Calorie Posting in Chain Restaurants

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## Blended Crème

<table>
<thead>
<tr>
<th></th>
<th>Tall 12 fl oz</th>
<th>Grande 16 fl oz</th>
<th>Venti 24 fl oz</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strawberries &amp; Crème</td>
<td>3.85 370 cal</td>
<td>4.45 470 cal</td>
<td>5.05 650 cal</td>
</tr>
<tr>
<td>Vanilla Bean</td>
<td>3.30 340 cal</td>
<td>3.90 470 cal</td>
<td>4.50 600 cal</td>
</tr>
<tr>
<td>Double Chocolaty Chip</td>
<td>3.85 380 cal</td>
<td>4.45 510 cal</td>
<td>5.05 670 cal</td>
</tr>
<tr>
<td>Green Tea</td>
<td>3.85 370 cal</td>
<td>4.45 490 cal</td>
<td>5.05 650 cal</td>
</tr>
<tr>
<td>Pumpkin Spice</td>
<td>4.15 360 cal</td>
<td>4.75 470 cal</td>
<td>5.35 630 cal</td>
</tr>
</tbody>
</table>

### Vivanno

**Orange Mango Banana**
Made with a whole banana and all natural Naked® Juice and our own whey protein* and fiber powder.

**Banana Chocolate**
Made with a whole banana and bittersweet cocoa and our own whey protein* and fiber powder.
New York City 2008

- Chains with 15 or more units nationwide
- Post calories as prominently as price
- Patient Protection and Affordable Care Act - March 2010
Information disclosure as a policy tool

- **Demand-side effects**
  - Consumers substitute to lower calorie items
  - Consumers substitute to different restaurants
  - Consumers purchase fewer items

- **Supply-side effect**
  - Restaurants change their menus
On the other hand

- Nutrition information is already available
- Choices driven by convenience, taste & price
- “Teaching to the test”
Pasta Dishes Made to Order

1. Penne w/ Olives, Capers & Plum Tomato Sauce $8.50/1938
2. Penne w/ Eggplant, Basil & Mozzarella $9.50/2735
3. Penne w/ Shrimp & Broccoli $11.95/1825
4. Penne alla Vodka w/ Bacon With Fresh Mozzarella $8.95/2917
5. Pasta Primavera w/ Zucchini, Broccoli & Peppers $8.95/1626
6. Fettuccine Alfredo w/ Parmigiano Cheese With Grilled Chicken $9.95/2940
7. Penne w/ Fresh Tomato Sauce Fresh Mozzarella & Basil $8.95/2713
8. Penne w/ Grilled Chicken & Mushroom $11.95/1638
9. Spaghetti & Meatballs $8.50/680

From our Brick Oven

Mama’s Favorite Lasagna 650/8.95
Baked Ziti w/ Mozzarella & Ricotta 700/7.50
Chicken Cutlet Parmigiana 520/8.95

Salads

Small Salad 147/3.49
Large Salad 244/4.99

Special

Grilled Chicken Caesar Salad 1415/6.49

Soup of The Day

Various Heros
Starbucks Data

- 3 months before & 11 months after
- NYC (posting starts April 1, 2008)
- Control locations—Boston & Philadelphia
- 110 million transactions
- 11,000 cardholders
Strengths

- Deep dive on how calorie posting affects consumer behavior at Starbucks
- Can assess impact on their business
- Starbucks is one of the biggest chains
Limitations

- Starbucks not representative of all chains
- No data on total caloric intake
- No data on obesity
Regression analysis

- We estimate the impact of calorie posting on calories per transaction
- Transactions in Boston & Philadelphia control for seasonality
- Various robustness checks (see paper)
Findings

- Ave. calories per transaction falls by 6%
  - From 247 to 232 calories per transaction

- The impact is all from food choices
  - Beverages choices unaffected
  - Food calories fall by 14%
Findings

- Revenue per transaction falls slightly
- Offset by an increase in transactions
- Zero net impact on Starbucks’s profit
- Revenue increases by 3% for Starbucks located within 100m of Dunkin Donuts
How big is this effect?

- 2,000 calories per day
- 25% of calories from chain restaurants
- 6% reduction in calories from ALL chain restaurants
- Implies 30 calories per day reduction
Conclusion

- Calorie posting is no silver bullet
- Effects may be larger at other chains
- How information is provided is key
- Good news – major companies understand the value of developing more nutritious food