as smart sensor-based leak detection, GSM-enabled monitoring systems, and automated gas detectors, alongside strengthened regulatory oversight and standardized emergency response training to ensure that the environmental benefits of LPG are not undermined by human error or equipment failure (Hotur, 2024; Marfo et al., 2023).

2. Material and methods

2.1 Research Design

This research used a quantitative methodology to examine the challenges and sales management methods of LPG from Solane in Masbate, Philippines. The quantitative component of this study will gather data using the correlational approach to examine demographic information that includes the ages and genders of the participants as well as their current job title/position and years with that job title/position. To conduct quantitative research, there is a requirement for standardized methods of collecting, analyzing, and interpreting numerical information relative to the hypotheses established for the research. The logical basis upon which quantitative research is based is derived from the collection and analysis of data with an emphasis on testing and is derived from the philosophy of positivism or empirical (Bryman, 2016). The main tool of data collection from respondents will be the use of a structured survey instrument (e.g., survey questionnaire) that includes closed-ended questions. The collected data will be analyzed using appropriate statistical methods with the aim of providing insights into the challenges faced by sales management practices of selected Solane Gas LPG distributors in Masbate City. This research design is appropriate because it allows researchers to measure characteristics quantitatively and to explore any correlations between sales management practices and selling influences on purchasing decisions.

2.2 Locale of the Study

Researchers conducted a study of the Liquefied Petroleum Gas (LPG) market in Masbate City, Philippines. The capital city of the province of Masbate is also a key hub for small and medium-sized enterprise (SME) development. With the increasing demand for household fuels such as LPG for cooking and other applications in Masbate City, Solane Gas is one of the most successful brands of liquefied petroleum gas available in the Philippines and is widely available through local dealers and gas stations in multiple cities and municipalities. Solane has several gas stations in Masbate City that provide LPG to residents, as well as restaurants and other businesses. The research focused on the selection of gas stations in Masbate City that are operational retailers of LPG, but which also face challenges such as managing inventory, variability in demand, delivery and logistics for delivery to customers, and competition for sales. By examining the operational practices and use of sales management by the gas station retailers in Masbate City, the study has demonstrated some current sales management practices utilized by owners/managers to grow their sales and better manage their operations.

2.3 Respondents of the Study

The respondents of this study comprised six (6) purposively selected individuals directly involved in the operations and distribution of Solane LPG in Masbate City, specifically including store owners, inventory specialists, sales professionals, and delivery staff. These participants were chosen based on their first-hand knowledge and daily engagement with the product, ensuring they could provide expert insights into the daily operational difficulties, sales management practices, and long-term viability of their respective businesses. By including a diverse cross-section of roles from management to frontline delivery the study captured a holistic view of the challenges and strategies within the local LPG retail sector, drawing on the respondents' considerable experience to assess the relationship between management tactics and overall business performance.

2.4 Sample and Sampling Procedure

The sample of this research study consisted of various businesses that distribute Solane LPG in Masbate City. These businesses were selected because they sell and distribute LPG products and, therefore, could provide useful information regarding LPG business operations. The researchers purposively sampled participants with adequate knowledge and experience in LPG sales and management. For the researchers to identify respondents, they first identified the businesses that sell Solane LPG in the area. After respondents were identified, the researchers visited the location of the respondent's business to request permission from the owner/manager of the business to conduct the study. Once consent was granted, the researchers provided an explanation of the purpose of the study, as well as its significance to potential respondents. Employees who were involved in the daily operation and sale of LPG products were invited to participate in the study. All employees who volunteered to participate were included as respondents and were given survey questionnaires. The information received from all respondents was analyzed in relation to the reported challenges experienced and the sales management practices employed by Solane LPG businesses in Masbate City.

2.5 Research Instrument

A research-devised survey questionnaire created in accordance with the researchers' objectives/research questions was employed. The survey instrument was specifically tailored to obtain pertinent data from industry participants at Solane stations and other locations in Masbate City. Additionally, the data-gathering tool was designed to capture empirical evidence regarding daily difficulties faced by the companies, sales outcomes obtained from their respective sales management practices, and long-term viability of each of the target Solane stations in Masbate City. Each questionnaire was divided into four sections (i.e., 1. demographic information; 2. daily difficulties experienced; 3. sales results achieved, based on how well they performed their sales management activities; and 4. long-term viability of the company). To complete the research data-gathering process, each of the researchers administered the survey (questionnaire) to each of

the survey participants. The survey contained a 5-point Likert scale from which the researchers measured each participant's experience based on their everyday dilemmas; ideally, it will enable researchers to evaluate how well each organization is managing their sales operations through their Sales Management tactics used by the organization; and finally, measure each company/organization's likelihood to remain viable into the future based upon their performance over time. A representation of the 5-point Likert scale's range and corresponding definitions appears below.

2.6 Data Gathering Procedure

The researcher identified qualified Solane Gas Station owners and personally approached them to request participation in the study. Questionnaires were distributed to the selected respondents to collect data on challenges and sales management practices adoption. Some identified participants declined due to limited time and business obligations, resulting in 6 completed responses. These responses were then compiled and prepared for analysis to address the research objectives.

2.7 Data Analysis Techniques

The data gathered from the survey questionnaires were analyzed using appropriate descriptive statistical tools to address the research questions. The following statistical treatments were applied. Percentage, this tool was utilized to describe the respondents' demographic profile, including years of age, sex, position, and length in service. Weighted Mean, it was used to determine the respondents' level of agreement regarding the daily challenges they encountered, their sales management practices and performance, as well as their business sustainability. The computed weighted mean was then interpreted using the 5-point Likert scale range.

3. Results and Discussion

3.1 Profile and Characteristics of Respondents

3.1.1 Age Distribution

With respect to the age categories of respondents, most of the respondents are in the 20-29 category (67%) and that 40 and older is 33%. The general population at the Solane Gas station in Masbate City is composed mainly of young people, which indicates that a younger segment will be probable for the success of this type of operation and that the youth will make up the bulk of new employable candidates.

3.1.2 Sex Distribution

A perfectly balanced workforce where all respondents are equally represented (50% male, 50% female). Gender equality within the workforce indicates that the LPG industry has equal opportunities for male and female employees regardless of whether their work-related duties involve physical or technical aspects of the business.

3.1.3 Position

An overview of the distribution of function within the station by showing the number of each of the station's functional positions (Station Manager at 17%, Cashiers at 33%, Inventory Officer at 17%, and Drivers at 33%). Together, they constitute important aspects of LPG Sales Management including Administrative administration, Inventory management, Final delivery.

3.1.4 Length of Service

About 50% of the workers have been at the company from 1–3 years, followed by 33% of the workforce having worked for 4 – 6 years, and only 17% with less than one year of experience. This demonstrates medium experience and stability within team since most of the workforce has successfully completed their original probationary period and become acquainted with the station's standard operating procedures.

3.2 Day-to-Day Challenges Encountered

3.2.1 Management Approach

The results for the management approach show an overall weighted mean of 4.81, interpreted as "Strongly Agree." The highest-rated item (Mean: 5.00) indicates that the organization clearly communicates its goals and involves employees in decision-making processes. This suggests a highly transparent and participatory management style at the Solane Gas station, where employees feel their input is valued and the direction of the company is well defined.

3.2.2 Market Competition

The market competition yielded an overall weighted mean of 4.39, with the station's strategic location earning a perfect mean of 5.00. While the respondents strongly agree that competition exists, they also acknowledge that the business has effective strategies to remain competitive. This indicates that while the Masbate City market is saturated with various gas providers, the station utilizes its physical positioning as a primary defense to maintain its customer base.

3.2.3 Inventory Control and Compliance

A strong performance in inventory and regulatory compliance, with an overall mean of 4.78. Specifically, the station received perfect scores (Mean: 5.00) for adhering to regulatory standards and maintaining optimal stock levels. This indicates a disciplined approach to supply chain management and a strict adherence to the legal frameworks governing the LPG trade in the Philippines.

3.2.4 Leadership and Decision-making Practices

Leadership and decision-making at the station received an overall weighted mean of 4.80. The data shows that the station manager makes timely decisions and handles workplace conflicts with ease, ensuring that operational bottlenecks are minimized. This high level of leadership efficacy suggests that the management can maintain a stable and productive working environment even during high-pressure periods or supply fluctuations.

3.2.5 Safety and Precautionary Measures

The safety measures at the station received a very high overall mean of 4.86, with regular safety inspections receiving a perfect mean of 5.00. This demonstrates that the station prioritizes the physical safety of its employees and the surrounding community, which is a non-negotiable aspect of handling volatile substances like liquefied petroleum gas.

3.2.6 Adequacy of Standard Operating Procedures

A high level of satisfaction was indicated by the responses to the survey with regards to the SOPs of the station, which received an overall weighted mean of 4.67 meaning “Strongly Agree” (SA). The greatest number of responses received were to the question concerning whether the SOPs are “well documented and easily accessible” (mean of 5.00). Employees also indicated a very high level of understanding of “why SOPs exist” (mean of 4.83) suggesting that the station does not just impose rules but that there is strong recognition of their purpose in daily operations by all employees.

3.3 Sales Management Practices and Sales Performance

3.3.1 Sales Management Practices

The specific sales management practices employed by the Solane Gas station, yielding an overall weighted mean of 4.78, interpreted as “Strongly Agree”. The highest-rated practice was the regular review and adjustment of sales targets based on performance (Mean: 5.00), while the maintenance of a customer database and sales forecast also received high marks (Mean: 4.83). This indicates a proactive and data-driven approach to sales management that focuses on adaptability and customer retention.

3.3.2 Sales Performance

The sales performance of the station, achieved a very high overall weighted mean of 4.93, interpreted as “Strongly Agree”. Respondents gave perfect scores (Mean: 5.00) to several key indicators, including the station's reputation in Masbate City, the quality of products, and the effectiveness of sales strategies in leading to business growth. This suggests that the station has established a strong market presence and high brand equity within the local community.

3.4 Influence of Sales Management Practices and Sales Performance

3.4.1 Customer Loyalty

Sales management influences customer loyalty, resulting in an overall mean of 4.90. The results show that quality service and active response to customer feedback are primary drivers of loyalty, both receiving a perfect mean of 5.00. This indicates that the station’s management prioritizes the customer experience as a core component of its business model.

3.4.2 Employee Supervision and Engagement

Table 4.2 shows the influence of sales management on employee supervision, with an overall mean of 4.67. The highest-ranked item was the supervisor's role in ensuring employees follow proper LPG sales procedures (Mean: 4.83). This underscores the critical role of middle management in maintaining operational standards and safety compliance in a high-risk environment.

3.4.3 Operational Efficiency

The influence of sales management on operational efficiency, yielding a high overall weighted mean of 4.94. Remarkably, items such as meeting industry standards, safety measures, competitive strategies, and employee welfare all received perfect scores of 5.00. This indicates that the station's management practices have created a highly optimized and compliant operational environment.

4. Conclusion & Recommendations

The study concludes that Solane Gas LPG in Masbate City thrives through a youthful, enthusiastic workforce and a highly transparent, participatory management style that ensures total clarity in organizational objectives. While the local market is intensely competitive, the station successfully leverages its strategic location and superior brand reputation to maintain growth and customer loyalty. Operationally, the station demonstrates nearly total efficiency and an excellent safety record,

though it faces moderate challenges regarding occasional supply shortages. These high-performance levels are primarily driven by data-driven management techniques, including the regular modification of sales objectives based on real-time results, which ensures long-term business resiliency and reliable service delivery within the community.

To further optimize operations, it is recommended that the station implement Remote Monitoring and Digital Inventory Management Solutions to address supply shortages through predictive analytics and demand forecasting. To counter market competition, the sales department should launch targeted loyalty programs and digital marketing campaigns to expand its reach beyond the immediate vicinity. Furthermore, establishing continuous professional development and safety training for its young workforce will ensure sustained technical proficiency and regulatory compliance. Finally, integrating energy-efficient infrastructure such as solar lighting can reduce overhead costs, while future research should explore comparative studies across the Bicol region or the impact of global fuel price volatility to further strengthen the resiliency of the local energy sector.

Compliance with ethical standards

This study was conducted in accordance with standard research procedures involving the voluntary participation of selected Solane Gas Station owners in Masbate City. Respondents were personally approached by the researchers and were included in the study based on their willingness and availability to participate. Data were collected through structured questionnaires and were used solely for the purposes of analysis aligned with the study objectives.

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