
| RESEARCH ARTICLE

Business Model Canvas: Business Analytics on Gas stations with C-stores in United States

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| ABSTRACT

Today's gas stations with convenience stores in the United States are not inclined to only selling gas and diesel, they are now offering more value propositions to their respective customers following their needs and choices. In the United States, people from every corner are now connected to gas stations and convenience stores for their daily needs. Therefore, any further improvements in this sector would benefit them even more. Gas stations with convenient stores can develop and maintain Business Model Canvas (BMC) for further improvement in their business and create even better value propositions for their customers. BMC will facilitate gas stations with better control of their business and help increase revenue streams. It also helps optimize the cost structure and fair pricing. Therefore, applying BMC model could facilitate gas stations with endless benefits by integrating all the nine segments of the model. In this research work, we designed our plan to explain the BMC model and analyze segments to the most relevant extent. Then we like to apply the model in a typical Gas station with C-store in the United States of America to see how a gas station can develop BMC in their business. In a typical gas station with C-store, we see, the customer segment composed of local consumers, commuters, travelers, and late-night shoppers. Gas stations are striving to extend their value propositions to attract more consumers and satisfy their growing needs. Value propositions include uninterrupted flow of gas/diesel supply, fresh produce, foods, merchandise items, friendly customer service, a wide range of products available in-store, ATM service, EV (Electric Vehicle) charging facility, car wash facility and more. Procurements of merchandise from various suppliers, building credit-worthy relationships with them, managing inventory/stocks are the key activities for this type of business. Key partners like banks, suppliers, delivery partners, and professional IT partners. A typical gas station with C-store may have multiple revenue streams. The cost structure of a typical gas station is classified as fixed costs and variable costs including suppliers' pay, utilities pay, payroll, monthly rents, and maintenance costs.

| KEYWORDS

Gas stations with c-stores, Business Model Canvas (BMC), business analytics, energy sector, US retail domain

| ARTICLE INFORMATION

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1. Introduction

Gas stations with C-stores are quite a common and integral part of the nation's (US) retail and transportation landscape which facilitates travelers, local folks with necessary fuel energy, and a variety of products.

Gas station's primary products include gasoline and diesel at their gas station. Few gas stations provide EV (Electronic Vehicle) charging facilities. In line with gas stations, they also have convenient stores selling necessary products for travelers and local

people which include snacks, drinks, auto products, tobacco, basic groceries etc. In terms of profitability, fuel sales generate a lower profit margin; however, general merchandise items earn a higher profit margin.

Besides basic fuel and merchandise items, they also provide convenient services like ATM facility, many gas stations serving hot food, restrooms etc. They also provide car wash facilities air pump, sells auto products like engine oil, steering power oil, coolant water, jump starters etc.

Nowadays, most of the gas stations have installed cutting-edge technologies in the register for accepting mobile payment, apple pay, self-checkout, and loyalty programs for attracting new customers. Major gas stations with C-stores include 7-Eleven, Shell, Chevron, Marathon, Speedway, BP etc. However, gas stations are mostly owned and operated by local business owners under franchise agreements.

In this research, we will look at the Business Model Canvas (BMC) of a typical gas station with convenient stores. This model will help gas station owners with better control of their business and enable them to make strategic business decisions.

2. Literature review

Business Model Canvas (BMC)

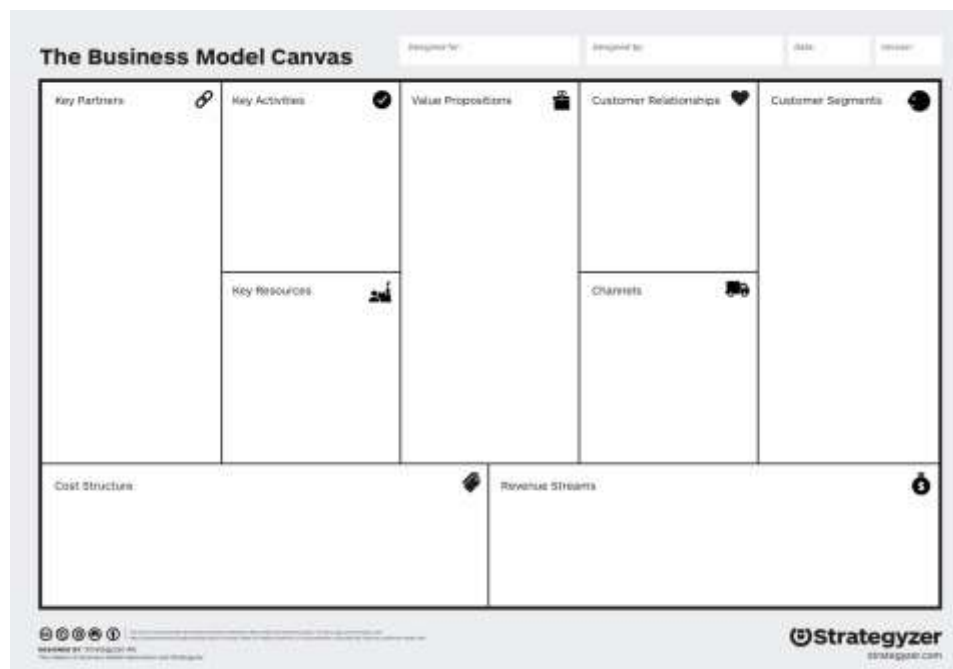
Business Model Canvas- a strategic tool for a business organization which contains a framework to help organizations identify and list the key elements of the business. It helps organizations to display their key components into a framework that benefits them to take strategic business decisions effectively and efficiently. There are nine segments of a BMC including: customer segments, customer relationship, channels, value proposition, key activities, key resources, key partners, cost structure, and revenue streams. A typical business model canvas framework looks as below:

2.1 Customer segments

This is an important pillar of designing a BMC of any business organization, because identifying the target customer is the key factor in becoming successful. Once we identify our potential and existing customers, we can design our business focusing on our target customers. Without identifying target customers, we may not be able to develop value propositions that will affect the revenue stream.

2.2 Customer relationship

This is another key component in how we approach customers with our products and services. A gentle behavior with customer greetings can make a difference in business performance. By offering a loyalty program and fair product pricing we can attract more customers and increase our sales revenue.



2.3 Channels

This is how we communicate and reach existing and potential customers. This segment is treated as a touchpoint through which customers connect with the company. There are two types of touch points like: owned channels (business website, social media, in-house sales), and partner channels (partner-owned website, retail, wholesale distribution).

2.4 Value Proposition

Value proposition refers to the core value of any business organization's products and services. It is the most important driver to attract potential customers in addition to regular customers. In other words:

- exactly what value a business entity wants to provide to its customers by selling its products and services,
- or what are the problems a company is trying to solve to satisfy customers,
- or why is the offer distinct in products and services to satisfy customer segment. Offers may include product quality, competitive price, products design etc.

2.5 Key Activities

Activities that are necessary to provide optimum value propositions to satisfy our customers' needs. Purchasing raw materials/fresh produce from suppliers is one of the key activities of a business entity. We identify and list all required activities to ensure the smooth flow of our business operations and deliver fresh products and services to our respective customers on time. Revenue stream, customer relationships, relationships with key partners depend on how effectively we set and manage the key business activities by using our key resources within the budgeted cost structure.

2.6 Key Resources

To establish and operate a business entity, it needs to have the necessary resources/assets to perform key activities and deliver its goods and services on time through appropriate delivery channels. Resources may include required equipment, infrastructure, intellectual property like software property, human capital, expert professionals etc. Without key resources it may not be possible to successfully run the business.

2.7 Key Partners

Business organizations are interdependent with key partner organizations or expert professionals for setting strategic business relationships. Suppliers of raw materials, financial institutions, distribution partners of our products and services. Building a long-term relationship with key partners may help a company lower its material costs and ensure a smooth flow of raw materials to its warehouse on time. Credit-worthy relationships with financial institutions may enable the company to avail themselves of the required finances for business expansion.

2.8 Cost Structure

This segment focuses on how the company spends money to set up and run business operations efficiently within the budget. Cost structure outlines all the fixed and variable costs associated with the business operations. Business entities can be cost-driven, or value-driven. A cost-driven company mainly focuses on lowering costs, for example, ALDI (a retailer) always tries to minimize costs and set low production prices. On the other hand, value driven companies focus on creating high-tech products, or fashionable products, for example. Apple company always focuses on quality and more advanced, high-tech products to deliver high value proposition. Business entities should outline key cost components and estimate total costs, also should plan on how to spend money on key resources and key activities.

Revenue Streams

This is the ultimate segment of a business model canvas. All of the segments of a BMC are designed to generate sufficient sales revenues to cover all its costs and expenses and earn net profit for the company. Therefore, the growth in revenue streams depends mostly on how we design and implement all other segments of a business model canvas. However, a company can generate sales revenue from different revenue streams. For example, Apple Inc. generates its sales revenue from several revenue sources like Apple Music.

3. Methodology

For this research work, we have chosen Business Model Canvas (BMC) to see what it looks like for a typical gas station with C-store in the United States. We know, BMC helps us to understand a business entity, its customers' segments, value propositions, channels,

key activities, key partners, key resources, cost structure, and finally, revenue streams of the business entity. Later, we will develop BMC based on secondary information published and available online. Finally, we will analyze and describe the outcomes we found during the research work. We also consider the author’s practical relevant experience in this sector.

4. Results/Findings

Business Model Canvas in a typical gas station with c-stores in the United States:

A typical Business Model Canvas for a Gas Station with C-store in USA				
Key Partners	Key Activities	Value Proposition	Customer Relationship	Customer Segments
Financial Institutions IT company Suppliers Delivery partners Tech professionals Security service partner APEC (for fuel delivery) Business & Tax Consultant	Manage inventory/stock Purchase merchandise Customer Service HR management Develop reporting system Monitor business performance Build relationship with suppliers Comply with rules and regulations Update all legal documentations	Fresh products Reasonable price Discount offers Friendly customer service Regular flow of gas/diesel 24/7 availability Suitable location A good range of products Car-wash service	Loyalty program Friendly relationship Building customer trust Self-service Faster service Clarify product features Focus on customer needs	Local consumers Commuters Travelers late-night shoppers
	Key Resources	ATM service	Channels	
	Modern Infrastructure Efficient POS system Inventories Trained Employees License & approvals MOUs with valuable partners Experience management Website	Lottery ticket Tire air pressure service EV (Electronic Vehicle) charging facilities	Store sales Delivery through partners Online sales	
Cost Structure			Revenue Streams	
Infrastructure development cost Lease payment Gas pumps maintenance costs Coolers maintenance costs POS system installation costs License, legal costs Insurance costs	Inventory suppliers' payments Utility expenses Staff salary and wages Tax consultant fees Loss from expired products Monthly Rent payments Other maintenance costs		Revenue from gas/diesel sale Merchandise sales Income from car wash service Income from prepared food Car parking fee ATM charges Air pressure service EV charging fee	

For a typical gas station with a convenient store, local consumers, travelers, and commuters are the targeted customer type. Local customers are mostly repetitive customers; therefore, building a friendly relationship with them may benefit the business significantly. They can provide loyalty program to attract more customers by retaining existing customers. Besides, they can provide self-service facilities, and faster customer service.

Gas stations generally sell their products and services at their premises, in-store sales, they also partnered with delivery services like UBER EAT, Doordash for online foods sales. Gas station's value propositions may include fresh products, a wide range of products availability, open 24/7 for late night shoppers, suitable locations, ATM facilities, Car wash facility etc.

Purchase of merchandise items and manage inventory on a regular basis to ensure a wide range of products are available at store – are most important and repetitive activities at a typical gas station with C-store. For efficient business operations, the gas station needs to develop modern infrastructure, an effective POS system, trained employees, and experienced management.

Maintaining a good long-term relationship with business partners is important to be successful in this business. Partners are more likely to be financial institutions (banks), suppliers, IT professionals, security service partners. A good relationship with suppliers may help reduce product costs and ensure products are available on time.

Gas stations with C-stores may have multiple revenue streams which include revenue from gas/diesel sales, EV (Electric Vehicle) charging fees, merchandise goods sales, car parking income, ATM fees etc. Gas stations with C-stores earn a high profit margin from merchandise sales. If we look at overall industry revenue, it grew at a CAGR of 1.6% over the last 5-year period, and revenue increased to \$503.4 billion in 2024. That means that this sector has been growing consistently with the increase in demand.

On the other hand, a gas station with C-stores spends a significant amount of money obtaining lease agreements, and other fixed costs like paying monthly lease payment, POS installations and maintenance costs, License and legal fees. Variable costs include regular suppliers' payments, utilities payments, payroll, maintenance costs etc.

Modern gas stations with C-stores have been consistently trying to improve their products and services across the country. A good number of competitors in the market are always striving to come up with new products and services to attract more customers to enhance their revenue streams even further. However, there are still opportunities to grow further in this sector with a new horizon.

From the graph below, we see the American C-stores' Customer Satisfaction Index for 2024 published by ACSI (American Customer Satisfaction Index). C-stores' Average index was 76 points out of 100. Wawa stands on top with 82/100 points followed by QuickTrip, Buc-ee's, whereas Sheetz, BP, 7-Eleven, Shell performed average in satisfying their customers. This graph clearly indicates that there are still opportunities to improve C-stores' value propositions.



Data Source: American Customer Satisfaction Index

5. Conclusion

Gas stations with C-stores are now playing a significant role in satisfying our day-to-day needs. People across the country are now connected to gas stations with C-stations directly or indirectly for their basic needs. Gas stations are not inclined to only gas/diesel sales, they added a lot more value propositions to increase the number of revenue streams considering customers' daily needs. Beside basic products, Gas stations are now offering a wide range of merchandise products including auto products, refreshment products, soft drinks, mineral waters, snacks, basic first aid products, foods, beers, and tobacco products. In addition, they also provide a car wash service, ATM service, and air pressure service. Overall, gas stations are very convenient now for local consumers, travelers, and commuters to satisfy their day-to-day needs. Though today's gas stations have improved their services and keep offering a wide range of merchandise products, there are still opportunities to grow further to reach out to more customers with new ideas, new value propositions.

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