

INSIGHTS FROM THE BDO RESTAURANT PRACTICE

BIG DATA SERIES  
**Gaining Data  
Insights for  
Enhanced  
Operations**

Restaurants rely on insights from data to improve many areas of business operations — from menu choices and marketing campaigns to supply chain and staffing. Understanding the relationships within the business' entire data set helps to pull the right levers, drive higher returns and relieve distress.

The [\*\*first installment of BDO's Big Data insight series\*\*](#) covered some of the ways restaurants can collect, manage and protect their data. Now, we will dig into how restaurants can use modeling and analyze specific data points to generate data-driven insights and make impactful changes that help streamline operations, boost efficiencies, strengthen customer loyalty and more. Below are three areas where leveraging data to make informed decisions can be especially impactful.



## STAFFING, SCHEDULING, COMPENSATION AND SERVICE

At the start of 2022, [seven out of 10 restaurants](#) still did not have adequate staff to support customer demand. Staffing shortages can cause longer wait times for customers, and slow service can deter them from returning. It's critical to address those shortages and minimize customer attrition.

Most restaurants rely on their local geography for recruiting, staffing and training, so finding and retaining talent has proven difficult amid the ongoing labor shortage. Continuing concerns about COVID-19 and job seekers changing industries during the pandemic also pose challenges.

Restaurants can harness publicly available data on population and the job market to perform a labor assessment, which helps determine whether they're offering staff competitive salary and compensation packages. Advanced AI data modeling teams can also assist owners in determining the risk of staff absenteeism and undertaking contingency planning so that a kitchen or counter is never short staffed.

Combining records from point-of-sale (POS) systems, reservation platforms and scheduling software can help restaurant management pinpoint staffing gaps or overstaffing, as well as predict specific dates (like holidays) that historically have been busier than a normal day. Wait time data can illustrate the value of hiring additional staff and, when combined with job market data, can inform compensation decisions.

Optimized staffing and scheduling can help reduce customer wait times, make for happier employees and ultimately result in better experiences all around.



**BDO EXAMPLE****Restaurant X Uses Data to Reveal and Solve Staffing Issues**

After Restaurant X made several staffing changes due to turnover, management noticed that net sales decreased while labor costs remained the same. The decline in sales did not correspond to fluctuations in previous-year data.

**An analysis of Restaurant X's data revealed several issues**

Sales during **lunch** and **happy hour** had **declined** substantially on Tuesdays and Thursdays.



**Two new servers** had a higher number of **voids** and **comps** per shift than other staff. They also had **longer turnover times** for their tables and lower tip percentages.



**One new server** had the **highest average spend** per customer and **highest tip** percentage on the entire staff, but that person had also swapped shifts multiple times.

**Management inquired and addressed the issues in the following ways**

**A large company** located nearby had **changed their hybrid work policy**, so all staff were permitted to work from home Tuesdays and Thursdays. Restaurant X temporarily **reduced staffing** but considered **running a promotion** on those days.



Voids and comps indicated **insufficient training on the POS system** and menu. Mistakes were affecting sales and tips and extending turnover times. **Additional training** fixed those issues.



The **server with strong sales** was experienced and adept at upselling. However, they were scheduled for a dinner shift followed by a brunch shift the next day, which sometimes conflicted with their childcare. Changing that server's brunch shift **improved their job satisfaction** and overall schedule continuity.

Management used data-backed insights to inform decisions that addressed the rise in labor cost percentage and right-sized staffing without compromising quality of service or staff morale. Clearer visibility of data, such as through a dashboard view that collates information from multiple systems, could have identified these issues even sooner.



## INVENTORY MANAGEMENT

Restaurants in the U.S. generate between 22 billion and 33 billion pounds of food waste annually, according to government data and other estimates. That waste presents a significant profit opportunity for the industry. Poor inventory management is a common culprit of waste, but that complex task can be improved through insights from data.

AI-based data modeling can extract important inventory data from past orders. When POS sell-through data is added with annual consumption patterns of ingredients, then restaurants can create predictive ordering lists that weigh certain products. This process helps restaurants to accurately calculate profit margins, especially as food and beverage prices fluctuate due to inflation and ongoing supply chain disruption.

At the same time, data aggregated from those same POS systems and online orders paints a picture of which menu items sell, as well as when and how they align to customer behaviors. Patterns drawn from ordering and transaction trends can help restaurateurs anticipate which ingredients they'll need, at what volume and for which days. Then they can adjust budgets, menus and orders accordingly.





## CUSTOMER EXPERIENCE

Demand for restaurant loyalty programs has risen during the pandemic. In addition to being a method for attracting and retaining customers, loyalty programs can serve as a valuable data collection tool. Customers enrolled in loyalty programs can be treated as a pilot audience for marketing initiatives. If an offer elicits a positive response among those in the loyalty program, it might benefit the restaurant to expand it to the broader customer base. Subsectors within the loyalty program might also grant insight into which strategies appeal to which demographics.

While some customers aren't shy about expressing their opinion to restaurant staff, the vast majority will opt to avoid confrontation about a negative experience. Instead, they turn to the internet to voice their concerns. Social media and dedicated review websites provide restaurants with customers' unfiltered opinions on everything from service to food to ambiance.

The permanent and public nature of online reviews is a double-edged sword. Positive diner reviews are associated with increased revenue, but a customer's account of a negative experience can dissuade others from trying the restaurant. It is important that restaurants go beyond living in the current moment as they assess social media hot takes. Aligning reviews with a timeline of business decisions and sales data can help restaurants understand which changes have made an impact (both positive and negative), and which ones have not moved the needle.

Staffing, inventory management and customer experience are just a few operational facets that can be enhanced by data-informed decisions.

**BDO EXAMPLE****Restaurant Y Makes Data-Backed Improvements to Customer Experience**

Restaurant Y had a repurchase rate below industry average for their online orders. An assessment of online reviews revealed several customer pain points in the ordering, payment, pickup and delivery processes. Challenges included sold-out menu items that were listed as available and frequent crowding near the host stand due to pickup and delivery orders.



Management was able to reduce friction in the ordering process by revamping their online application and integrating POS information about item availability. They used order data to improve customer relationship management by introducing targeted marketing offers — focusing on slower midweek days and incentivizing complementary menu items — and a loyalty program that raised the repurchase rate and average spend. As online orders increased, they also created a dedicated pickup area to expedite those orders.

These actions improved the customer experience, strengthened demand forecasting and boosted revenue.

## Leveraging data for high-quality service

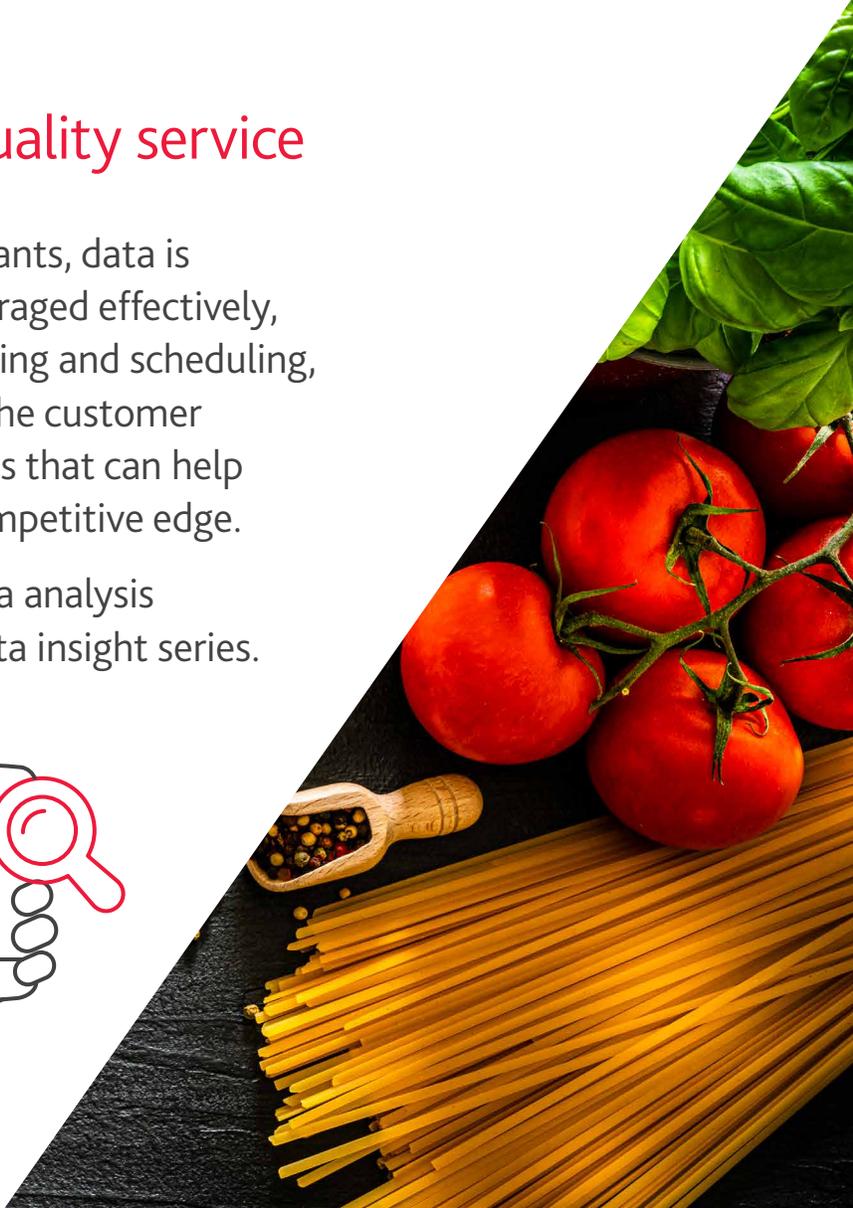
Of all the resources available to restaurants, data is arguably the most powerful. When leveraged effectively, data can help restaurants optimize staffing and scheduling, manage inventory efficiently, improve the customer experience and make proactive decisions that can help mitigate disruption and sharpen the competitive edge.

Learn how technology can optimize data analysis in the next installment of BDO's Big Data insight series.

Looking for guidance to make the most of your data? BDO can help.

Speak with a BDO professional today about your restaurant's data application strategy.

[Get in touch!](#)





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