QUANTIFYING THE IMPACT OF LOST CUSTOMERS IN QUICK SERVICE RESTAURANT (QSR) OPERATIONS

Rainer Dronzek[1]

[1]Simulation Modeling Services, LLC, Verona, WI, USA

ABSTRACT

Simulation modeling is used extensively in the quick service restaurant (QSR) industry to help design and improve operations. These models can also be used to quantify the financial, customer satisfaction, and operational performance of QSR systems and processes with respect to lost customers. We'll discuss the types and behaviors of lost customers, relate them to simulation definitions, and see how lost revenue and customer satisfaction levels can be quantified in a simulation model. The session will include a group interactive exercise, visualizations and explanations of lost customer behaviors, a discussion of how this application can evolve to a simulation digital twin, and a demonstration of a simulation model used to analyze and tell the story of lost customers.

1 INTRODUCTION

For this discussion we'll limit ourselves to customers using a QSR drive-thru, but the same concepts apply to QSR in-store customers. In fact, these concepts can be applied to any service industry that deals with queues AND with customers that have choices. Rarely, for example, do you see a lost customer checking in for a flight. They don't have a choice like the QSR customer, who can decide to try a nearby competitor or forgo the buying experience all together.

2 STAKEHOLDERS

When thinking about the impact of lost customers, it's important to consider the perspectives of the various stakeholders in a QSR environment. These include, but are not limited to restaurants, competitors, repeat and new customers, potential customers with a specific need (e.g., 30-minute lunch, wants one specific item, customer with a disability), the customer's conveyance (e.g., car, scooter, bicycle, walk-up, truck & trailer), employees, the point of sale (POS) system, data collection systems (e.g., loops, dumb video, smart video), the paths (e.g., roadways, driveways, parking lots), and the municipality. Often, we limit our definition of a stakeholder to a person, but if you look at the lost customer from non-human entities (like the POS), you get a much better appreciation of how the system plays in the overall scheme of things and how changes to that system can improve the customer experience.

3 THE CUSTOMER'S JOURNEY

Understanding the customer's holistic journey is key to understanding how process factors impact decision-making. Steps in a drive-thru process can include face-to-face orders at a menu board, mobile orders, roving order takers, vehicles moving out of the line, roving delivery of a completed order to a parked car, order correction (e.g., getting back in line, park and enter restaurant, use walk-up window). Not only do we strive to understand and model the typical customer journey, but it may be beneficial to document and even model those behaviors that are atypical yet can have a large impact on the performance of the drive-thru. Examples include how a customer choses to handle an incorrect order and cheaters that cut into a queue.

4   TERMS & CUSTOMER QUEUE BEHAVIORS

Common simulation terms translate to the following QSR customer behaviors:

- Balk: Potential customer arrives at a queueing system and does not to enter
- Decide: Customer selects the queue in a multi-queue system
- Renege: Customer in a queueing system leaves prior to receiving service
- Jockey: Customer in a queuing system switches queues
- Delay: Unplanned customer impacts:
    - Menu Reading: Time reviewing the menu before entering queue
    - Paying: Time finding or organizing payment method
    - Faffing: Time spent gathering things after paying
    - Checking: Looking through their order to ensure it is correct

5   LOST CUSTOMER METRICS

There are several ways to mathematically model lost customers, including:

- Thresholds & percentages - If wait time exceeds X minutes … drive-off likelihood is Y%
- Financials - Average check multiplied by the number of lost customers
- Customer repeatability - A poor experience can impact the likelihood of a return customer

6   REDUCING THE LIKELIHOOD OF A LOST CUSTOMER

Once models are used to quantify the likelihood of lost customers, they can be redeployed to test improvement scenarios. In this way, the restaurant owner/operator can be shown potential solutions in financial terms. These solutions can involve process changes, new technology, or physical plant upgrades. At this point the model function may switch from running the scenarios and quantifying the results to that of a storytelling tool. This is where the animation, be it abstract or realistic, can help convey the results and important conclusions and recommendations.

One typical change aimed at reducing lost customers is to modify staffing levels and schedules to reduce the lengthy queues that drive customers to leave the system. Detailed schedules and rules can be tested with the model to optimize staffing levels while also minimizing underutilized resources.

Another way to reduce lost customers is to increase the capacity of the drive-thru (along with the requisite staffing increase). Often this capacity increase takes the form of a shift from a single lane drive-thru to a dual lane. This entails driveway construction and new technology needed for the additional capacity.

7   SUMMARY

Often the focus of a drive-thru analysis is speed of service (SOS). While SOS is an important proxy for customer satisfaction, the revenue that could be gained by converting a lost customer to a successful transaction is a more impactful message. This addition of lost revenue to the discussion often results in a greater willingness to invest in technology or process changes that will result in more customer visits.

REFERENCES

C. Bialik. 2009. "Justice -- Wait for It -- on the Checkout Line". *The Wall Street Journal.*