

Tonalli Group LLC
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Virtually all business desire to satisfy their customers needs and wants. This is true whether the business is a service or product provider. However, in order for any business to satisfy their customer in a timely and efficient manner, the business must anticipate this need or want and take business oriented measures to quantitatively anticipate the demand upon the service or product. This servicing of the anticipated demand upon the product or service is known as forecasting. One widely accepted definition of forecasting is a prediction of future events used for planning purposes (Krajewski and Ritzman, 492).

In forecasting the demand, one may use mathematical models based upon historical, observed, or statistical data. One may also use qualitative methods based upon industry experts or customer feedback, for example, or a combination of the two. When using a mathematical model, there are five observed patterns and are also known as a time series (Krajewski and Ritzman, 493). These five patterns are classified as: Horizontal, or the grouping of data around the mean, Trend, increasing/decreasing of the mean over time, Seasonal, or a repeating pattern based upon a short time cycle, Cyclical, gradual increase/decrease over a long time period, and finally Random, where there is huge variation in pattern. Qualitative methods may be defined as casual or judgment.

Judgment methods are the opinions of industry experts, managers, customer feedback, and marketing intelligence. Casual methods use a combination of observed data on an independent variable such as economic conditions or the actions of competitors.

Regardless of the method used to forecast the demand, there are two principal factors that will affect demand. They are external factors and internal factors. External factors are

generally the more difficult for any business to predict and control. These factors include such effects as a booming economy, a sudden recession, or changing government regulation or deregulation. However, these external factors may be classified into three categories known as leading indicators, coincident indicators and lagging indicators. Leading indicators include such items as pending contracts, or any other business cycle or practice. The remaining two include, for example, US census employment data, and retail sales data, respectively. While Internal factors encompass such items as target market, pricing, advertising, and packaging. Moreover, internal factors are generally more easily controlled by the business.

Another important factor in forecasting is the forecast length of time. A business may produce a short term, medium term, or long term forecast. Generally, short-term forecasts are for zero to three months and are for individual products or services. The forecasting method may be a time series, casual, or judgment. Medium term forecast are for three months to two years and are for such items as total sales, groupings or families or products or services. The method used is casual or judgment. Long-term forecast are for more than two years and are usually for total sales, dollars or units sold. Once again the method is casual or judgment.

Moreover, through the use of computers and business software, businesses are able to analyze large amounts of data for forecast analysis. However, a more sophisticated model does not necessarily produce better results and no single forecast method has been

superior to any other. Thus, forecasts almost always contain errors and this error may be measured by subtracting the forecasted amount from the actual demand.

In closing, businesses rely on multiple methods to forecast demand upon a product or service, or a combination thereof. These methods are time series, casual and judgment. Forecasts are affected by internal factors and external factors. External factors tend to be more difficult to control and predict. Forecasts may be long term, short term, or long term. All methods almost always contain some errors including the most sophisticated models.

Works Cited

Krajewski, Lee, and Larry Ritzman. Operations Management Strategy and Analysis. 5th ed. New York: Addison-Wesley, 2000.