

# Demand Forecasting Methods: Choosing The Right Type For Your Business



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Forecasting is the process of estimating future demand for a product or service.

Businesses use demand forecasting to make decisions about production levels, pricing, inventory management, and other factors impacting their bottom line.

Businesses can use various methods to forecast demand, including trend analysis, regression analysis, and market surveys. The most effective method will vary depending on the industry and the product or service.

However, all businesses must carefully consider their demand forecasting techniques to make accurate predictions.

Otherwise, they risk losing money due to excess inventory, missed sales

opportunities, or other problems.

Demand forecasting helps you make educated business decisions based on various metrics, including economic factors.

Because handling these tasks manually is time-consuming, plenty of forecasting tools aggregate the data for you.

These tools allow you to access real-time data insights - such as cash flow and consumer demand- that can help you with everything from inventory planning to capacity planning.

## **Types of Demand Forecasting Models**

Demand forecasting models can be classified into two basic types - passive and active. The passive type relies on past sales data to predict the future.

This type is ideal for businesses that have seasonal sales patterns. It assumes that sales will be similar to last year.

This type is also good for growing companies. It takes aggressive growth plans into account and also takes into account the competitive environment.

### **• Passive Demand Forecasting**

Passive Demand Forecasting is the most basic type of demand forecasting. It relies on historical sales data to predict future sales.

This type of forecasting works well for businesses that are growing slowly or have seasonal fluctuations.

It assumes that future sales will be similar to the previous year's numbers. It is particularly useful for companies in a competitive industry or interested in sustainability.

Active and passive demand forecasting have different advantages and disadvantages. Active forecasting involves the inclusion of external factors.

Passive demand forecasting uses a small sample size and makes very few assumptions. It is best suited for small to medium-sized businesses and companies in the growth phase.

## ▪ **Active Demand Forecasting**

Active Demand Forecasting models consider several factors to predict future demand. This method is ideal for startups and companies that are growing rapidly.

It considers factors such as growth plans and the overall competitive environment. It is also useful for companies that don't have a lot of historical data to work with.

Trend projection is one of the most common models for predicting demand. It takes into account trends in the past and projects them into the future.

However, it is important to keep anomalies out of the equation. For example, a viral story might spike sales for a month, or ecommerce website hacking can temporarily lower them.

## ▪ **Short-Term Demand Forecasting**

The use of short-term demand forecasting models helps businesses stay on top of market changes and fluctuations. Companies can capture changes quickly and use scenarios to develop contingency plans.

For example, a business could use a model to predict the demand for its products in emerging markets. Then, it can adjust the model to consider specific expansion plans.

Short-term demand forecasting is crucial for many industries. For example, on-demand ride-hailing services such as Uber, Didi, and Lyft require accurate forecasting.

Dynamic fare adjustment and the relocation of idle drivers to areas of high demand can improve dispatch system efficiency.

## • **Long-Term Demand Forecasting**

Demand forecasting is an important part of supply chain management. It helps companies identify trends in demand for products and services over a longer period of time.

It can also help identify seasonality, annual patterns, and production capacity. This type of forecasting helps companies plan for expansion and investments. It's also a valuable tool in marketing and sales.

One of the most basic methods of demand forecasting is trend projection. This method uses historical data to predict future sales.

However, it's important to remove anomalies from historical data. For example, a viral story could spike sales for a month, while a hacking of an eCommerce site could temporarily decrease sales.

## • **Macro & Micro Demand Forecasting**

Macro and micro demand forecasting models predict future sales of different products and services.

Macro-demand forecasting models consider external factors that affect the economy, such as the economy's overall growth and changes in the weather, while micro-demand forecasts consider the impacts that specific factors have on an industry.

The two models are used in different industries to help businesses make better decisions and improve their supply chain practices.

The data collected to produce the forecast should be as accurate as possible. Companies with a lot of sales and demand data can use that information to improve their forecasts.

Ideally, they should collect two to three years' worth of data. In addition, they should clean and measure the data to ensure accuracy.

The data should also contain customer information, location, and specific times. For macro-level demand forecasting in the United States, companies can use data from publicly available government agencies and

other sources.

## Types of Demand Forecasting Models



Passive Demand Forecasting



Active Demand Forecasting



Short-Term Demand Forecasting



Long-Term Demand Forecasting



Macro Demand Forecasting



Micro Demand Forecasting

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*Demand planning is crucial to all businesses, but the forecasting process and even the forecasting software you use can influence the results.*

# The Different Types of Demand Forecasting Methods

## • Statistical Method

The statistical method of demand forecasting involves projecting demand for products based on past events or similar conditions. This type of forecasting is useful for evaluating demand for existing and new products.

In general, the statistical method is useful for short-term forecasting. However, it is difficult to make accurate forecasts if the customer changes his demand or decision.

There are two main types of statistical methods for demand forecasting. The first is called trend projection and is based on past sales data.

Organizations can use this method if they have extensive sales data over a long time frame. The data are organized in chronological order and can be used to forecast future market trends.

The second type of statistical method involves grouping items. This technique combines data from past events with expert opinions and cross-sectional data to make predictions.

It is more costly than the other two techniques and requires the user to calculate the optimum value of parameters. However, this type of statistical method is good for long-term forecasting, as it is free from bias.

## • **Sales Force Composite**

One method is the sales force composite method, which combines the predictions of sales agents in different locations. This bottom-up approach uses the knowledge and experience of sales agents, who have the most direct contact with customers. In this way, a company can forecast demand for both the overall market and individual areas.

A sales force composite is a demand forecasting method that uses the average judgments of salespeople in a region or area to predict overall sales.

Salespeople often have the best knowledge of the product they are selling and are usually better able to spot trends and predict sales than other sources of information. However, it is important to note that this method relies on sales data from sales agents, which is not always accurate.

## • **Delphi Method**

The Delphi Method for demand forecasting is a group decision-making method for forecasting a specific business demand or event. It uses a process where experts fill out questionnaires and present their views to a facilitator.

The facilitator then summarizes the information and forecasts the probability of an event occurring. The Delphi method may involve several

iterations, each with a different expert's opinion.

The method works by using a group of experts chosen based on their knowledge of the subject matter. Using this method, experts can present their views and make recommendations for improvement.

The experts are anonymous but have a general understanding of the subject matter. Their answers are analyzed, and a consensus is reached.

The Delphi method relies on the judgment of experts to make the best possible forecast. The panel members are assumed to be recognized experts, and their collective knowledge will produce more accurate predictions.

The Delphi method uses the expertise of skilled judges to develop scenarios and predict future demand.

## • **Expert Opinion**

Expert opinion is a qualitative method of demand forecasting. It involves input from experts in various business streams, including marketing, sales, finance, operations, and production.

The objective of the method is to minimize error and generate the most accurate forecast possible. It can be done through periodic meetings and requires minimal time.

In this method, sales representatives are asked to fill out a questionnaire. The experts then consider the responses and make appropriate changes. This process is repeated until the group reaches a consensus. The expert opinions are then aggregated to create an overall demand forecast.

Expert opinion is a valuable tool in conjunction with other quantitative methods. While it can provide valuable insight, it is not an accurate forecast on its own.

It is often inaccurate and insufficiently informed unless combined with other methods. This is similar to preseason college football rankings, which are often inaccurate when compared to the final standings.

## • **Market Research**

Market research is often used in conjunction with demand forecasting to better understand customer behavior and trends. By accurately predicting future customer demand, businesses can optimize their operations and ensure they can meet customer needs.

## • **Econometric Method**

The econometric method for demand forecasting uses the combined knowledge of experts to make predictions.

It is based on a hypothesis that combines economic theory and previous empirical studies. For instance, a manager might want to know how to price a new product or the production needed to satisfy current demand. This method is fast and cost-effective.

The econometric method for demand forecasting is an important tool for companies to use in their product life cycle. This is because the maturity of a product influences data availability and relationships between factors.

Generally, an econometric method is most appropriate for companies that manufacture products for industrial use. However, it's not the best choice for manufacturers to use for forecasting products for household use.

The econometric method for demand forecasting uses several statistical techniques to analyze past sales data. The data is arranged chronologically, which creates a time series. This time series can then be used to project future market trends.

## • **Split-Testing (A/B Experimentation)**

When conducting A/B experimentation, it is crucial to carefully select the variables that you want to measure. A good way to do this is to define your baseline and desired results.

Then, you can test two options and measure the difference between them. You can also use your current control as a baseline when conducting split

tests. Ideally, you should split the traffic that sees the variations simultaneously.

The next step is to design an A/B test with an appropriate stopping rule. The stopping rule should be based on the experimental hypothesis, a parameter, or an overall evaluation criterion.

Do not base this decision on statistical significance since this only tells you whether the variation performed better or worse than the control. Doing so may lead to forecast error, especially if there are major differences in the data set.

This type of testing can be used in many different circumstances, most famously to test different elements of your web site to improve the user experience and increase conversion rates.

For demand forecasting, you can test different promotions, imagery, email subject lines, the look of a check-out page, or you can compare the price of shipping. If consumers strongly favor one version over the other, you can gain a better understanding of what appeals to them forecast demand more accurately.

Whatever the case, A/B testing is an excellent way to determine whether a particular product is the best choice for your customers.

## Types of Demand Forecasting Methods



Statistical Method



Sales Force Composite



Delphi Method



Expert Opinion



Market Research



Econometric Method



Split-Testing (A/B Experimentation)

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# How to Choose the Right Type of Demand Forecasting for Your Business

When it comes to demand forecasting, one size does not fit all.

The right approach for your business depends on many factors, including the type of product or service you offer, the size of your customer base, and the nature of your market.

For example, if you sell a seasonal product, you must take a different sales forecasting approach than a product in constant demand.

The same is true if you are selling to businesses rather than consumers. In addition, you need to consider the level of accuracy you need.

If your business depends on accurate demand forecasts, you will need to invest more time and resources into developing an accurate forecast.

However, a less sophisticated approach may be sufficient if your business can tolerate some inaccuracies.

Ultimately, the best way to choose the right demand forecasting approach is to

work with a professional who can help you understand your specific needs and develop a customized solution.

As a business owner, it is essential to have some level of understanding about demand forecasting and the available different methods.

By learning about your options and determining which approach makes the most sense for your business, you can set yourself up for success.

Implementing a demand forecasting system can help you make better decisions about inventory, pricing, and production levels based on customer demand and consumer behavior - all of which can positively impact your profit margins.

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