

# Nescafé Concentrated Coffee Pods Product Launch Analysis



Minghao Du  
Jiaman Li  
Haohua Lu  
Fengyuan Tian  
Xiangping Zhou

December 10th, 2021



# CONTENTS



**01** Introduction

**02** Research Problem

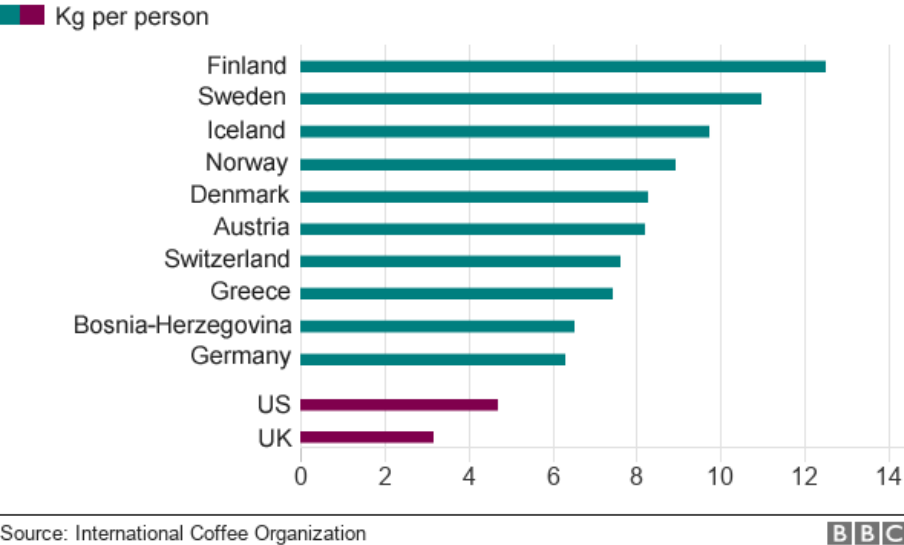
**03** Research Plan

**04** Analytical Plan

**05** Key Findings from the  
Simulation

# 01 Introduction: Global Coffee Market

Per capita coffee consumption in 2016



- Coffee is one of the most popular beverages in the world
- According to Mordor Intelligence, The global coffee market was valued at USD 102.02 billion in 2020. (Coffee Market, 2021)

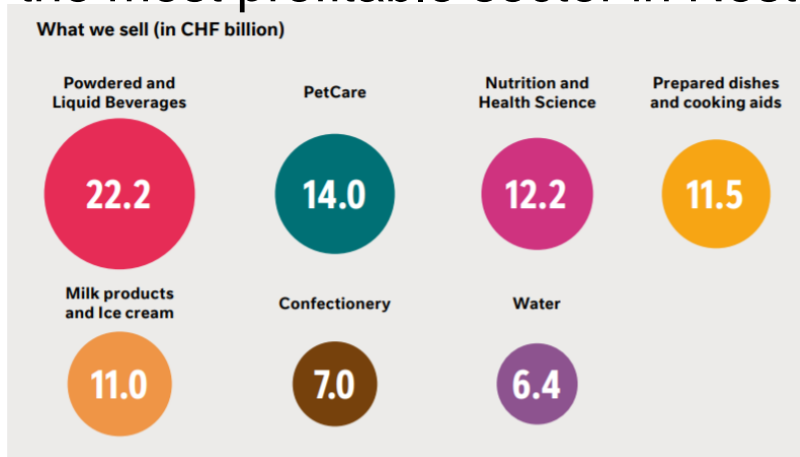
Source: International Coffee Organization

# 01 Introduction: Top Manufacturer - Nestle

- Nestle is the largest multinational food and drink manufacturer measured by revenue (Spector, 2021)
- “Powdered and Liquid Beverages” is the most profitable sector in Nestle



- Nescafé is the signature



Source: Nestle Annual Report 2020

Spector, N. (2021, May 27). *The 10 food and beverage companies making the most money*. GOBankingRates. Retrieved December 8, 2021, from <https://www.gobankingrates.com/money/business/10-food-beverage-companies-making-most-money/>

# 01 Introduction: Nescafe Sales Declined

## Sales by geographic areas

	Differences 2020/2019 (in %)		
	in CHF	in local currency	in CHF millions
By principal markets			2020
United States	-9.8%	-4.4%	26 014
Greater China Region	-13.4%	-8.5%	5 986
France	-10.8%	-7.3%	3 946
United Kingdom	-1.2%	+4.3%	2 883
Brazil	-23.5%	+5.7%	2 790
Philippines	+4.8%	+6.2%	2 769
Mexico	-12.6%	+2.6%	2 564
Germany	-7.1%	-3.4%	2 445
Canada	-2.8%	+4.3%	2 122
Japan	-11.5%	-8.0%	1 607
India	-3.7%	+7.2%	1 605
Russia	-8.7%	+8.6%	1 555
Italy	-9.9%	-6.4%	1 508
Spain	-6.8%	-3.2%	1 409
Australia	-5.0%	+1.8%	1 394
Switzerland	-2.6%	-2.6%	1 134
Rest of the world	-7.5%	(a)	22 612
<b>Total</b>	<b>-8.9%</b>	<b>(a)</b>	<b>84 343</b>

- According to the Nestle Annual Report in 2020, the Greater China Region is the second largest market of Nestle
- The sales declined 13.4% compared to 2019

# 01 Introduction: New Types of Instant Coffee

- The most recent trending instant coffee in the Chinese market is the **concentrated coffee pod**.
  - Syrup-like product
  - Extracted from coffee beans
  - Vacuum-frozen at extremely cold temperatures.
- They are tiny and portable
  - You only need a cup of water or milk to dilute the concentrated pods.



Concentrated Coffee Pods  
made by Starbucks



Concentrated Coffee Pods  
made by Yongpu

## 02 Research Problem: Statement

- As a group of analysts, we are helping Nescafe to investigate the necessity of launching its concentrated coffee pods to recap its sales and compete with these new emerging forces in the Chinese Market.
- The research question: **“Will the launch of Nescafe concentrated coffee pods increase Nescafe’s sales in the Chinese market?”**

## 02 Research Problem: Hypotheses

- **Null hypothesis:** the launch of Nescafe concentrated coffee pods will not increase Nescafe's sales in the Chinese market.
- **Alternative hypothesis:** the launch of Nescafe concentrated coffee pods will increase Nescafe's sales in the Chinese market.

$$H_0: \mu(Sales_{Pods}) - \mu(Sales_{No\ Pods}) \neq 0$$

$$H_A: \mu(Sales_{Pods}) - \mu(Sales_{No\ Pods}) = 0$$



# 03 Research Plan: Sample Selection

**Population of Interest:** Consumers in 119 targeted cities.

- Existing consumers of Nestlé brand and coffee products
- Consumers who buy coffee products but not the Nestlé brand

**Sample Size Generator:**

- Margin of error = 5%

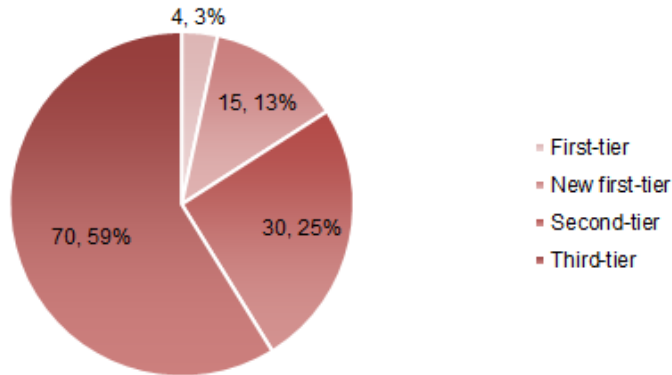


Treatment Group: 54 cities

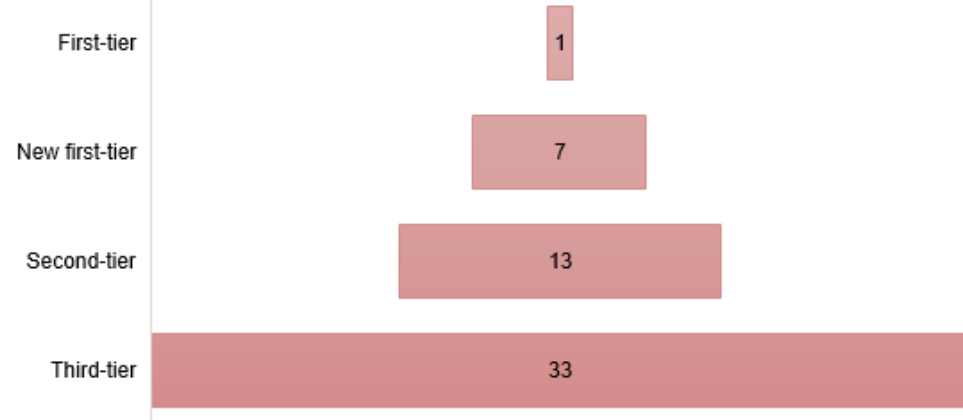
- Confidence level = 95%

Control Group: 54 cities

Population Size = 119



Sample Size in Treatment and Control Group (54 each)



# 03 Research Plan: Variables

## Independent Variable (X):

- The launch of Nestlé concentrated coffee pods (Yes=1, No=0)

## Dependent Variable (Y):

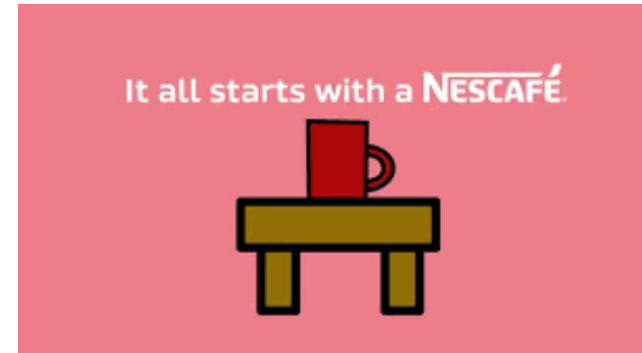
- Total sales of Nescafé (Nestlé SA) in a fiscal period.

$$Y_i = b_1 X_i + b_2 + u_i$$

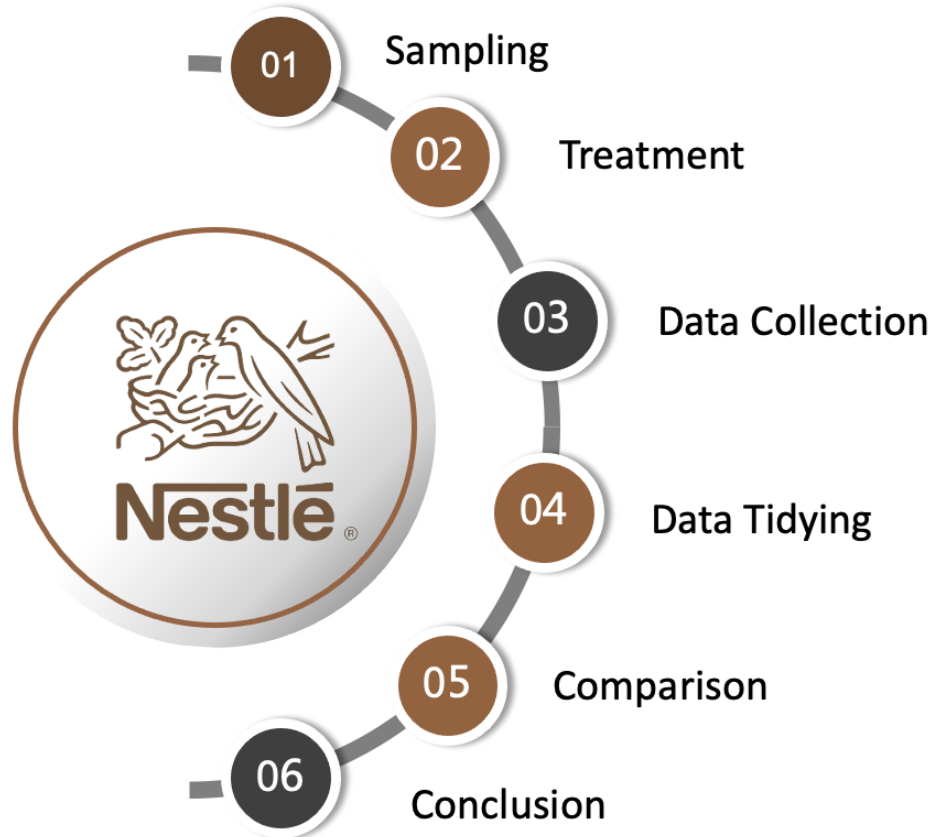


$$X = \begin{cases} 1 = Yes \\ 0 = No \end{cases}$$

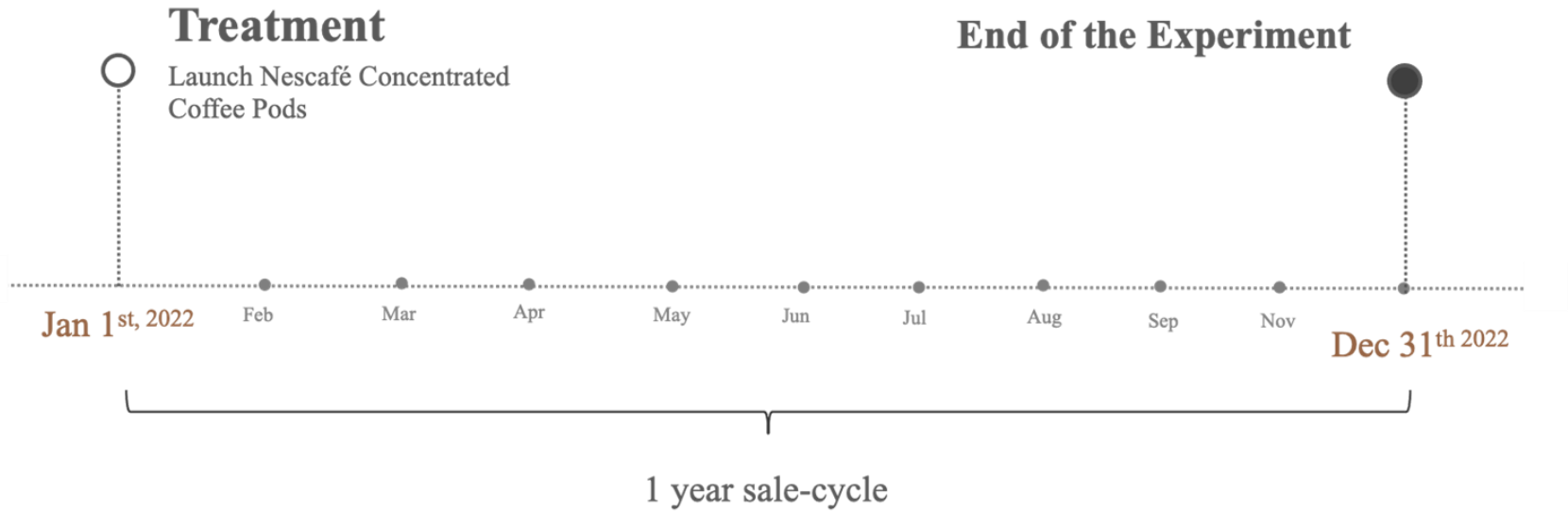
Two Sample t-test



# 03 Research Plan: Operational Procedure



# 03 Research Plan: Timeline



# 03 Research Plan: Data Collection & Security



## Data Collection

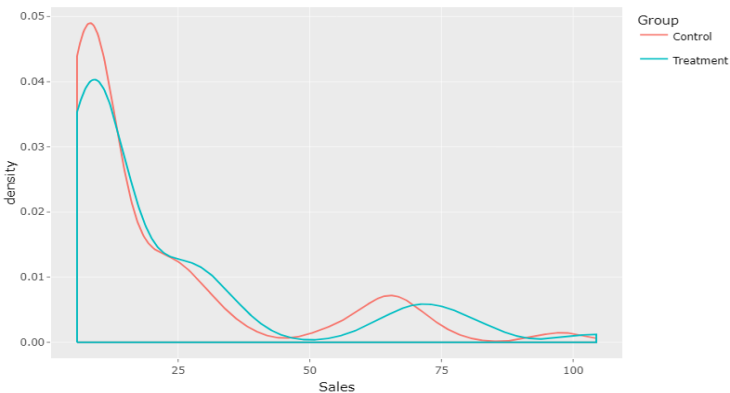
- Sales in control & treatment group
- Collect monthly
- 54 cities each group
- 108 cities in total
- Confounding variables



## Data Security

- Sales volume
- No sensitive information included

# 04 Statistical Analysis Plan

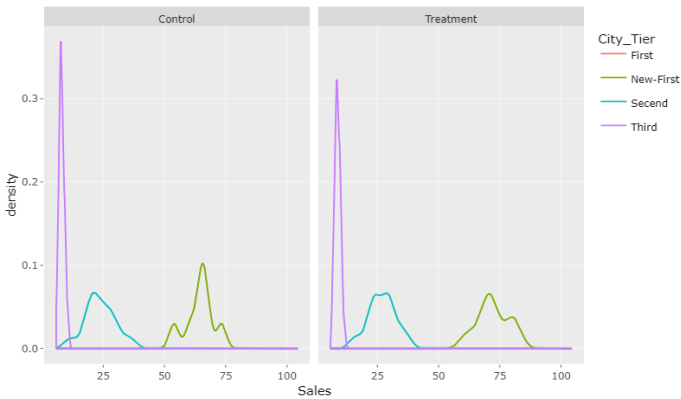


- Data Simulation

- Baseline Sales Mean: 100
- Standard Deviation: 10
- Simulation Rounds: 1000 rounds

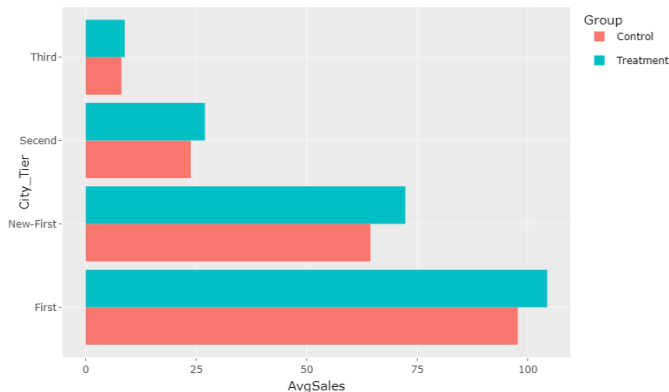
- Exploratory Analysis

- Inspect data
- Generate plots
- Statistical properties of the simulated data calculation



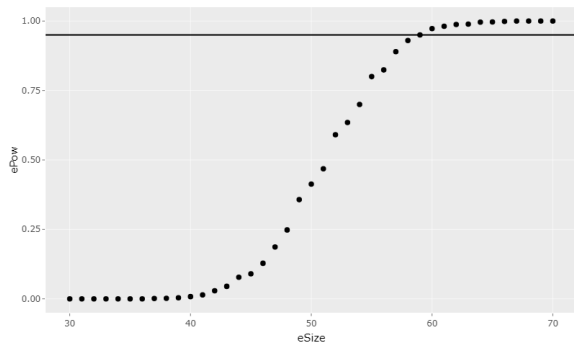
- Quantitative Analysis

- Power
- P-value
- Effective Size

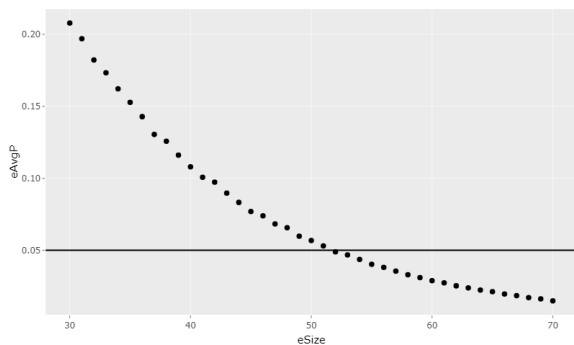


# 05 Key Findings from the Simulation

Effective size vs Power

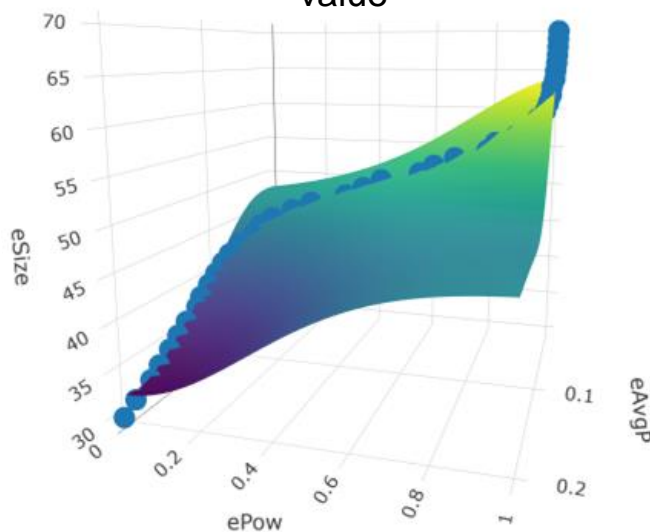


Effective size vs Avg. P-value



**Research question:** Will the launch of Nescafe concentrated coffee pods increase Nescafe's sales in the Chinese market?

Effective size vs Power vs Avg. P-value



## Exploration

- Power > 0.95
- Effective size >= 60
- P-Value < 0.05
- Effective size >= 52

## Analysis

Scenario 1: No Effect

- Effective size = 40
- Power = 0.009
- P-value = 0.1086

Scenario 2: Has Effect

- Effective size = 60
- Power = 0.961
- P-value = 0.0292



# THANKS

谢谢观看

