**Use Cases for MSBA Capstone- University of Utah**

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# Use Case 1: Predict Customer Success

Around 10% of Swire Coca-Cola’s business is “B2B,” driven by local businesses such as restaurants.  When a new restaurant is launching, the most important decision Swire needs to make is the profitability of the business. Depending on the profitability of the business Swire can determine price and funding to offer to the business. A lower price point on Coca-Cola will make it more likely that Swire ‘wins’ the business but will create a risk that the account isn’t profitable.  Offering great prices to a business that will thrive creates a loyal and valuable customer, offering the same discounts to a customer who doesn’t last is a significant loss of investment.

For this reason, Swire Coca-Cola needs to constantly improve their ability to predict the success/profitability/sales of a new restaurants in their market.

Problem: predict the popularity (4.0 or higher in online reviews), longevity (1, 2, or 3+ years), and total 3-year sales volume of new Swire customers based on historical results.

Data provided and needed:

* **Customer attributes (including location and customer type)**

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* **Swire sales for above customers**

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* **Census data**

Students are encouraged to find open-source census data for population demographics. Swire might be able to provide the data after an NDA has been signed.

* **Consumer Reviews**

Students are encouraged to find open-source consumer reviews data from Google and Yelp.

# Use Case 2: Forecast Commodity Pricing

Swire Coca-Cola relies on raw materials to keep its business running. Several commodities like aluminum, sugar, coffee, corn, cotton, soyabean and soyabean oil are key to ensuring timely and sufficient production of beverages. The price Swire pays to procure these materials has a large impact on the company’s bottom line: paying high prices for raw materials results in less profit; paying low prices yields higher margins. Having an accurate forecast on what the prices of these commodities might be in the future allows Swire to optimize its procurement strategy, production planning, and inventory management.

For these reasons, Swire Coca-Cola needs to routinely forecast the future short-term and long-term prices of its key commodities.

**Problem:** Forecast the price of these commodities for the next 3 months and for the next year. If multiple sources of forecast are available for the same commodity, use either the best [most accurate] or conservative [the one showing higher prices].

Students are encouraged to present the forecasts on a dashboard with an ability to simulate various profitability scenarios.

Data provided and needed:

**Aluminum:**

<https://markets.businessinsider.com/commodities/aluminum-price>

<https://tradingeconomics.com/commodity/aluminum>

**Coffee:**

<https://www.macrotrends.net/2535/coffee-prices-historical-chart-data>

<https://tradingeconomics.com/commodity/coffee>

**Corn:**

<https://www.macrotrends.net/2532/corn-prices-historical-chart-data>

<https://tradingeconomics.com/commodity/corn>

**Cotton:**

<https://www.macrotrends.net/2533/cotton-prices-historical-chart-data>

<https://tradingeconomics.com/commodity/cotton>

**Soyabean:**

<https://www.macrotrends.net/2531/soybean-prices-historical-chart-data>

<https://tradingeconomics.com/commodity/soybeans>

**Soyabean Oil:**

<https://www.macrotrends.net/2538/soybean-oil-prices-historical-chart-data>

<https://gov.capital/commodity/soybean-oil/>

**Sugar:**

<https://www.macrotrends.net/2537/sugar-prices-historical-chart-data>

<http://www.isosugar.org/prices.php?pricerange=currentmonth>

<https://tradingeconomics.com/commodity/sugar>

# Use Case 3: Determine Price Elasticity

The pricing for each of Swire Coca-Cola’s products is dependent on several variables including geography, store channel, and line of business. As economic conditions change, Swire is interested in adjusting its prices to maximize both volume and profit. Often these come at a tradeoff: low prices increase volume but result in smaller margins. High prices might cause consumers to stop purchasing. This tradeoff is called price elasticity of demand. Consumers might be more sensitive to price changes in one product than another, causing the price elasticity (the tradeoff between volume and price) to differ from product to product.

If Swire Coca-Cola knows the price elasticity by product, it can make pricing decisions to maximize profit.

Problem: estimate the price elasticity of each product and determine the optimal price point. Students are encouraged to look at more granular situations like analyzing product by region or by store type.

Data provided and needed:

* Consumer purchasing and pricing history by product and geography



[Note: This is only a sample data of 1000 rows. Full data with 800,000+ rows will be provided via Google drive or SharePoint].