



Why Your Restaurant is Losing \$30,000 a Year & You Don't Know It

Introduction:

We all know that to some extent a business's sales are influenced by external factors that no one has control over, such as weather, time of day, etc. However, to date there has been a dearth of concrete research on the subject. If you own a restaurant or are involved in the restaurant industry the following data should peak your interest for this reason alone.

Over the course of four months from July 2009 to October 2009 a total of 244 survey responses from restaurant owners and managers were collected for our two part survey. In the first part of the survey respondents were asked about the effects of weather, seasons, time and other factors relative to their sales. In the second portion of the survey restaurants were asked about their income levels and customer traffic.

Summary of Results:

- A **20%** sales drop was observed by a majority of restaurants due to **weather, seasonal, or holidays/ events**. A smaller percentage of restaurants observe a 20% or greater sales drop due to specific times of the day and depending on the day of the week.
- **75%** of restaurants state that changes in the weather alone lead to a sales decline of **at least 10%**.
- Based on this data we have estimated that the average restaurant is losing **\$31,200** in potential revenue every year due to the negative effects of these key external factors.

Calculation of Annual Sales Loss:

- **Calculation of Restaurant Average:**
 - $(20\% * \$3,000)(52 \text{ weeks}) = \mathbf{\$31,200 \text{ per year}}$
 - Key external factors such as weather, season, or holidays, result in a loss of approximately \$31,200 for the average restaurant.
 - **Key Assumptions Based on Data:**
 - Based on the data below, we assume that an average restaurant has sales of \$3,000 per day, or \$40 per table multiplied by 75 tables daily¹ (see the charts to questions 4 and 5 below).

¹ 61% of respondents stated they receive between 0 and 100 table orders a day, while 39% said they saw over 100 table orders a day. To be closer to the median we assumed 75 table orders a day on average. 55% of respondents



- Sales will drop by 20% once per week² because of weather or another external factors (see the charts to questions 1 and 2 below)

- **Lower Bound:**

- \$20 per table and 20 tables filled per day³
- $(\$20)(20 \text{ tables}) = \400 per day
- 20% sales drop once per week
- $(0.20 * \$400)(52 \text{ weeks}) = \mathbf{\$4,160 \text{ per year}}$
- Key external factors such as weather, season, or holidays, result in an annual loss of approximately **\$4,160** for a low-earning restaurant.

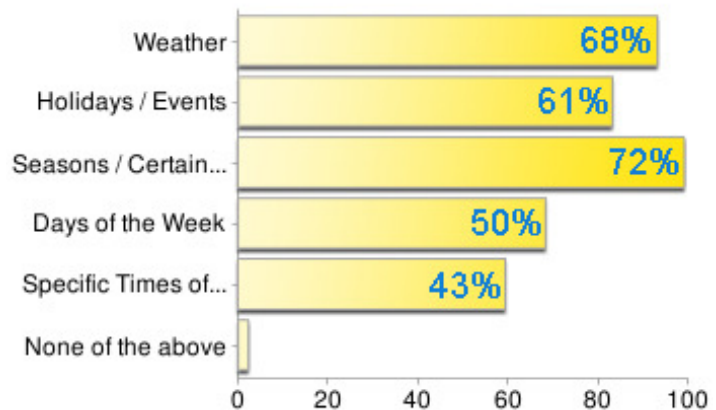
- **Upper Bound:**

- \$100⁴ per table and 200⁵ tables filled per day
- $(\$100)(200 \text{ tables}) = \$20,000$ per day
- 20% sales drop once per week
- $(0.20 * \$20,000)(52 \text{ weeks}) = \mathbf{\$208,000 \text{ per year}}$
- Key external factors such as weather, season, or holidays, result in an annual loss of approximately **\$208,000** for the high-earning restaurant.

Data Collected (Part I):

Question 1: Select all factors that typically cause a sales drop of 20% or more

X axis = # of Respondents
Y axis = External Factor



reported that their restaurants generated \$50 of revenue or less per table. We selected \$40 per table in an attempt to be closer to the median value.

² The data from question one overwhelmingly gives evidence as to the variety of factors and extent to which restaurant sales are affected by them. Since a majority of respondents selected 3 of the 5 factors as causing a 20% or larger sales drop, assuming a 20% sales drop once per week is a reasonable basis for this calculation.

³ For a restaurant to do much less business than this would result in a revenue loss due to typical levels of fixed costs associated with owning and running a restaurant.

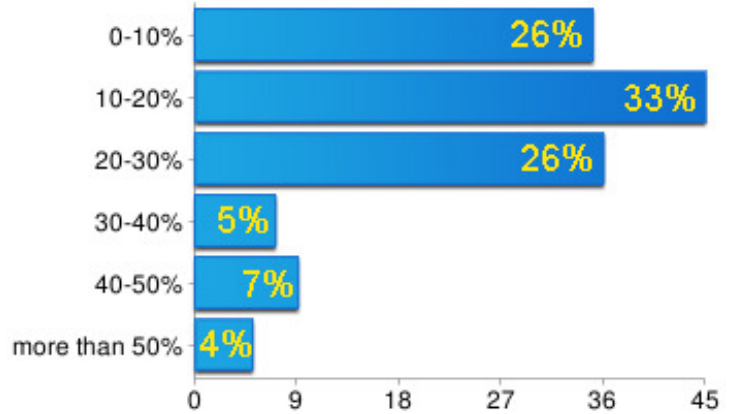
⁴ 12% of restaurant generate over \$100 in revenue per table.

⁵ 21% of restaurants said they fill 200 or more tables on average every day.

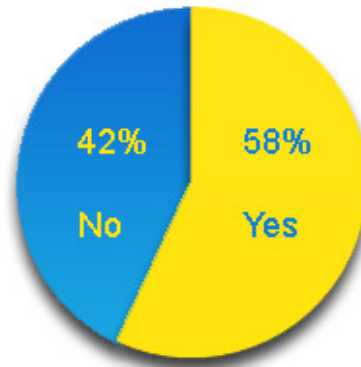


Question 2: On days when weather conditions are Undesirable (for instance, rainy OR sunny), how much (%) do sales drop?*

X axis = # of Respondents
Y axis = Sales Drop %



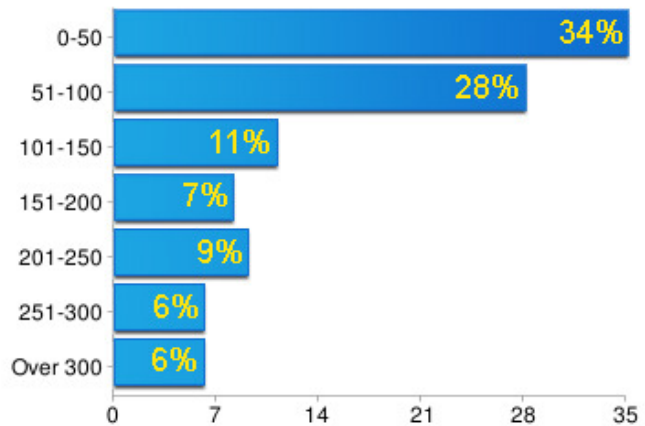
Question 3: Would you be interested in a web-based service that could boost sales and reduce the effect of these factors?



Data Collected (Part 2):

Question 4: How many table orders do you fill in an average day?*

X axis = # of Respondents
Y axis = # of Orders

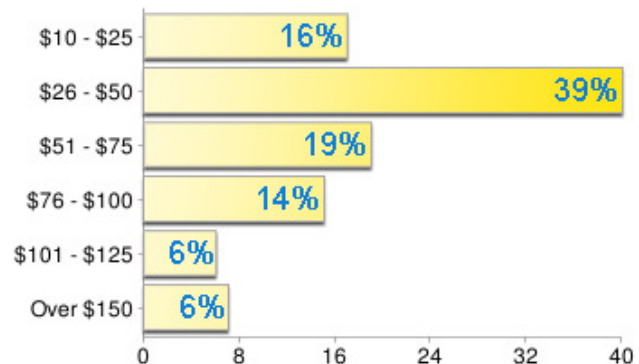


* Percentages for this question exceed 100 due to marginal rounding.



Question 5: How much (\$) is the check for the average table?

X axis = # of Respondents
Y axis = Size of Check



Key Details of the Research Survey:

- **Who was surveyed?**
 - 136 Dine-In Restaurant owners or managers in the U.S. for part one of the survey (questions 1-3)
 - 108 Dine-in Restaurant owners or managers in the U.S. for part two of the survey (questions 4-5)

- **How were they selected?**

Approximately 30,000 restaurants were browsed and searched for online through search engines and directories. The aim in doing so was to have a fairly representative sample of restaurants from across the United States. The criteria for searching for a potential participant in the study are that (1) they must be a dine-in restaurant, (2) they must be located in the U.S. and (3) they must have a listed email address⁶.

From 30,000 restaurants, 13,000 restaurants were selected.

- **How were they surveyed?**

All respondents were contacted via email and asked to participate in a short restaurant research survey by filling out a form which was placed directly in the email or they could click-thru to a website form.⁷

⁶ Our reasoning was that email was the most affordable and quickest way to contact a large sample size of the restaurant market, and gather data in a shorter period of time. Initially, when calling to speak with restaurant owners over the phone, the task became daunting and tedious, since many restaurant owners were busy or unavailable to participate.

⁷ Some restaurant owners were understandably skeptical or reluctant to participate at first. Many have received similar spam emails in the past only to learn their primary purpose was to garner contact information and create sales leads for a product or service being offered. For this reason the email was kept brief and to the point.



Restaurant Survey

* Required

Select all factors that typically cause a sales drop of 20% or more. *

- Weather
- Holidays / Events
- Seasons / Certain Months
- Days of the Week
- Specific Times of the Day
- None of the above

- **How many participated?**

Approximately 13,000 restaurants were emailed total for parts one and two of this survey. The response rate was approximately 1.8%.

For part one of the survey there were 136 respondents. For part two of the survey there were 108 respondents.

Bluesky Local Survey				Share	Autosaved on 2:57 PM PDT	
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	A	B	C			
1	Timestamp	On days when weather conditions are Undesirable (for instance, rainy OR sunny), how much (%) do sales drop?	Select all factors that typically cause a sales drop of 20% or more.			
2	7/13/2009 7:07:49	20-30%	Weather			
3	7/13/2009 12:48:20	10-20%	Weather, Holidays / Events, Seasons / Certain Months, Days of the Week, Specific Times of the Day			
4	7/14/2009 11:17:52	20-30%	Weather, Holidays / Events, Seasons / Certain Months			
5	7/15/2009 11:09:12	0-10%	Holidays / Events, Seasons / Certain Months, Days of the Week, Specific Times of the Day			
6	7/18/2009 20:29:14	20-30%	Weather, Days of the Week			
			Weather, Holidays / Events, Seasons / Certain			
+						
Add Sheet Sheet1						



- **What questions were asked?**

In part one, all respondents were contacted via email and asked to participate in the restaurant research survey by filling out a 3 question form. In part two, all respondents were contacted via email and asked to participate in the restaurant research survey by filling out a 4 question online form. All participants were asked the same questions in the same order, with the exception of questions 1 and 2, whose order was reversed half-way through the survey to see if the reversal would have any impact on the answers (it did not). For the reasoning behind this, see the point titled “Further Study” in “Final Notes & Observations” below.

In order, the questions that were asked:

1. Select all factors that typically cause a sales drop of 20% or more
2. On days when weather conditions are Undesirable (for instance, rainy OR sunny), how much (%) do sales drop?
3. Would you be interested in a web-based service that could boost sales and reduce the effect of these factors?
4. How many table orders do you fill in an average day?
5. How much (\$) is the check for the average table?

Final Notes & Observations:

- **Correlation vs. Causation:** In this research survey we have made an implicit inference that the observation of key external factors, like the weather, directly cause a change in customer traffic. We felt it practical and appropriate, in this instance, to make this conclusion. There are a few reasons why:
 - Interviews with restaurant customers, restaurant owners, and among the research team members cited specific reasons why their motivation to patronize a restaurant is affected by the external factors listed above. Key examples include:
 - When it rains or snows, there is apprehension to leave one’s home or apartment because of poor driving conditions.
 - During an event such as the Super Bowl, many households will order food for take-out or delivery because they are motivated to stay inside, congregate with others, and watch the football game.
 - Seasonal changes in temperature instinctually influence one’s motivation to stay-in or leave the home or place of work.
 - Most individuals adhere to a 5-day work week cycle. The weekends are viewed as a time for relaxing, celebrating, and socializing. This attitude translates to a motivation to patronize restaurants more-so than during the work week.
 - Many individuals eat their meals everyday day at set times. The primary meals are breakfast, lunch, and dinner. Breakfast is usually eaten in the morning, lunch



in the afternoon (around or near 12:00PM), and dinner in the evening. With hunger being satisfied at regular times throughout the day, there is little reason to eat at restaurants during the times in-between meals. Also there is no other factor in place that would motivate customers to alter their regular meal habits.

- **Note:** The psychology of consumer motivation directly tied to external sales factors is an interesting study in itself and may make for an interesting follow-up study.
- **Further Study:** 42% of respondents stated their restaurant's sales dropped by 20% or more, while in the first question 68% of respondents reported a 20% sales drop as a result of weather. Further study is needed to rectify this discrepancy. Based on both data points, it still seems reasonable to conclude that most restaurants are significantly impacted by the weather.
- **Randomization:** We encourage that future studies of this topic include an element of randomization with regard to how participants are selected.
- **Additional Data:** During the course of this two part study two questions were asked of restaurant respondents (in part two). The answers to these questions were not included in this research paper due to a lack of relevance and because of ongoing data analysis. We expect to release them at a later date as part of a separate research paper.
- **Special Thanks** to Angel Villegas and Kerry Motelson for the assistance with revisions.

About Bluesky Local:



Bluesky Local is the first company to pioneer a Slow Sales Response (SSR) solution for restaurants. Bluesky Local's web-based solution tracks relevant external factors (weather, seasons, time, etc.) and responds to slow sales conditions by automatically delivering coupons to customers via email, text, and Twitter. For example, if Joe's Restaurant is slow on Tuesdays and when it rains, Bluesky Local will anticipate those conditions and instantly send out coupons to increase customer traffic and sales.

Sent at the right time, coupons work to counteract external conditions that affect customer spending behavior and provide powerful leverage for restaurant owners in the battle to steady sales and capture new revenue. For more information on Bluesky Local, visit <http://www.BlueskyLocal.com>.

