

## **MICRO ECONOMICS**

### **DIGITAL ASSIGNMENT - 1**

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**Slot: F1+TF1**

#### **Caselet 1**

Branded apparels, valued at Rs.1,40,000 crore in 2016, and beauty, at almost Rs.67,000 crore, have merged as fast-growing categories in India; however, this category of consumer goods is marked by stiff competition between several local and international brands. Marquee fashion and international lifestyle brands like GAP, Zara, and The Body Shop have resorted to slash prices to remain competitive in a price sensitive market like India. The percentage of price cut registered for these brands is around 10-15 for GAP and 20-30 for The Body Shop. The Big Shop is being driven by the idea that price cut would make its best-selling products more accessible to diverse consumers across age groups and places.

#### **Response to Caselet 1**

##### **The Law of Demand and Price Cuts in the Indian Apparel and Beauty Market**

The caselet presents a clear illustration of the law of demand in action within the Indian apparel and beauty market. The law of demand states that as the price of a good or service decreases, the quantity demanded of that good or service increases, all else being equal. This inverse relationship between price and quantity demanded is a fundamental principle in economics.

In the context of the caselet, the decision by international brands like GAP, Zara, and The Body Shop to slash prices in India is a direct application of the law of demand. By reducing their prices, these brands aim to make their products more affordable to a wider range of consumers. This, in turn, is expected to lead to an increase in the quantity of their products purchased.

Several factors contribute to the effectiveness of this strategy:

- **Price Sensitivity:** The Indian market is known for its price sensitivity, meaning consumers are particularly responsive to changes in price.
- **Increased Accessibility:** Lower prices make products more accessible to consumers with limited budgets, expanding the potential customer base.
- **Competitive Pressure:** The intense competition within the market necessitates aggressive pricing strategies to attract and retain customers.

In conclusion, the caselet demonstrates how the law of demand can be applied to understand the impact of price cuts on consumer behavior and market dynamics. By reducing prices, brands can

increase their sales and market share, as long as the decrease in price is sufficient to offset the potential decrease in profit margins.

## Caselet 2

The Indian power sector has undergone significant structural changes that include unbundling of State Electricity Boards and establishment of independent regulators in most of the States. Further, power trading has emerged as a target area towards reforming the sector. Most of the utilities are trading power either through Exchange or traders in Indian Power Exchanges. Electricity is usually traded between wholesale buyers and sellers through auction mechanism, wherein participants submit their buy and sell bids in terms of prices and quantities for 24 hours of predefined interval of the next day. The market clearing process is determined by the intersection of aggregate supply and demand curves.

Need for a price forecasting model is driven out of the typical characteristics of the power sector, including long term capital investment, highly specific nature of assets and distinct characteristics of electricity as compared to other commodities. Governments want predictability in such models as electricity directly linked to economic development; customers want predication from price variations, while investors want confidence. Thus, the objective of any price forecasting model in power is to visualize future electricity market dynamics to assist in the present decision-making process.

Load and demand forecasting tools have been widely developed and used globally, but usage of such tools is still low in India. Complex requirements in India may not be met by a standard product or model. Any model in the Indian power sector must consider dynamics of the sector, patterns of demand and weather, and a host of other local data inputs. Different methods of forecasting the price of electricity in India are categorized as qualitative methods, regression methods, multiple equation methods, and time series methods. These techniques are mostly used for short and medium-term forecasts.

**Question 1: How is the price of electricity different from a normal commodity? Explain the factors behind the volatility of electricity power. (4 marks)**

Electricity is a unique commodity that differs from most others in several key ways:

1. **Non-Storable Nature:** Unlike physical commodities that can be stored for future use, electricity must be consumed as it's produced. This instantaneous consumption creates a delicate balance between supply and demand, making electricity prices highly volatile.
2. **Time-Dependent Value:** The value of electricity is time-dependent. Peak-time electricity, when demand is highest, is typically more valuable than off-peak electricity. This temporal variation in value further contributes to price volatility.
3. **Grid Constraints:** The transmission and distribution of electricity are subject to physical constraints of the power grid. Congestion or limitations in the grid can impact the flow of electricity, leading to price spikes or shortages.

4. **Weather Dependence:** Electricity generation is often influenced by weather conditions, particularly for renewable sources like wind and solar. Fluctuations in weather patterns can affect supply, leading to price volatility.
5. **Fuel Costs:** The cost of fuel used to generate electricity can significantly impact prices. Changes in fuel prices, such as natural gas or coal, can cause fluctuations in electricity costs.

**Question 2: What could be various initial activities to be performed before the actual forecast is initiated? (2 marks)**

Before initiating an electricity price forecast, several initial activities should be undertaken:

1. **Data Collection and Cleaning:** Gather relevant historical data on electricity prices, demand, supply, fuel costs, weather patterns, and other factors that influence prices. Ensure data accuracy and consistency through cleaning and preprocessing.
2. **Variable Selection:** Identify the key variables that are likely to have a significant impact on electricity prices. This may involve statistical analysis or expert judgment.
3. **Model Selection:** Choose appropriate forecasting models based on the characteristics of the data and the desired level of accuracy. Consider factors like time series models, regression analysis, or machine learning techniques.
4. **Model Validation:** Test the selected models using historical data to assess their performance and accuracy. This involves comparing predicted prices to actual prices.
5. **Scenario Analysis:** Develop different scenarios or assumptions about future conditions to evaluate the potential impact on electricity prices under various circumstances.