Lesser Antilles Lines: The Island of San Huberto Case Report

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OVERVIEW

LAL operates as a containerized shipping company which provides services between Fort Lauderdale Florida and fifteen Caribbean islands. LAL started operations as a solo barge service during the 1960s and reached a $50 million revenue mark by the middle of the 1980s. The company gained domination of its market segment through delivering on-time service across regions which had lacked quality transportation before.

The 1980s saw a major transformation of the shipment sector because break-bulk shipping became obsolete through containerization advancements. This market trend allowed LAL to expand its business through investments in port development and steady shipping operations. The transport industry battled with rising levels of market capacity as well as declining price rates alongside intensified market competition.

As a Caribbean island nation with fewer than 40,000 inhabitants San Huberto meets its need for imported merchandise entirely through international trade and depends on tourists for economic prosperity. LAL started operations in the San Huberto route during 1980 as it faced off against Kronos Lines which had maintained its stronghold over the route. The appointment of an experienced local agent failed to increase LAL's market presence against KL because importers remained dedicated to KL operations. The market information revealed KL maintained a 60% share of the market even when prices remained equal. The importers protect their business continuity by dispersing orders between LAL and Kronos Lines.

The company launched a price reduction strategy that caused LAL to lower its freight rates in order to win more customers. Shrinking shipping rates failed to boost shipping activity due to price unresponsiveness in the market which created financial burdens for the company. LAL maintained a TEU price of $841 but KL charged its customers $883 per container. LAL failed to sustain its price advantage over KL due to the rival's continuous price matching operations which ran twice a month.

LAL needs to change its profit improvement plan from price cut competition toward service enhancement strategy. By improving customer service and streamlining operations along with securing lasting importer contracts the firm could achieve revenue stability. The combination of sustainable pricing practices and reliable delivery excellence enables LAL to maintain business performance in San Huberto by reducing competition effects on profit margins.

Please answer the following questions in your case report. Some of the questions will also be used to guide class discussion.

1) **Appraise Lesser Antilles Lines (LAL)'s past pricing strategy. Your answer should cover the following questions.**

   A) What is LAL's objective?

   Lesser Antilles Lines (LAL) aims to achieve a dual objective of the pricing strategy: maintaining market share and ensuring profitability in a highly competitive monopoly with kronos Line (KL). As the territorial shipping market is relatively fixed in size, LAL's primary focus was to retain and attract customers, certain price-sensitive ones, by offering competitive rates. Simultaneously, the company must generate sufficient profit margins to cover its fixed and variable costs, such as fuel, labor and maintenance, while avoiding

the hostile price cuts that could trigger a price war and harm long- term profitability. LAL's strategy was to reflect and maintain higher competitive positioning by anticipating KL's pricing moves was to ensure the offerings that attract without sacrificing financial sustainability.

B) Can this strategy achieve its objective?

In the case of Lesser Antilles Lines (LAL), the strategy employed was a price-matching and defensive pricing strategy aimed at maintaining market share in the very highly competitive duopoly shipping market with Kronos Line (KL). LAL was focusing on KL's pricing moves, mostly undercutting or matching KL's rates to retain existing customers and attract larger-volume shippers. Customer loyalty was affected heavily by price sensitivity and shipping cost. The strategy ensured that LAL did not lose ground to KL in the immediate term, especially since both companies were competing for the same customer base in a price-sensitive market. It helped achieve the short-term goal of retaining market share, but it failed to achieve the long-term objective of sustainable profitability. This approach has the disadvantage of intensified price wars and eroded margins, which undermined the financial stability of the company.

C) Why and why not?

LAL's pricing strategy was primarily defensive, focused on maintaining market share in a highly competitive duopolistic with Kronos Line (KL). By matching KL's rates, LAL aimed to prevent customer loss and sustain its shipping volume. Firstly, it placed LAL in a price war where profitability was sacrificed for market retention, potentially leading to a race to the bottom. Secondly, the customers were purely price-sensitive, overlooking service quality, reliability and value-added offerings that could justify premium pricing. Additionally, LAL's ability was to absorb the continuous price reductions that were constrained by its cost structure, making it financially unsustainable.

2) What are the assumptions behind the table in Exhibit 4? How realistic are those assumptions?

Assumptions:

- **Market Size**
  - The total market size is fixed at 3,900 TEUs per year.
- **Base Market Shares**
  - LAL's base market share: Starts at 40%.
  - KL's base market share: Starts at 60%.
- **Unit Costs**
  - LAL's unit cost per TEU: $841.
  - KL's unit cost per TEU: $883 (5% higher than LAL due to inefficiencies).
- **Price Sensitivity and Market Share Adjustments**
  - For every $100 difference in price per TEU between the two competitors:
    - The more expensive firm loses 10% of its market share.
    - This assumption directly adjusts the market shares for both LAL and KL.
- **Profitability**
  - Profits for both firms are calculated as:
    - LAL Profit = (LAL Price − $841) × LAL Market Share × 3,900
    - KL Profit = (KL Price − $883) × KL Market Share × 3,900

- **Market Behavior**
    - The model assumes price inelastic demand, meaning the total market size does not change based on price levels.
    - The market adjusts only through reallocation of market share between LAL and KL.

The assumptions are:

- **Price Sensitivity:** The assumption that market share shifts by 10% per $100 price difference is reasonable, as KL's established reputation and customer loyalty make price sensitivity moderate. However, the linear adjustment oversimplifies how customers respond to price changes.
- **Fixed Market Size:** The market's price inelasticity aligns with the case context, where shipping services are essential, and demand remains stable regardless of price changes.
- **Cost Disparity:** The 5% cost advantage for LAL over KL reflects operational differences between the firms, assuming reasonable.
- **Profitability:** Simplifies profitability by treating costs as fixed, ignoring economies or diseconomies of scale. However, it is reasonable for short-term analysis.
- The assumptions about market behavior and firms' profitability in Exhibit 4 are **reasonable** within the context of the Lesser Antilles case. While they simplify some real-world complexities, they provide a robust framework for analyzing LAL and KL's pricing strategies and competition in the short term.

3) Reproduce the profit matrix in Exhibit 4 of the case using Excel. Upload the spreadsheet you create with the case report. The cells should contain functions used to calculate the profit, not the numbers. (Workings attached in excel)

KL Share												
1900	0	0	0	0	0	0	0.1	0.2	0.3	0.4	0.5	0.6
1800	0	0	0	0	0	0.1	0.2	0.3	0.4	0.5	0.6	0.7
1700	0	0	0	0	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8
1600	0	0	0	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9
1500	0	0	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1
1400	0	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1	1
1300	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1	1	1
1200	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1	1	1	1
1100	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1	1	1	1	1
1000	0.4	0.5	0.6	0.7	0.8	0.9	1	1	1	1	1	1
900	0.5	0.6	0.7	0.8	0.9	1	1	1	1	1	1	1
800	0.6	0.7	0.8	0.9	1	1	1	1	1	1	1	1
	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900

LAL Share												
1900	1	1	1	1	1	1	0.9	0.8	0.7	0.6	0.5	0.4
1800	1	1	1	1	1	0.9	0.8	0.7	0.6	0.5	0.4	0.3
1700	1	1	1	1	0.9	0.8	0.7	0.6	0.5	0.4	0.3	0.2
1600	1	1	1	0.9	0.8	0.7	0.6	0.5	0.4	0.3	0.2	0.1
1500	1	1	0.9	0.8	0.7	0.6	0.5	0.4	0.3	0.2	0.1	0
1400	1	0.9	0.8	0.7	0.6	0.5	0.4	0.3	0.2	0.1	0	0
1300	0.9	0.8	0.7	0.6	0.5	0.4	0.3	0.2	0.1	0	0	0
1200	0.8	0.7	0.6	0.5	0.4	0.3	0.2	0.1	0	0	0	0
1100	0.7	0.6	0.5	0.4	0.3	0.2	0.1	0	0	0	0	0
1000	0.6	0.5	0.4	0.3	0.2	0.1	0	0	0	0	0	0
900	0.5	0.4	0.3	0.2	0.1	0	0	0	0	0	0	0
800	0.4	0.3	0.2	0.1	0	0	0	0	0	0	0	0
	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900

KL contribution												
1900	0	0	0	0	0	0	396.63	793.26	1189.89	1586.52	1983.15	2379.78
1800	0	0	0	0	0	357.63	715.26	1072.89	1430.52	1788.15	2145.78	2503.41
1700	0	0	0	0	318.63	637.26	955.89	1274.52	1593.15	1911.78	2230.41	2549.04
1600	0	0	0	279.63	559.26	838.89	1118.52	1398.15	1677.78	1957.41	2237.04	2516.67
1500	0	0	240.63	481.26	721.89	962.52	1203.15	1443.78	1684.41	1925.04	2165.67	2406.3
1400	0	201.63	403.26	604.89	806.52	1008.15	1209.78	1411.41	1613.04	1814.67	2016.3	2016.3
1300	162.63	325.26	487.89	650.52	813.15	975.78	1138.41	1301.04	1463.67	1626.3	1626.3	1626.3
1200	247.26	370.89	494.52	618.15	741.78	865.41	989.04	1112.67	1236.3	1236.3	1236.3	1236.3
1100	253.89	338.52	423.15	507.78	592.41	677.04	761.67	846.3	846.3	846.3	846.3	846.3
1000	182.52	228.15	273.78	319.41	365.04	410.67	456.3	456.3	456.3	456.3	456.3	456.3
900	33.15	39.78	46.41	53.04	59.67	66.3	66.3	66.3	66.3	66.3	66.3	66.3
800	-194.22	-226.59	-258.96	-291.33	-323.7	-323.7	-323.7	-323.7	-323.7	-323.7	-323.7	-323.7
	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900

LAL contribution												
1900	-159.9	230.1	620.1	1010.1	1400.1	1790.1	1962.09	2056.08	2072.07	2010.06	1870.05	1652.04
1800	-159.9	230.1	620.1	1010.1	1400.1	1611.09	1744.08	1799.07	1776.06	1675.05	1496.04	1239.03
1700	-159.9	230.1	620.1	1010.1	1260.09	1432.08	1526.07	1542.06	1480.05	1340.04	1122.03	826.02
1600	-159.9	230.1	620.1	909.09	1120.08	1253.07	1308.06	1285.05	1184.04	1005.03	748.02	413.01
1500	-159.9	230.1	558.09	808.08	980.07	1074.06	1090.05	1028.04	888.03	670.02	374.01	0
1400	-159.9	207.09	496.08	707.07	840.06	895.05	872.04	771.03	592.02	335.01	0	0
1300	-143.91	184.08	434.07	606.06	700.05	716.04	654.03	514.02	296.01	0	0	0
1200	-127.92	161.07	372.06	505.05	560.04	537.03	436.02	257.01	0	0	0	0
1100	-111.93	138.06	310.05	404.04	420.03	358.02	218.01	0	0	0	0	0
1000	-95.94	115.05	248.04	303.03	280.02	179.01	0	0	0	0	0	0
900	-79.95	92.04	186.03	202.02	140.01	0	0	0	0	0	0	0
800	-63.96	69.03	124.02	101.01	0	0	0	0	0	0	0	0
	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900

4) Based on your profit calculations, what action would you recommend to LAL management about how it should set its price?

Current prices: LAL=800, KL=800

- Payoff at this price: LAL Profit: −64 (thousands of US dollars), KL Profit: −194 (thousands of US dollars)
- LAL's profit is highly sensitive to its pricing relative to KL's. When LAL prices below KL, it gains a significant market share due to the price elasticity assumptions, even if profits decrease due to lower margins.
- However, setting prices too low (e.g., $800 per TEU) may lead to negative profits for both LAL and KL, especially in scenarios where KL matches LAL's pricing.

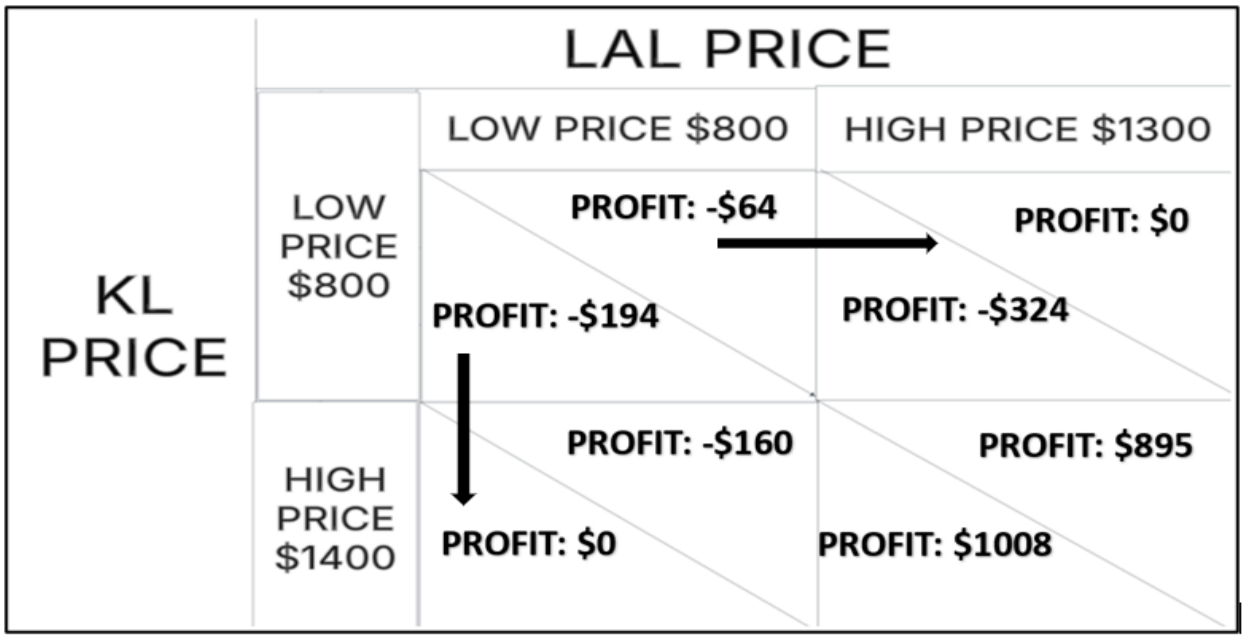
Optimal Price Range:

- The matrix likely indicates that $1,200 to $1,400 per TEU is an optimal range for LAL: At this price range, LAL achieves a balance between capturing market share and maintaining profitability. Pricing within this range allows LAL to capitalize on its lower costs relative to KL and secure a competitive advantage without triggering aggressive price competition that erodes profits for both firms.
- At price combination ($1,300, $1,400), both KL and LAL maximize their profits given the other pricing decision. Neither KL nor LAL has an incentive to deviate unilaterally, making it a stable outcome (Nash Equilibrium).

Expected Profits at Nash Equilibrium

- ♣ LAL's Profit at ($1,300, $1,400) = $895
- ♣ KL's Profit at ($1,300, $1,400) = $1008

1900	0	0	0	0	0	0	396.63	793.26	1189.89	1586.52	1983.15	2379.78	
	-159.9	230.1	620.1	1010.1	1400.1	1790.1	1962.09	2056.08	2072.07	2010.06	1870.05	1652.04	
1800	0	0	0	0	0	357.63	715.26	1072.89	1430.52	1788.15	2145.78	2503.41	
	-159.9	230.1	620.1	1010.1	1400.1	1611.09	1744.08	1799.07	1776.06	1675.05	1496.04	1239.03	KL
1700	0	0	0	0	318.63	637.26	955.89	1274.52	1593.15	1911.78	2230.41	2549.04	
	-159.9	230.1	620.1	1010.1	1260.09	1432.08	1526.07	1542.06	1480.05	1340.04	1122.03	826.02	LAL
1600	0	0	0	279.63	559.26	838.89	1118.52	1398.15	1677.78	1957.41	2237.04	2516.67	
	-159.9	230.1	620.1	909.09	1120.08	1253.07	1308.06	1285.05	1184.04	1005.03	748.02	413.01	
1500	0	0	240.63	481.26	721.89	962.52	1203.15	1443.78	1684.41	1925.04	2165.67	2406.3	
	-159.9	230.1	558.09	808.08	980.07	1074.06	1090.05	1028.04	888.03	670.02	374.01	0	
1400	0	201.63	403.26	604.89	806.52	1008.15	1209.78	1411.41	1613.04	1814.67	2016.3	2016.3	
	-159.9	207.09	496.08	707.07	840.06	895.05	872.04	771.03	592.02	335.01	0	0	
1300	162.63	325.26	487.89	650.52	813.15	975.78	1138.41	1301.04	1463.67	1626.3	1626.3	1626.3	
	-143.91	184.08	434.07	606.06	700.05	716.04	654.03	514.02	296.01	0	0	0	
1200	247.26	370.89	494.52	618.15	741.78	865.41	989.04	1112.67	1236.3	1236.3	1236.3	1236.3	
	-127.92	161.07	372.06	505.05	560.04	537.03	436.02	257.01	0	0	0	0	
1100	253.89	338.52	423.15	507.78	592.41	677.04	761.67	846.3	846.3	846.3	846.3	846.3	
	-111.93	138.06	310.05	404.04	420.03	358.02	218.01	0	0	0	0	0	
1000	182.52	228.15	273.78	319.41	365.04	410.67	456.3	456.3	456.3	456.3	456.3	456.3	
	-95.94	115.05	248.04	303.03	280.02	179.01	0	0	0	0	0	0	
900	33.15	39.78	46.41	53.04	59.67	66.3	66.3	66.3	66.3	66.3	66.3	66.3	
	-79.95	92.04	186.03	202.02	140.01	0	0	0	0	0	0	0	
800	-194.22	-226.59	-258.96	-291.33	-323.7	-323.7	-323.7	-323.7	-323.7	-323.7	-323.7	-323.7	
	-63.96	69.03	124.02	101.01	0	0	0	0	0	0	0	0	
	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	



By setting its price at $1,300, LAL leverages its cost advantage ($841 per TEU vs. KL's $883) without instigating further price wars. KL's price at $1,400 reflects its strategic decision to avoid a race to the bottom while maintaining competitive profitability.

Set LAL's price at $1,300 per TEU and allow KL to settle at $1,400 per TEU to maximize profitability for both firms while stabilizing the market. This recommendation aligns with the game theory framework and ensures sustainable profits for LAL.

5) Based on your recommendation, what is LAL's profit? What is Kronos Line (KL)'s profit?

Based on the recommendation where LAL sets its price at $1,300 per TEU and KL sets its price at $1,400 per TEU, the profits are as follows:

LAL PROFIT
LAL Profit = (LAL Price − LAL Cost) × LAL Market Share × Total Market Share

Substituting values:
• LAL Price: $1,300
• LAL Cost: $841
• LAL Market Share (from the matrix): Approximately 0.5
• Total Market Size: 3,900 TEUs

Calculation: LAL Profit = (1,300 − 841) × 0.5 × 3,900 = $895,050

KL PROFIT
- KL Profit = (KL Price − KL Cost) × KL Market Share × Total Market Share

Substituting values:
• KL Price: $1,400
• KL Cost: $883
• KL Market Share (from the matrix): Approximately 0.4
• Total Market Size: 3,900 TEUs

Calculation: KL Profit = (1,400 − 883) × 0.5 × 3,900 = $1,008,150

Final Answer:
• LAL's Profit: $895,050 (thousands of US dollars)
• KL's Profit: $1,008,150 (thousands of US dollars)

Total Equilibrium Profit:
- **Total Profit = LAL's Profit + KL's Profit** = $895,050 + $1,008,150 = $1,903,200