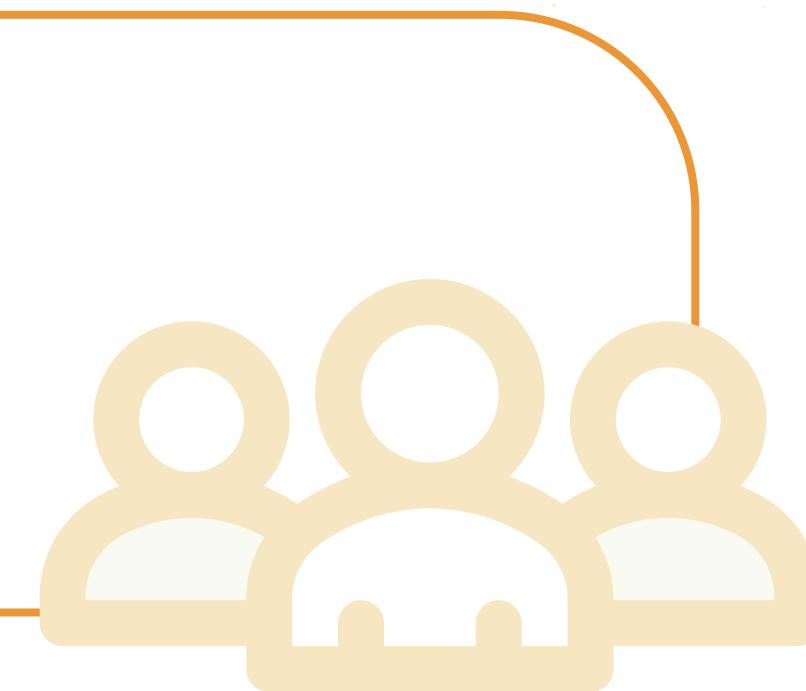




FOODPANDA

ROOM5

- Michelle Chan
- Alex Wong
- Joanne Tsang





Objective



Customer Behavior:

- Food Category
- Time (day of week, order time)
 - When order more food ?
- Promotion discount

Food Supplier

- Maintain the food Supplier number



Objective

Marketing Strategy

- Previous performance
 - eg 【新年限定】，精選百大
- Food types promotion on day of weeks
- Offer discounts during peak hours to boost order volume
- Collaboration with Restaurants
- make cooperation with certain type of restaurant which has reached the most transaction rate

WHAT ARE THE DISTRIBUTION OF ORDERS?

- Daytime (day of week/ specific hours/special day / peak hour)
- Geographic location
 - Food order
 - population(external data information) correlation with transaction
- Type of restaurant
- Type of food -> individual preference
- Promotion/Discount

ANY POTENTIAL DATA QUALITY ISSUES?

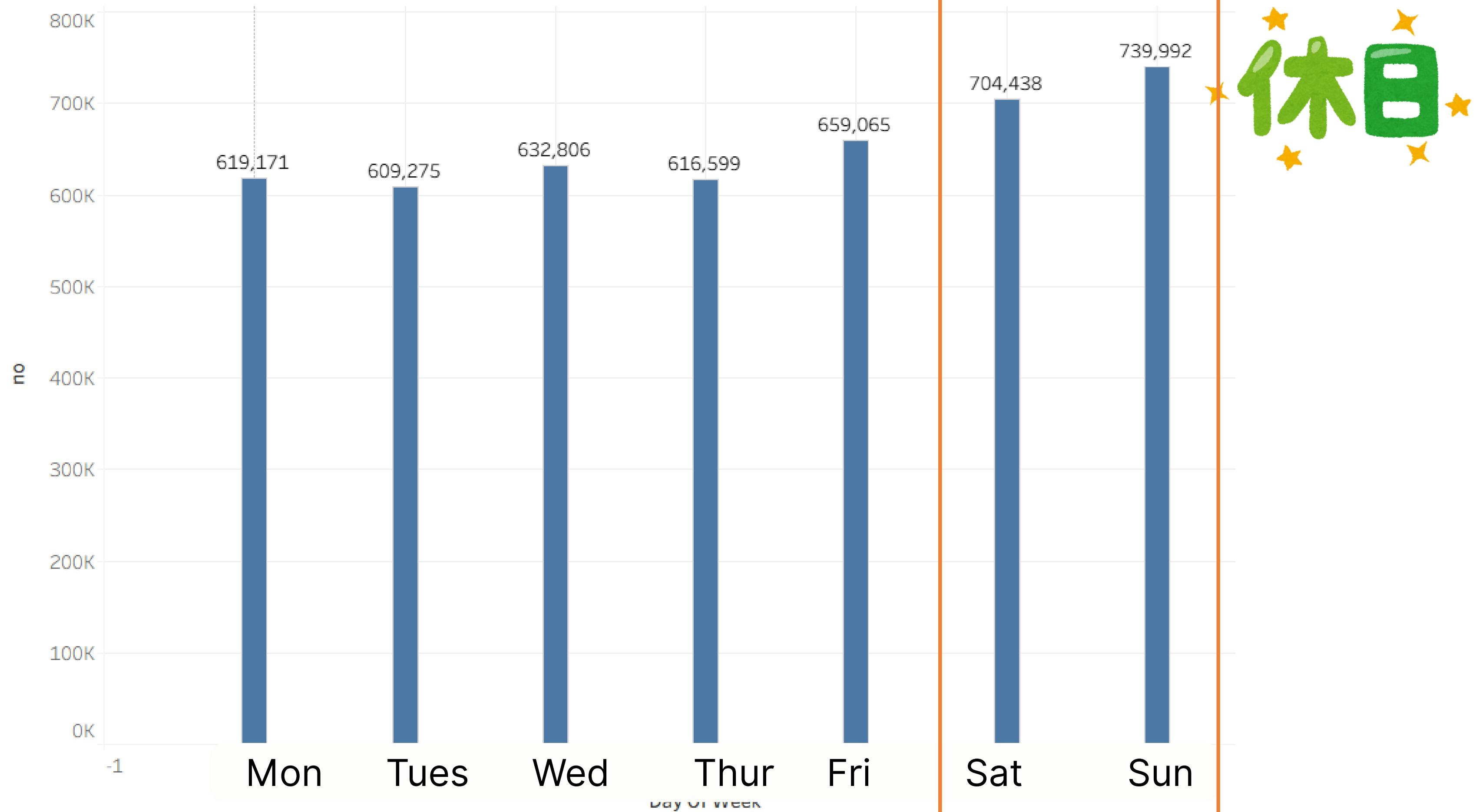
NULL VALUE

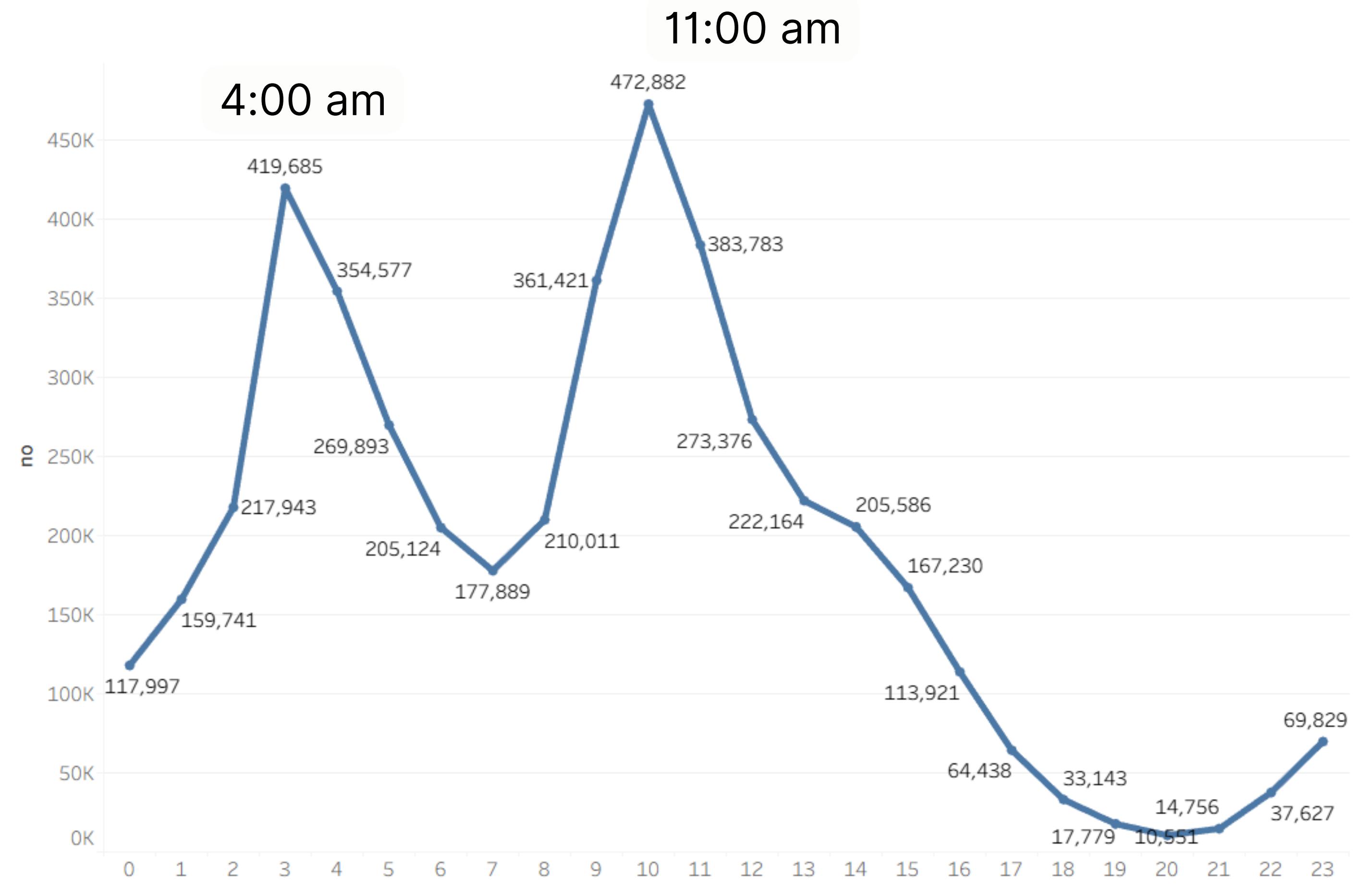
```
<class 'pandas.core.frame.DataFrame'>
Index: 9506 entries, 1 to 23061
Data columns (total 4 columns):
 #   Column           Non-Null Count  Dtype  
---  --  
 0   vendor_id        9506 non-null   object 
 1   chain_id         4738 non-null   object 
 2   geohash          9506 non-null   object 
 3   primary_cuisine  9506 non-null   object 
dtypes: object(4)
memory usage: 371.3+ KB
```

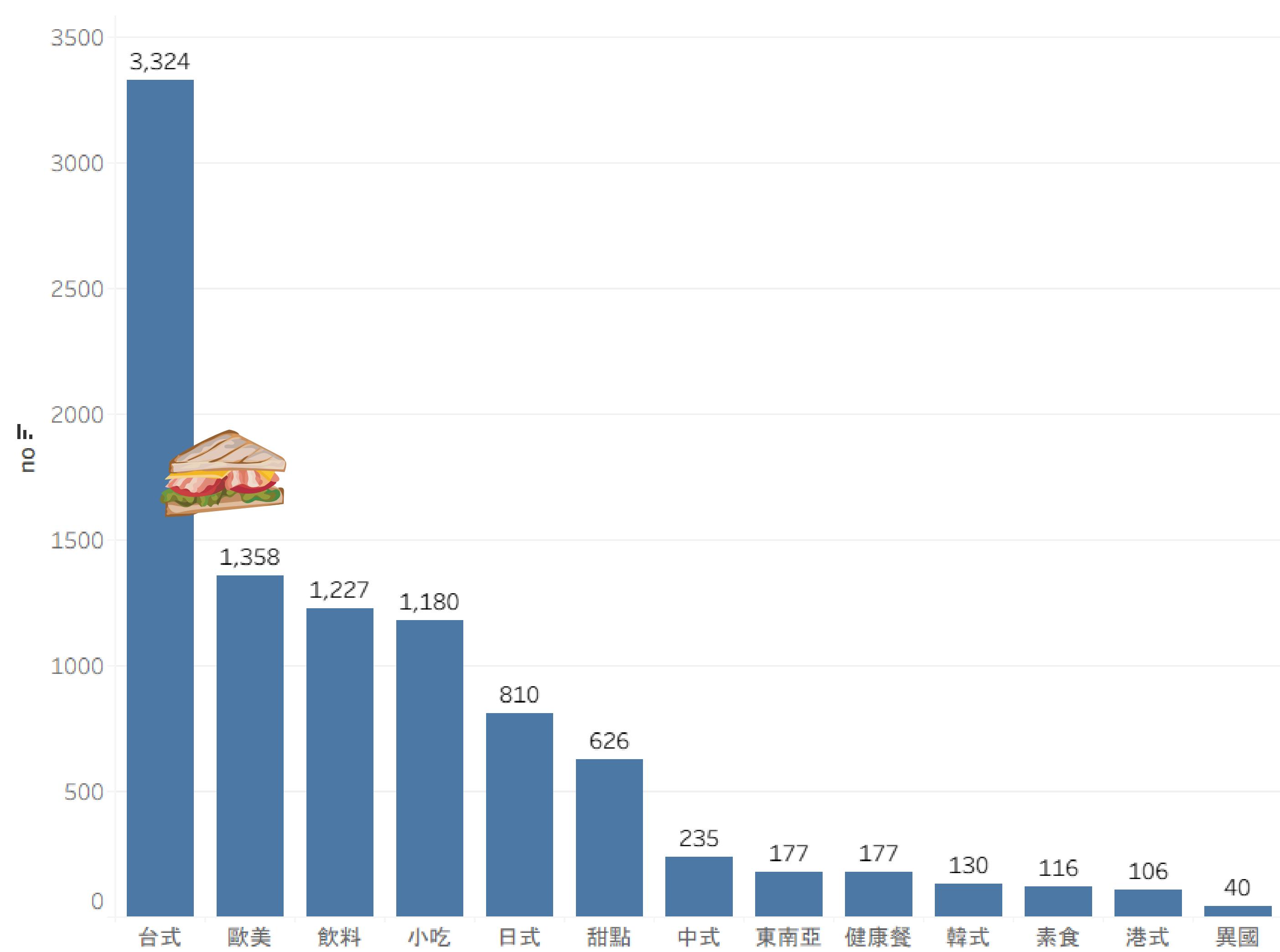
DATA MISMATCH

- Data including messy information not just food
e.g. number, tableware option, package and user's comment
- Same food different product name
- Data cleaning in product name

Day of Week - Order number







LIST 3 PRELIMINARY OBSERVATIONS

Deepdive analysis

- Check if food name contains specific keywords that are mostly/lessly ordered by customer
 - Whether food order includes drinks will affect ordering
 - The statistic of day of week merge into order time to see the order frequency



POSSIBLE FURTHER DATA ANALYSIS LIMITATION

- Price
- Brand
- Promotion/discount code
- Delivery service time
- Previous comments/customer service_missing
- Frequency of food order

THANK YOU



Phase 2



FOODPANDA

ROOM 5

- Alex Wong
- Michelle Chan
- Joanne Tsang



PRESERVATION FLOW

- Data Information



- Order Time
- Cuisine
- Relationship Time & Cuisine



- Order
- Location
- Vendor Showcase



- Summary
- Strategic Planning

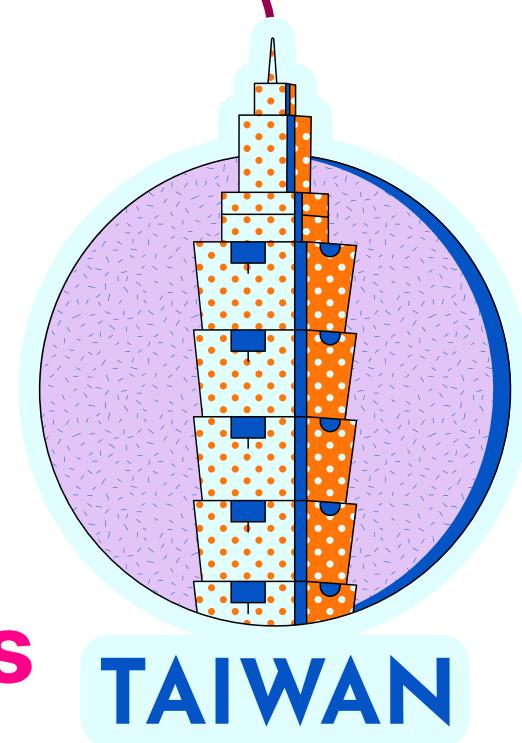




Database Information

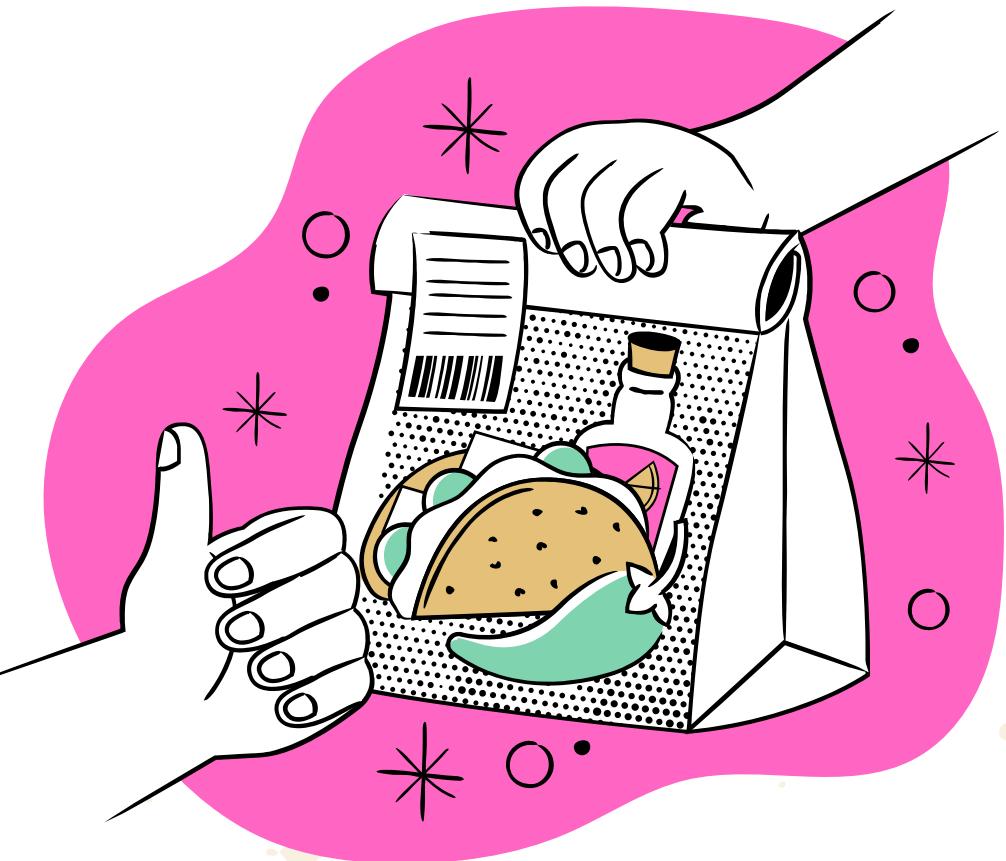
FoodPanda Taiwan:

- Time range: 89 days
- Data set: Order, Customer, Vendor
- Matched data size: 4,581,346 rows × 13 columns



- 
- Order Time
 - Cuisine Types
 - Food Name
 - Geographic Location





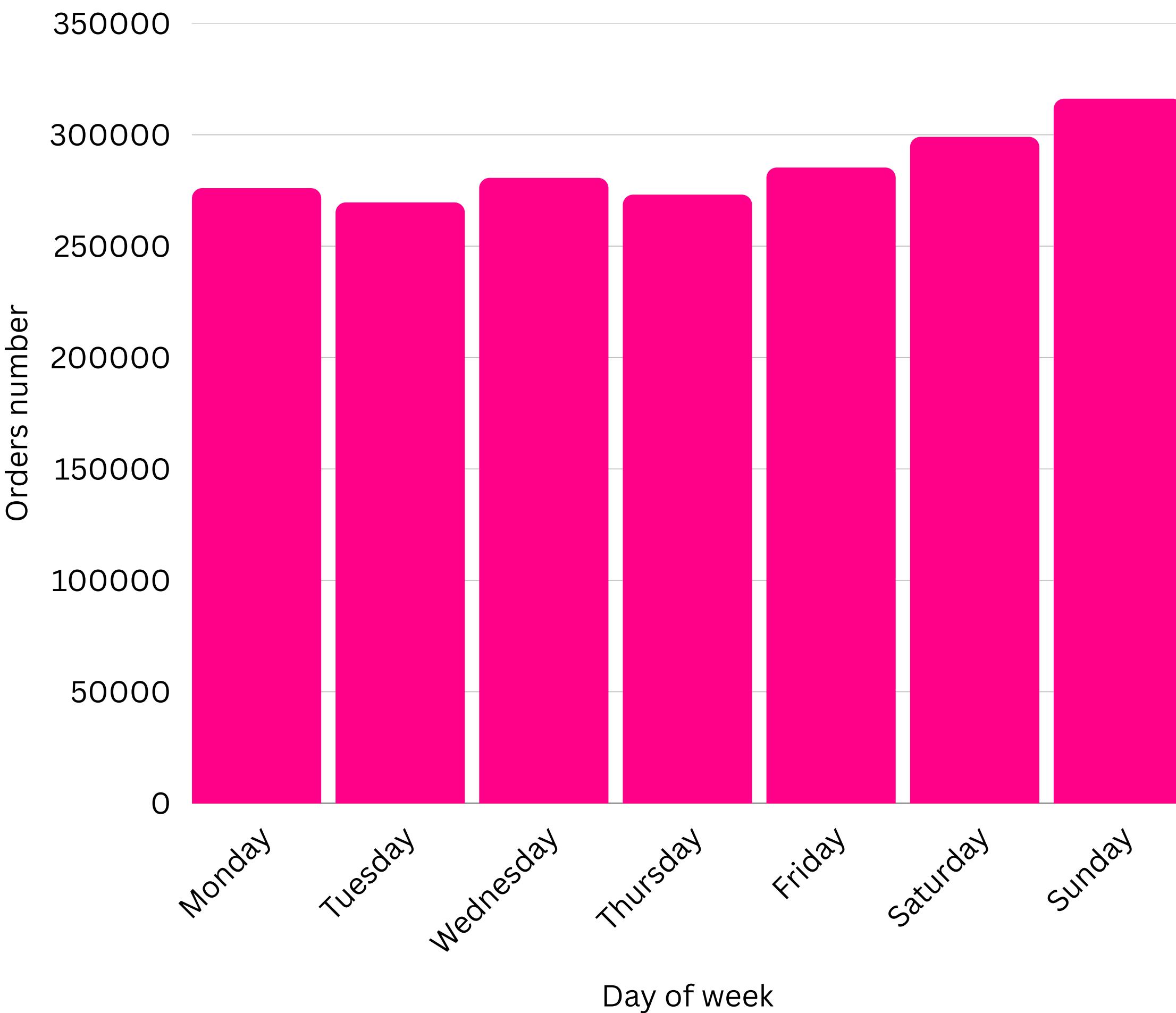
ORDER TIME



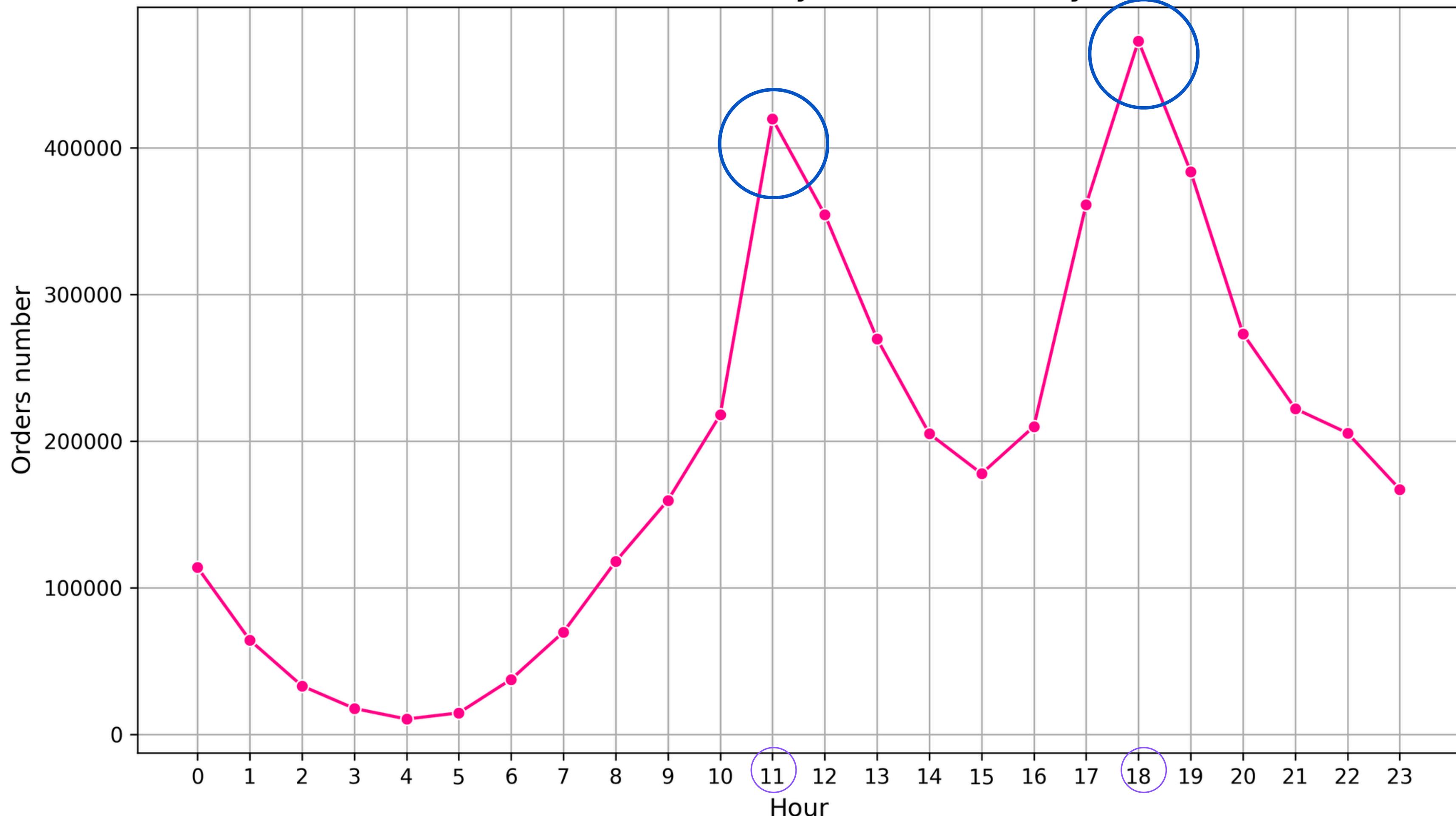
ORDER TIME

Day of week	No. of order
Monday	13.80%
Tuesday	13.48%
Wednesday	14.03%
Thursday	13.66%
Friday	14.26%
Saturday	14.95%
Sunday	15.81%

Orders by Day of the Week



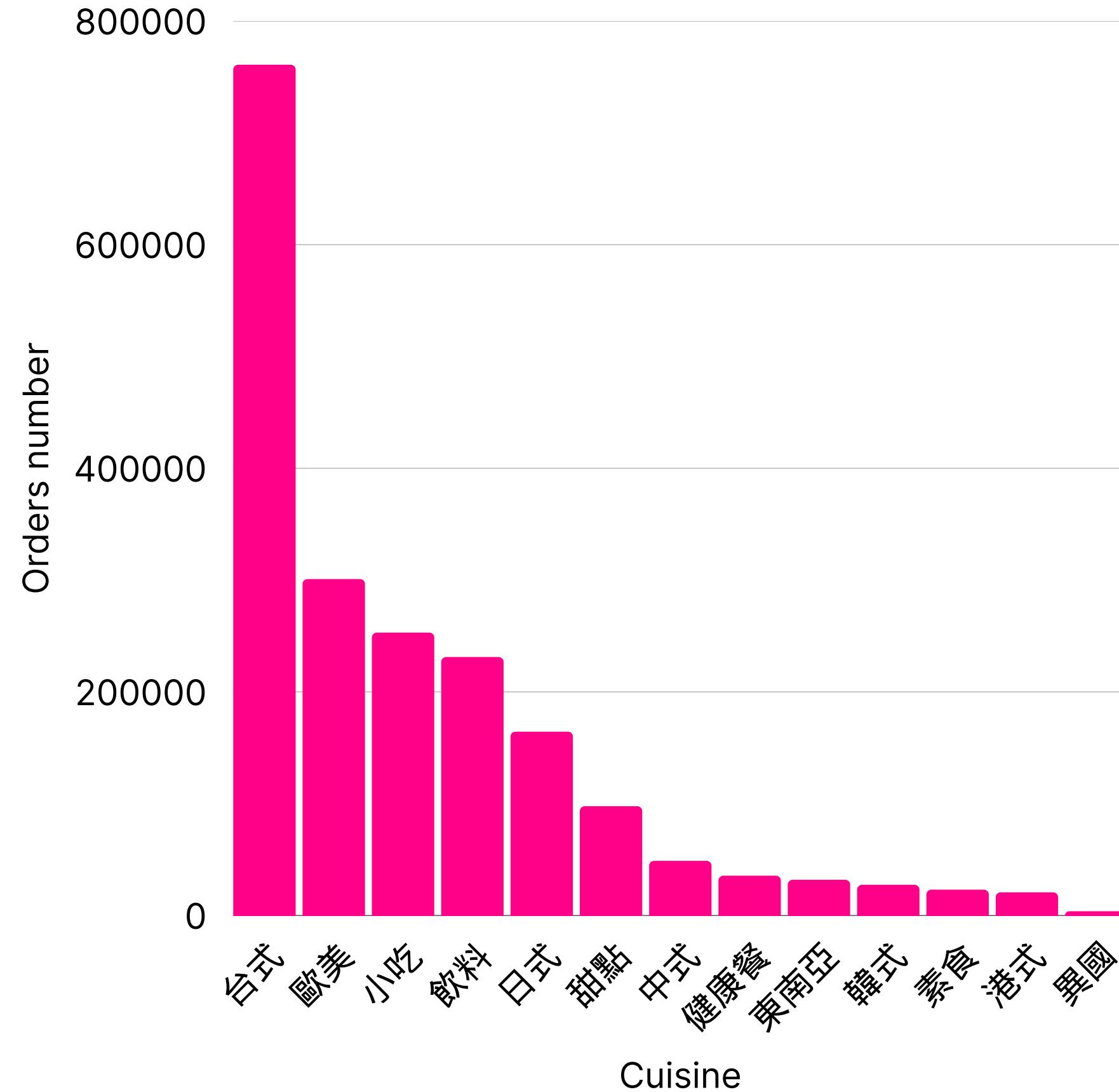
Trend of Orders by Hour of the Day



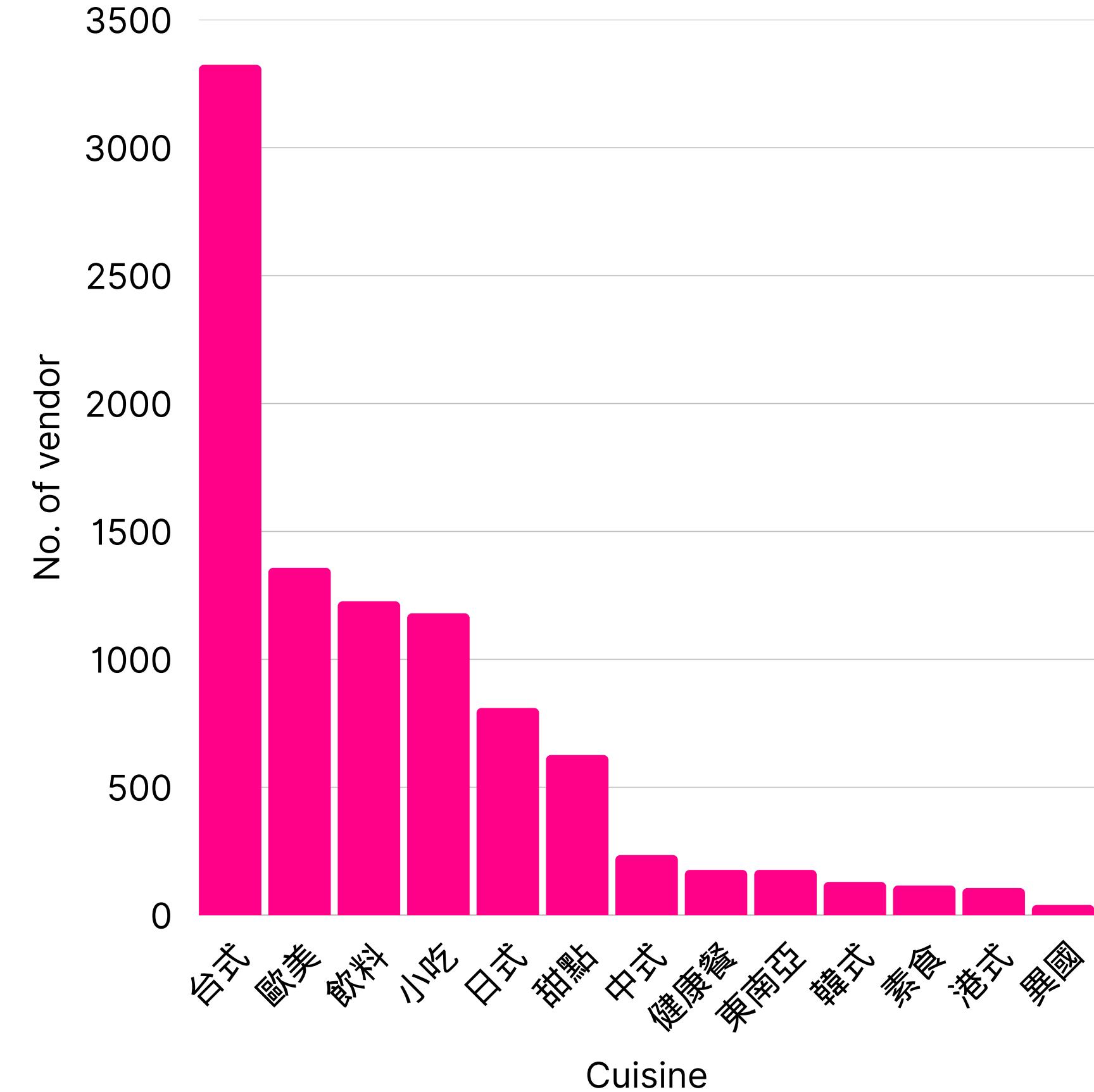
CUISINE



Orders by Cuisine



No. of Vendors by Cuisine



POTENTIAL CUISINE TYPES



Cuisine	Vendor No.	Order No.	Order per Vendor	
健康餐	176	8,111	46.1	✓
歐美	1,329	54,725	41.2	✓
台式	3,292	135,163	41.1	
素食	116	4,489	38.7	
小吃	1,161	44,700	38.5	✓
中式	233	8,920	38.3	
港式	101	3,807	37.7	
韓式	128	4,702	36.7	
東南亞	174	6,125	35.2	
日式	793	26,936	34	
飲料	1,201	40,029	33.3	
甜點	613	18,059	29.5	
異國	39	742	19	

CUISINE TYPES

1

中正區

TOP 6 ORDER

Cuisine	Vendor No.	Order No.
台式	263	9798
歐美	147	5471
飲料	147	3955
小吃	88	3232
日式	95	2557
甜點	79	1979

> App Display Order

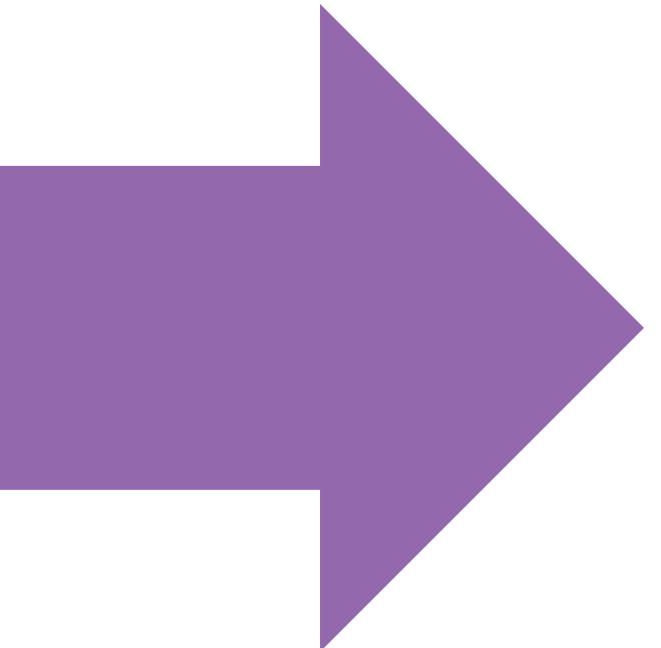
VENDOR PER ORDER

Cuisine	中正區	Total	Difference
健康餐	54.8	46.1	8.7
韓式	44.7	36.7	7.9
素食	41.5	38.7	2.8
港式	37.9	37.7	0.2
台式	37.3	41.1	-3.8
歐美	37.2	41.2	-4
中式	36.8	38.3	-1.5
小吃	36.7	38.5	-1.8
東南亞	34.9	35.2	-0.3
日式	26.9	34	-7.1
飲料	26.9	33.3	-6.4
甜點	25.1	29.5	-4.4
異國	15.2	19	-3.9

TOP 5 FOOD

Original result

	order_id
	name
甜不辣	34582
招牌鍋貼	28683
燙青菜	24728
酸辣湯	22024
玉米濃湯	17621



NEW RESULT

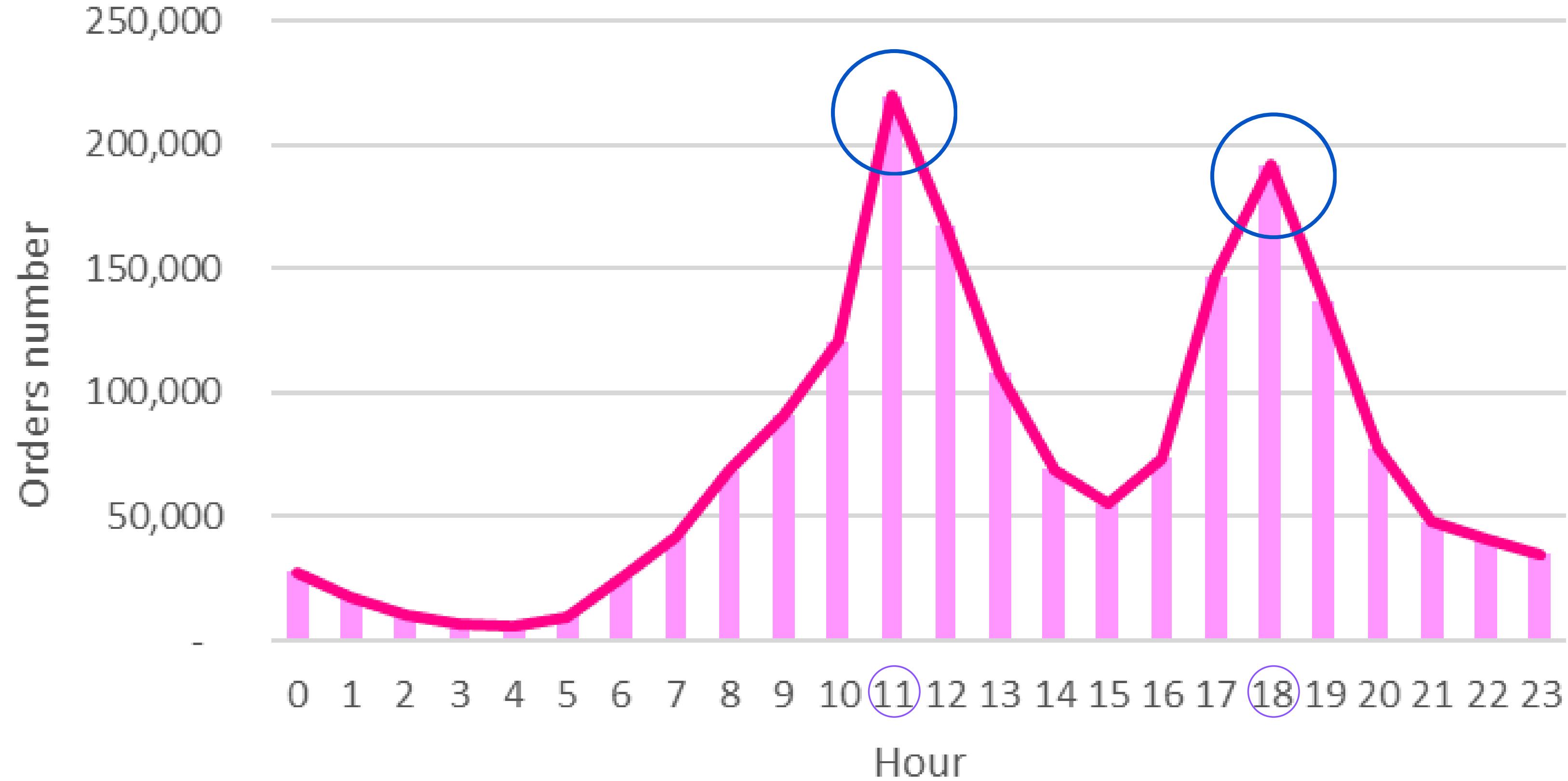
Food	No. of order
鍋貼	68,369
甜不辣	53,087
青菜	34,376
酸辣湯	29,622
玉米湯	21,702

>> Items contain keywords from the top 5 items

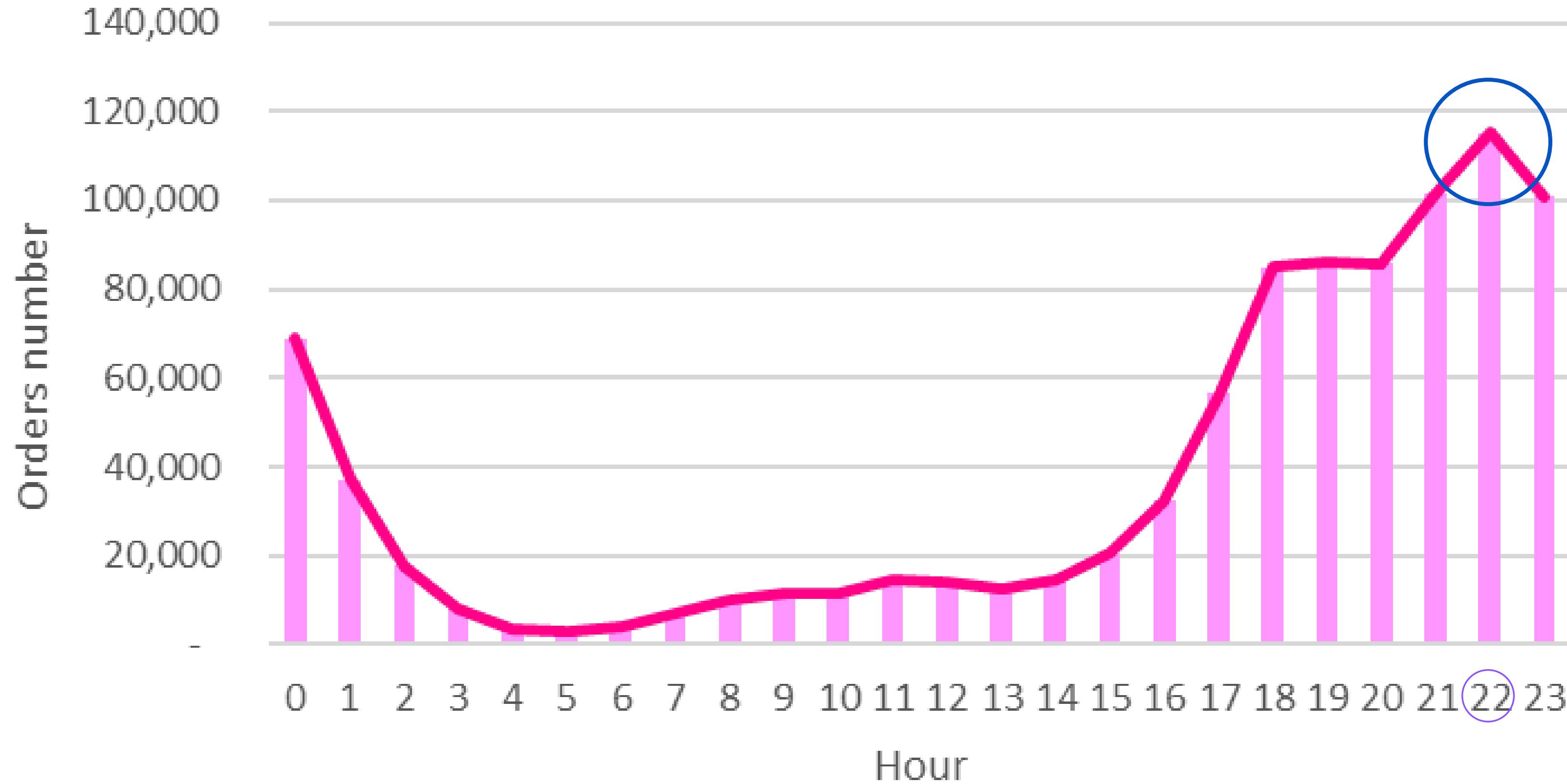
RELATIONSHIP TIME & CUISINE



台式 Cuisine Orders Over 24 Hours



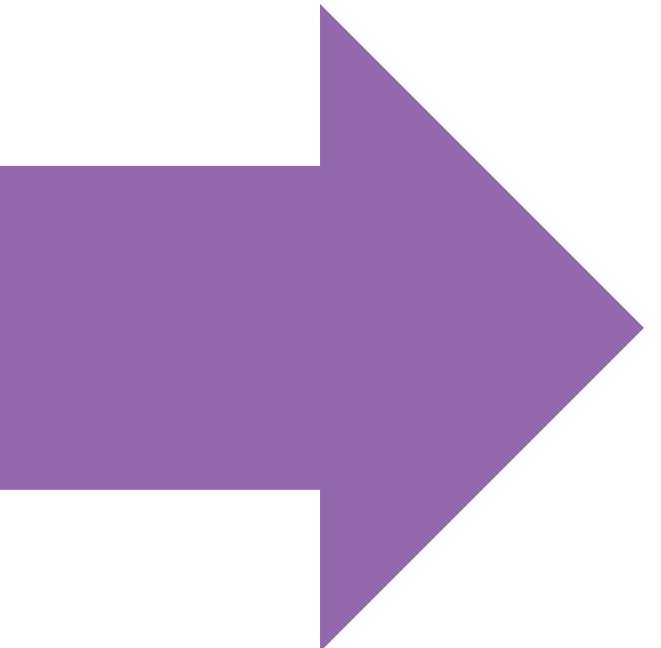
小吃 Cuisine Orders Over 24 Hours



TOP 5 FOOD

Original result

	order_id
	name
甜不辣	34582
招牌鍋貼	28683
燙青菜	24728
酸辣湯	22024
玉米濃湯	17621



NEW RESULT

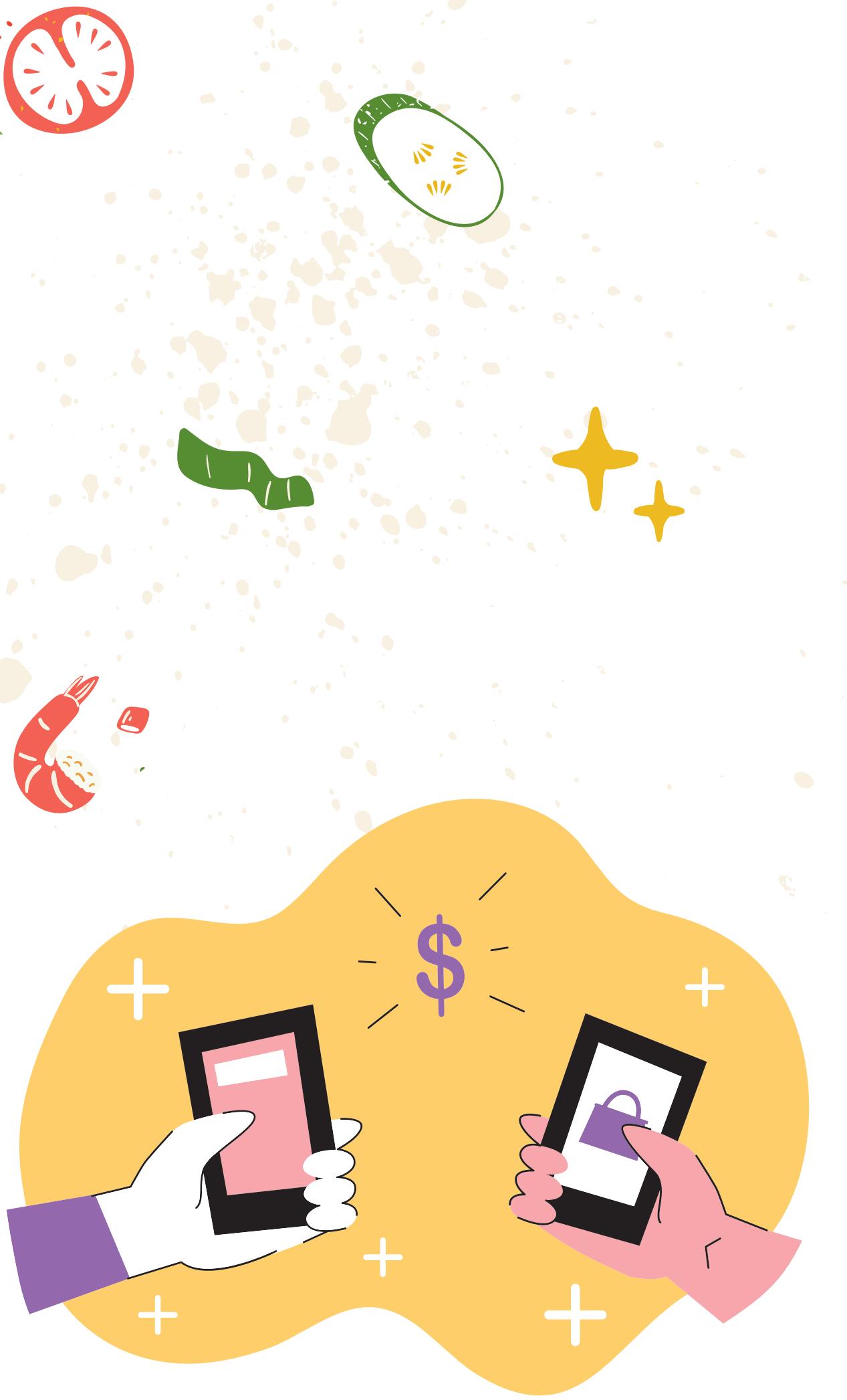
Food	No. of order
鍋貼	68,369
甜不辣	53,087
青菜	34,376
酸辣湯	29,622
玉米湯	21,702

>> Items contain keywords from the top 5 items

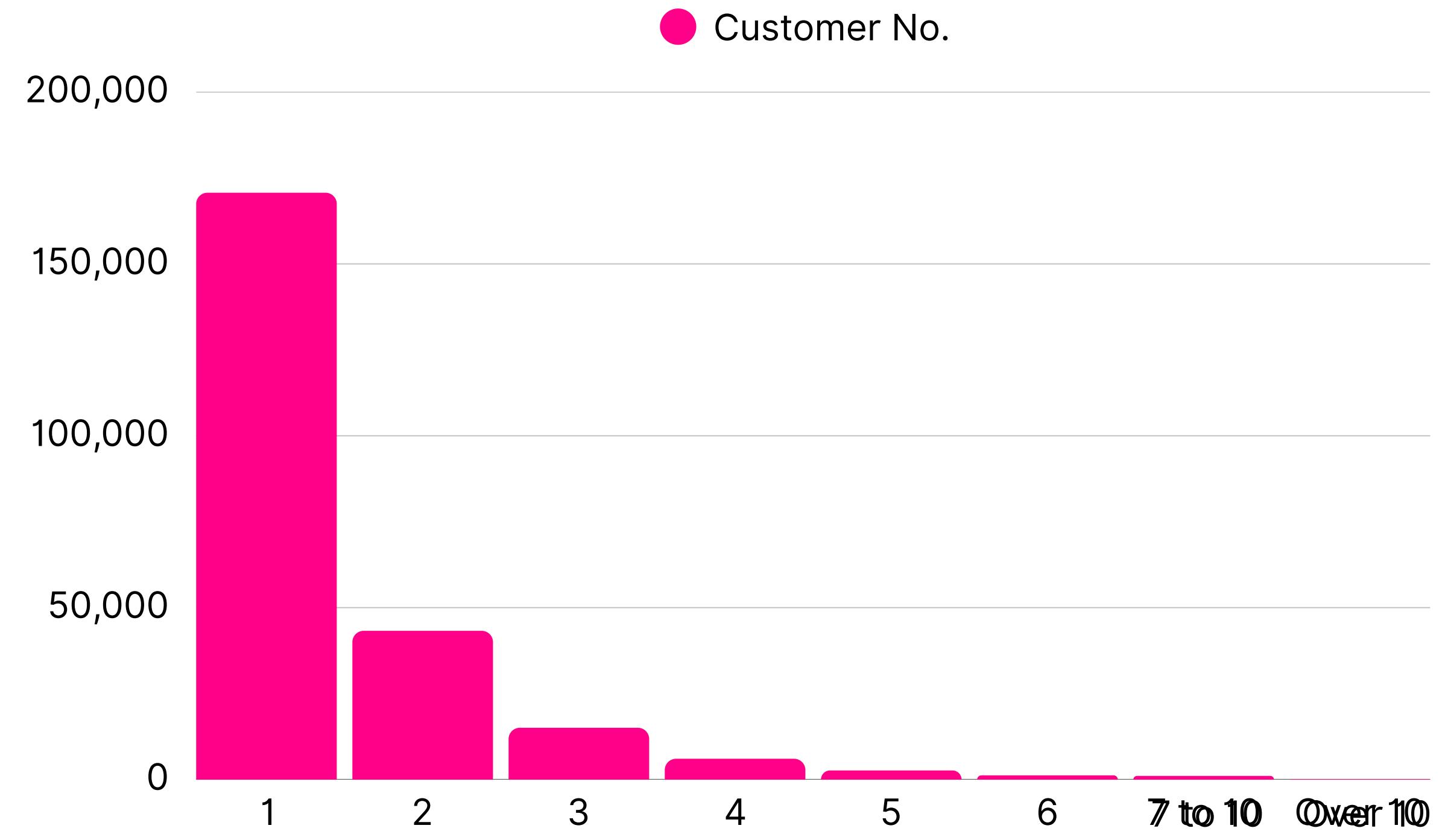
TOP 5 FOOD

Food	Breakfast (6:00 - 10:59)	Lunch (11:00 - 17:59)	Dinner (18:00 - 21:59)	Late-night meal (22:00 - 05:59)
鍋貼	4%	62%	31%	3%
甜不辣	2%	20%	41%	37%
青菜	5%	54%	33%	7%
酸辣湯	4%	65%	28%	2%
玉米湯	10%	61%	26%	3%

ORDER

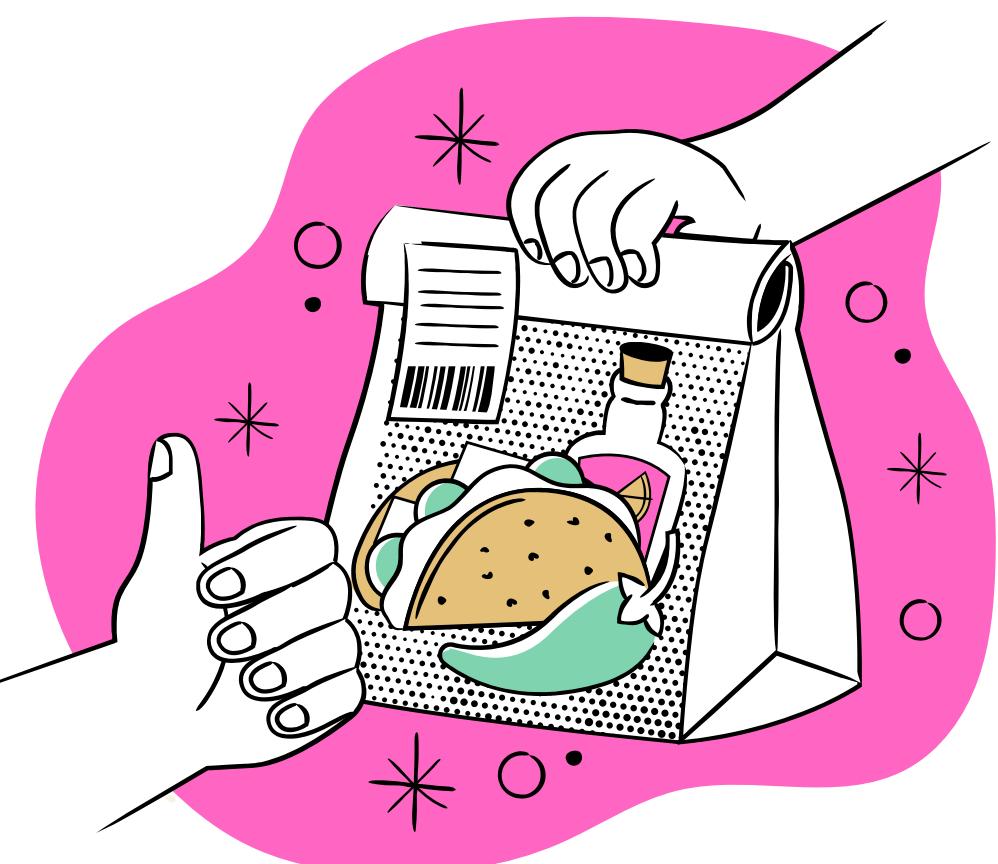
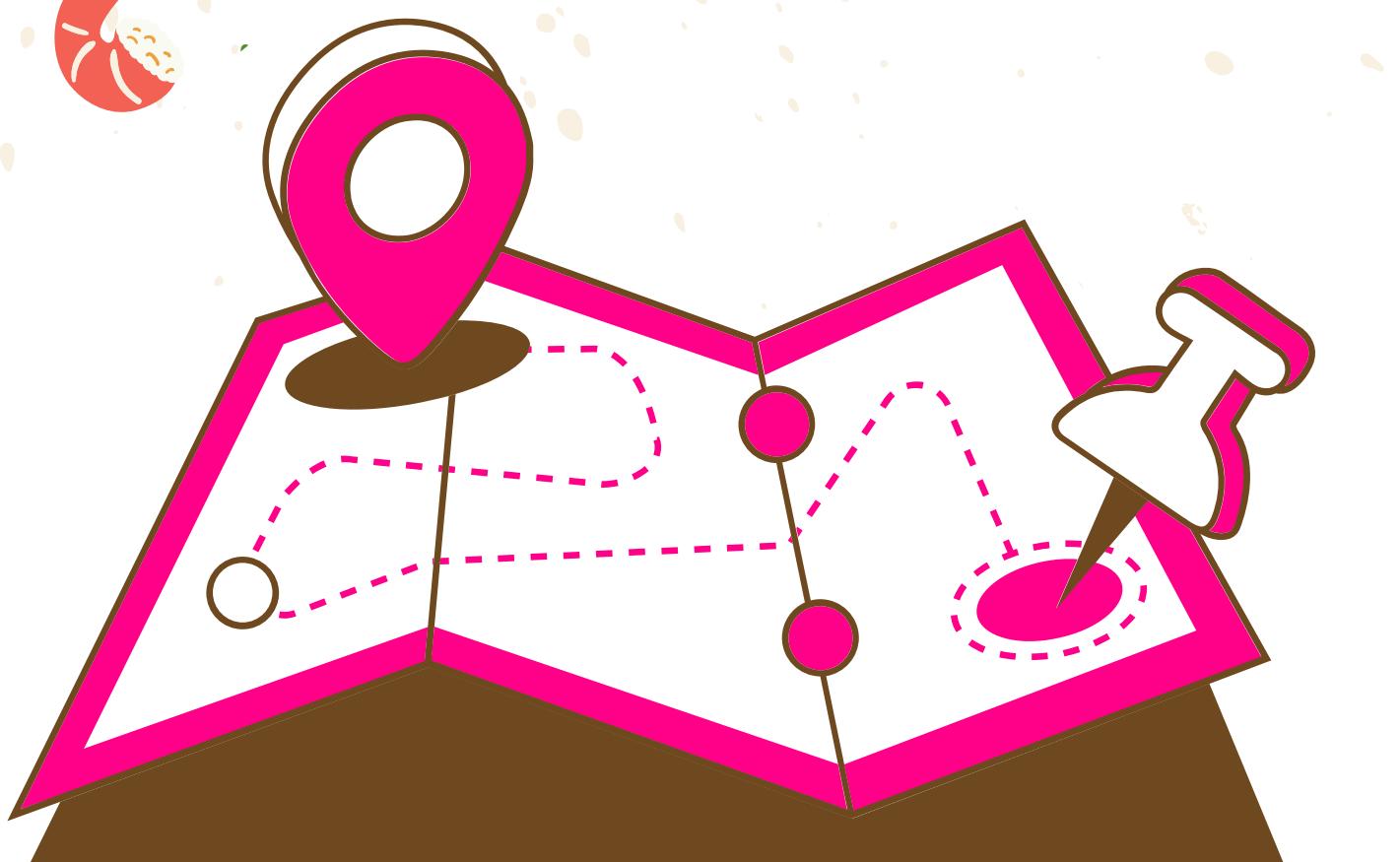


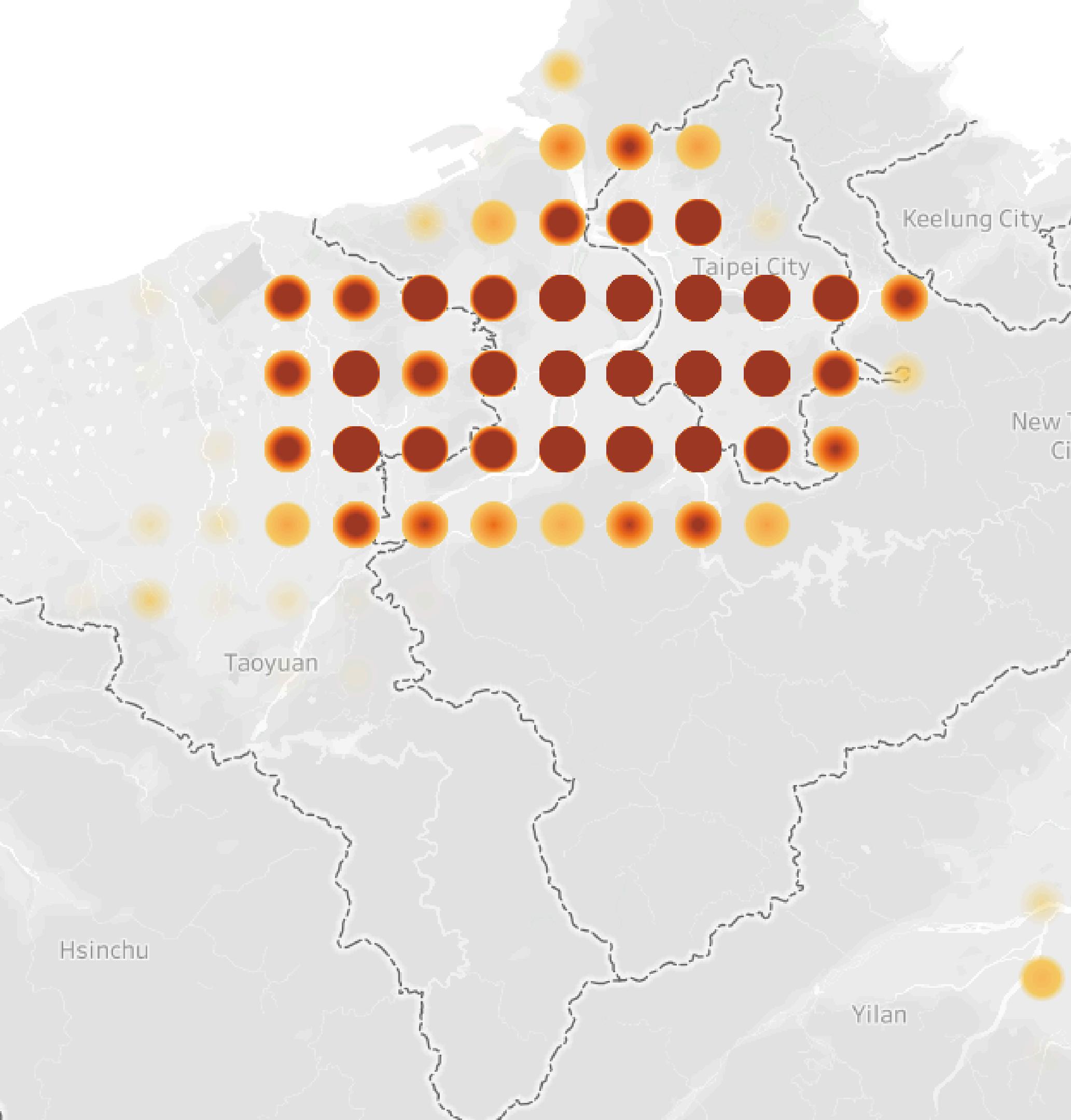
Order No.	Customer No.
1	170,705
2	43,260
3	15,055
4	6,041
5	2,640
6	1,219
7 to 10	1,056
Over 10	101



>> *Client comment, delivery time
>> App/ EDM discount notification

LOCATION

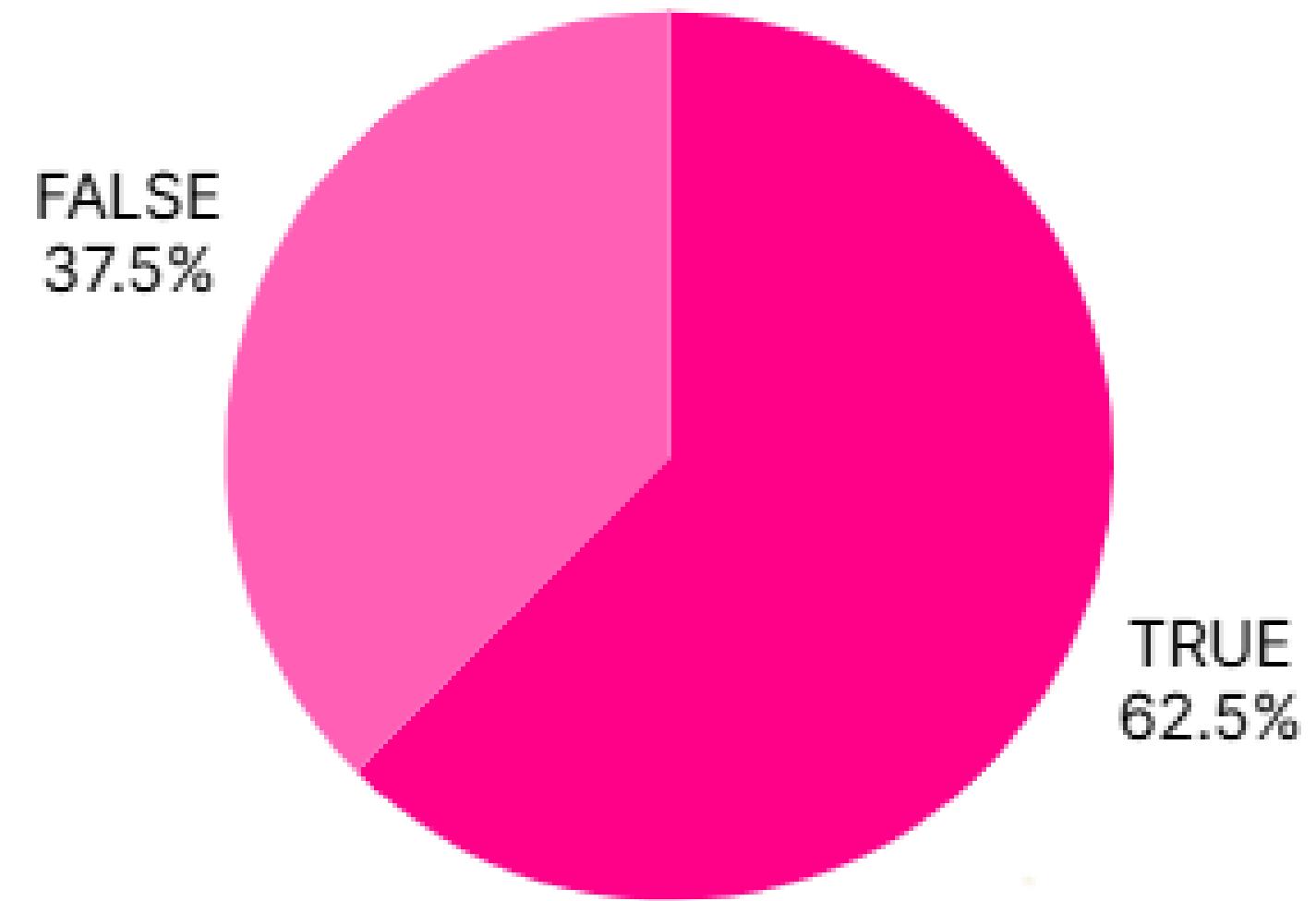




Location	Customer	Order	Vendor
中正區	22,741	32,503	984
中山區	21,027	30,411	838
桃園區	20,760	29,046	813
三重區	18,809	27,670	769
萬華區	17,372	25,355	646
新莊區	16,176	23,265	756
永和區	15,252	21,825	675
信義區	13,609	19,415	653

CUSTOMER-STORE LOCATION

Same location	Order No.
TRUE	222,736
FALSE	133,773



Same District	Order No.
TRUE	232,173
FALSE	124,336

District diff.
+/- 3%, 9K

OVER 50% CUSTOMER-STORE LOCATION MISMATCH

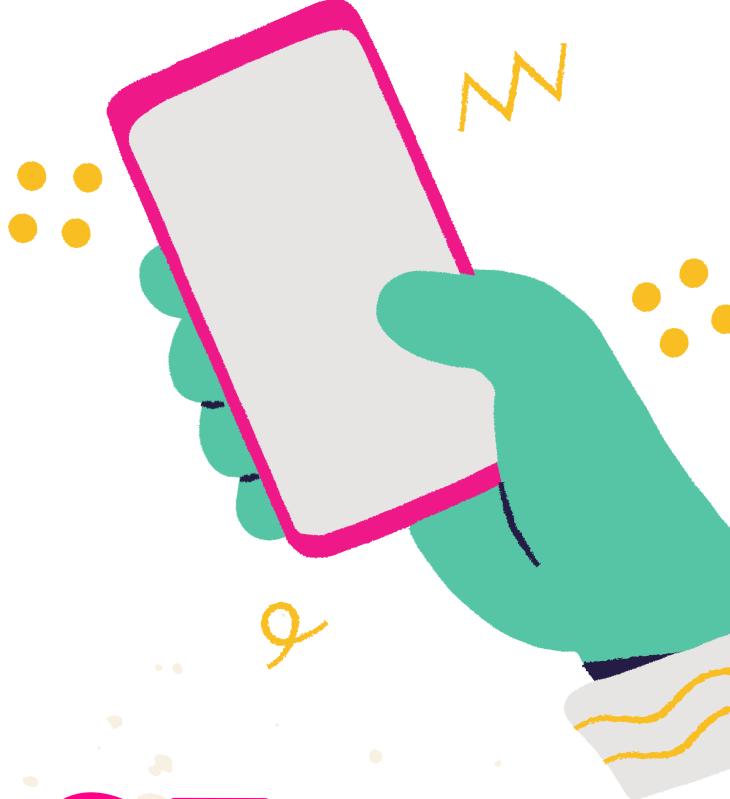
Location	Diff District%	Customer No.	Order No.	Vendor No.
泰山區	61%	7,777	11,103	174
蘆竹區	64%	4,091	5,337	56
樹林區	79%	2,796	3,875	54
新店區	100%	1,800	2,299	NaN
八德區	100%	1,485	1,785	NaN
南港區	84%	1,462	2,094	14
龜山區	98%	1,158	1,556	2
北投區	100%	1,088	1,416	NaN
汐止區	100%	1,036	1,229	NaN

Ref information 中正區 Order no 32,503; Vendor 984

> **Vendor expansion**

Vendor showcase

ENHANCE USER EXPERIENCE THROUGH VENDOR DISPLAY OPTIMIZATION



VENDOR SHOWCASE

Customize strategy by per Vendor Level

	Primary Cuisine	Vendors Location	Order No.
284fee4f	健康餐	中正區	295
64ac731b	飲料	桃園區	257
60124287	小吃	內湖區	236
43e31ebb	健康餐	林口區	233
841549ce	小吃	松山區	224
fed2a0ad	韓式	中正區	207
0fdc444d	飲料	桃園區	198
7897c864	小吃	五股區	198
8ea03224	台式	新莊區	197
957604c4	歐美	土城區	197



Vendor showcase 1

健康餐. 中正區



VENDOR SHOWCASE 1

	Primary Cuisine	Vendors Location	Order No.
284fee4f	健康餐	中正區	295

70%

207/297

of orders contain **only ONE** food item.

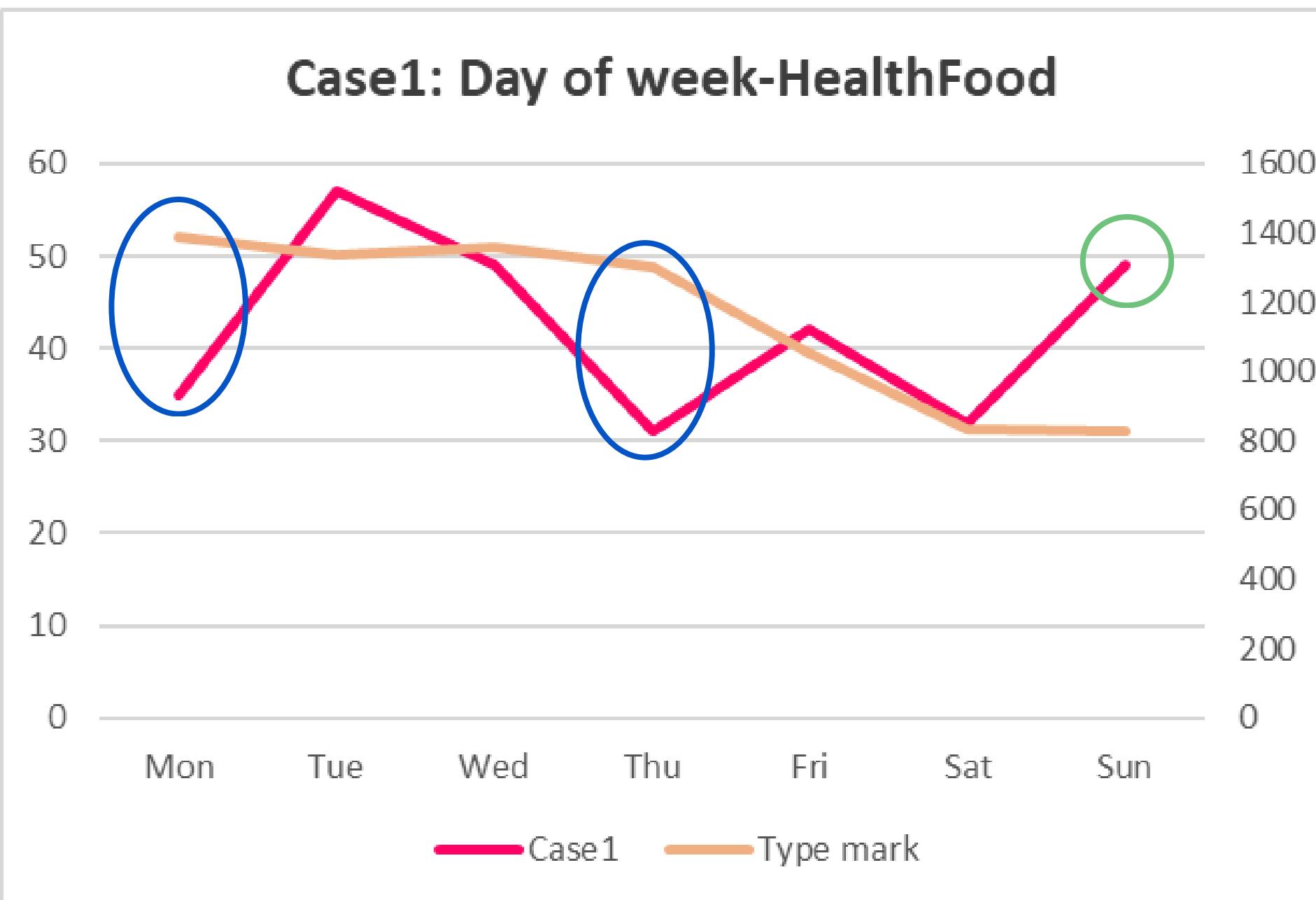


	Order No.	%
Only Food	264	89%
with drink	31	11%

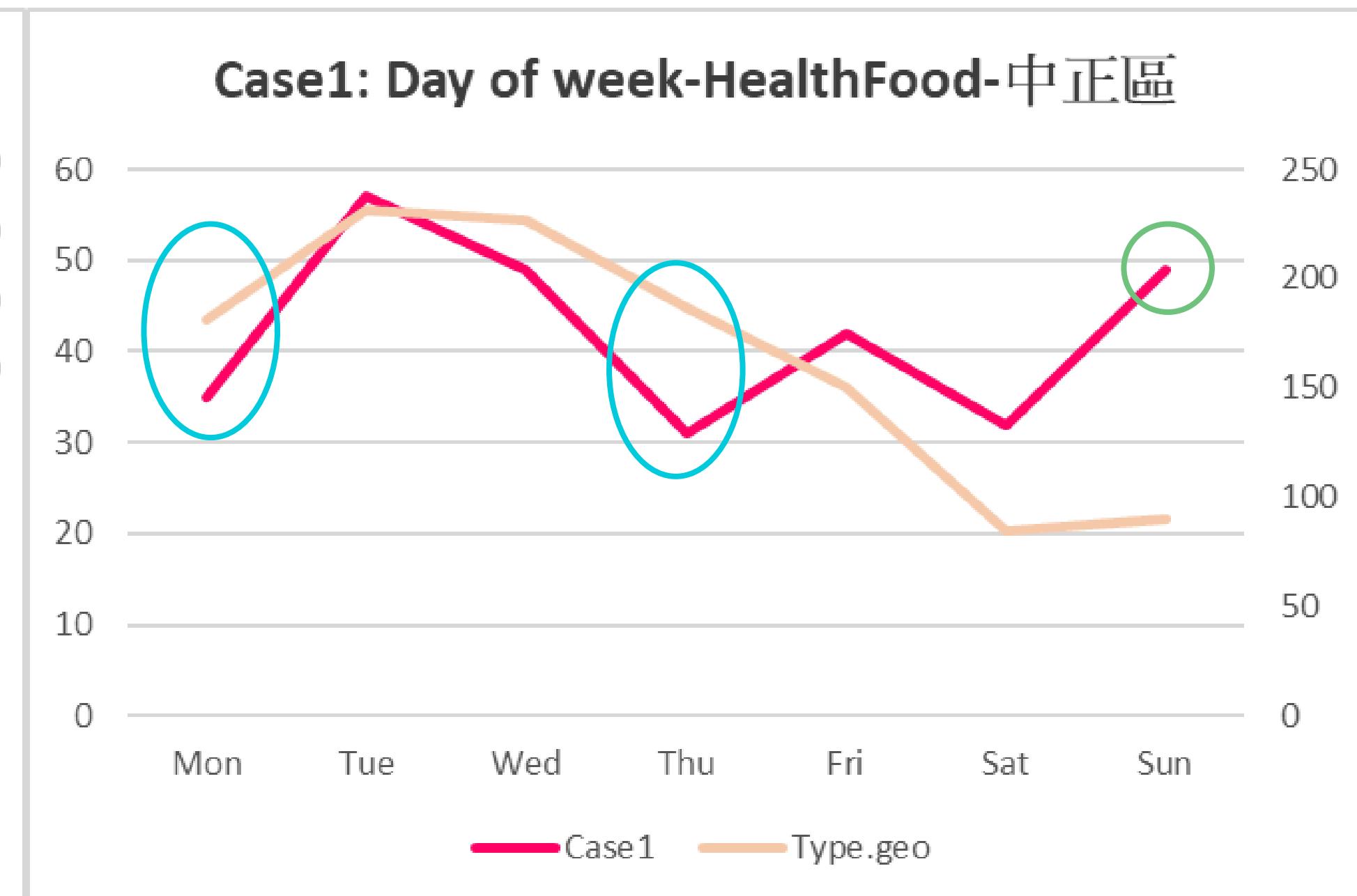
VENDOR SHOWCASE 1

	Primary Cuisine	Vendors Location	Order No.
284fee4f	健康餐	中正區	295

Case1: Day of week-HealthFood



Case1: Day of week-HealthFood-中正區



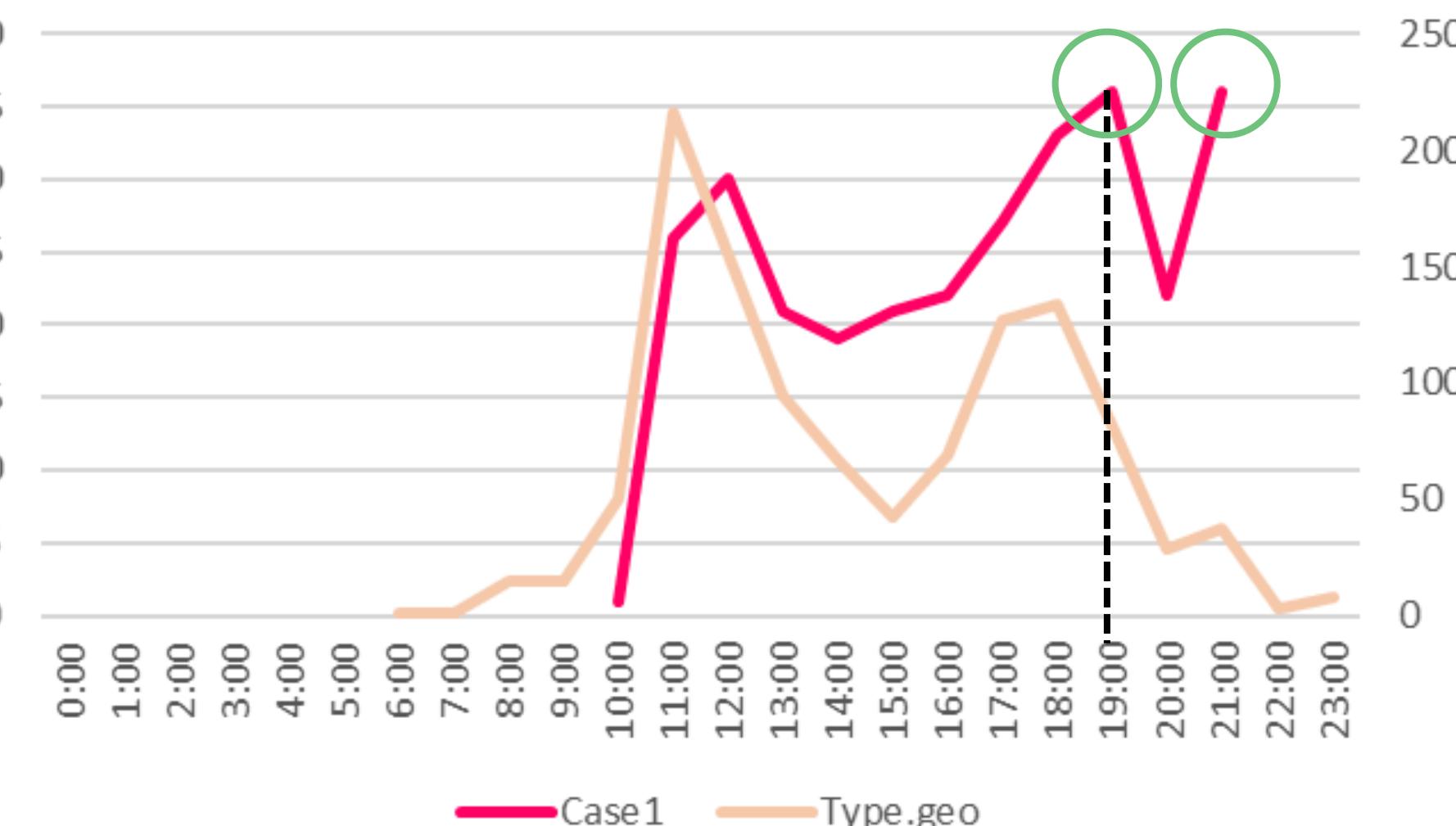
VENDOR SHOWCASE 1

	Primary Cuisine	Vendors Location	Order No.
284fee4f	健康餐	中正區	295

Case1: Hour-Health



Case1: Hour-Health_中正區



VENDOR SHOWCASE 1

- **Showcase 1 Vendor A/B testing**
 - Show drink option after selected food
 - compare with Other Health Vendor status
 - Mon, Thu show more health food for target audience
- **Other restaurant**
 - Try 19:00-21:00



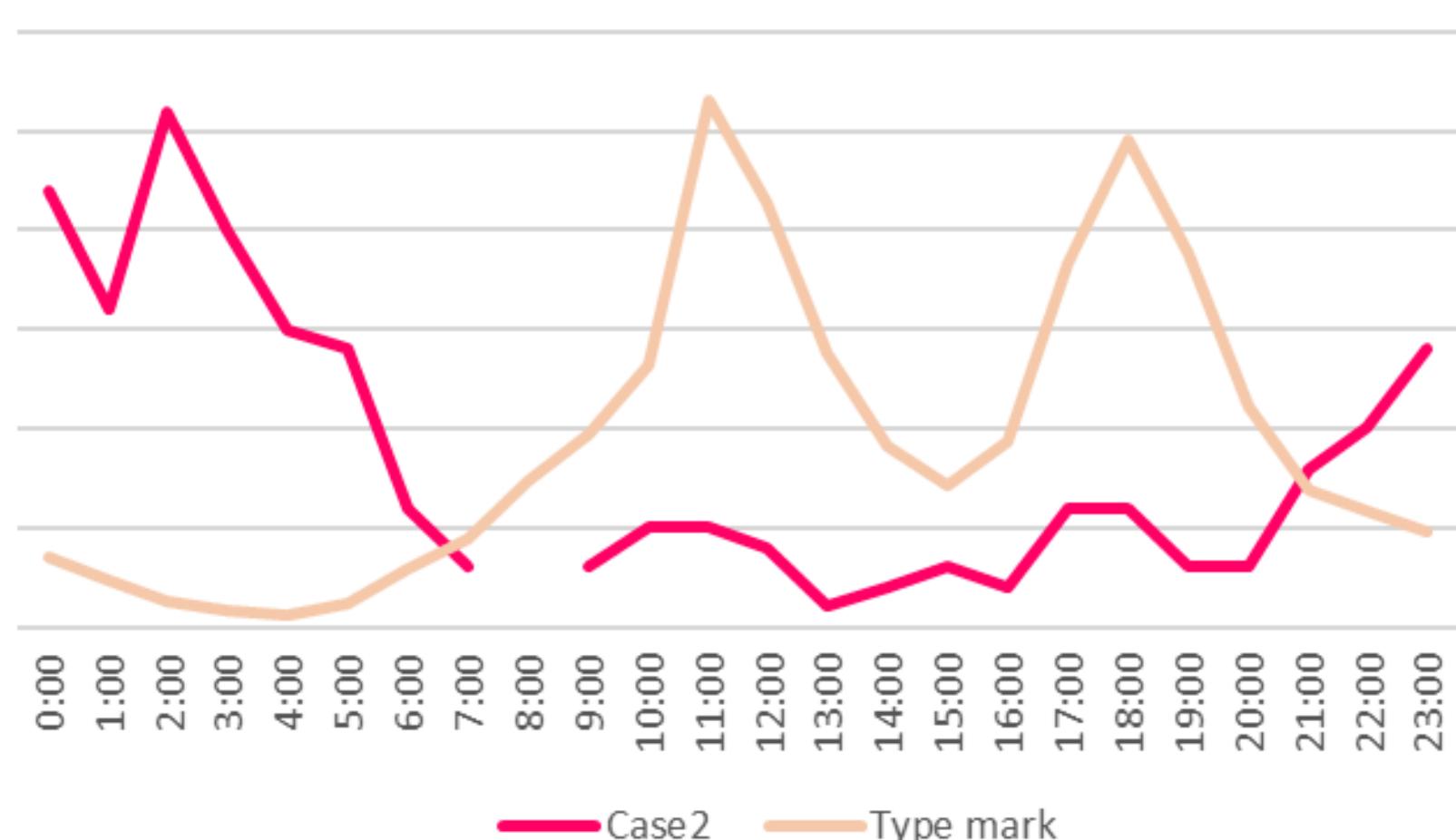
Vendor showcase 2

台式 . 新莊區

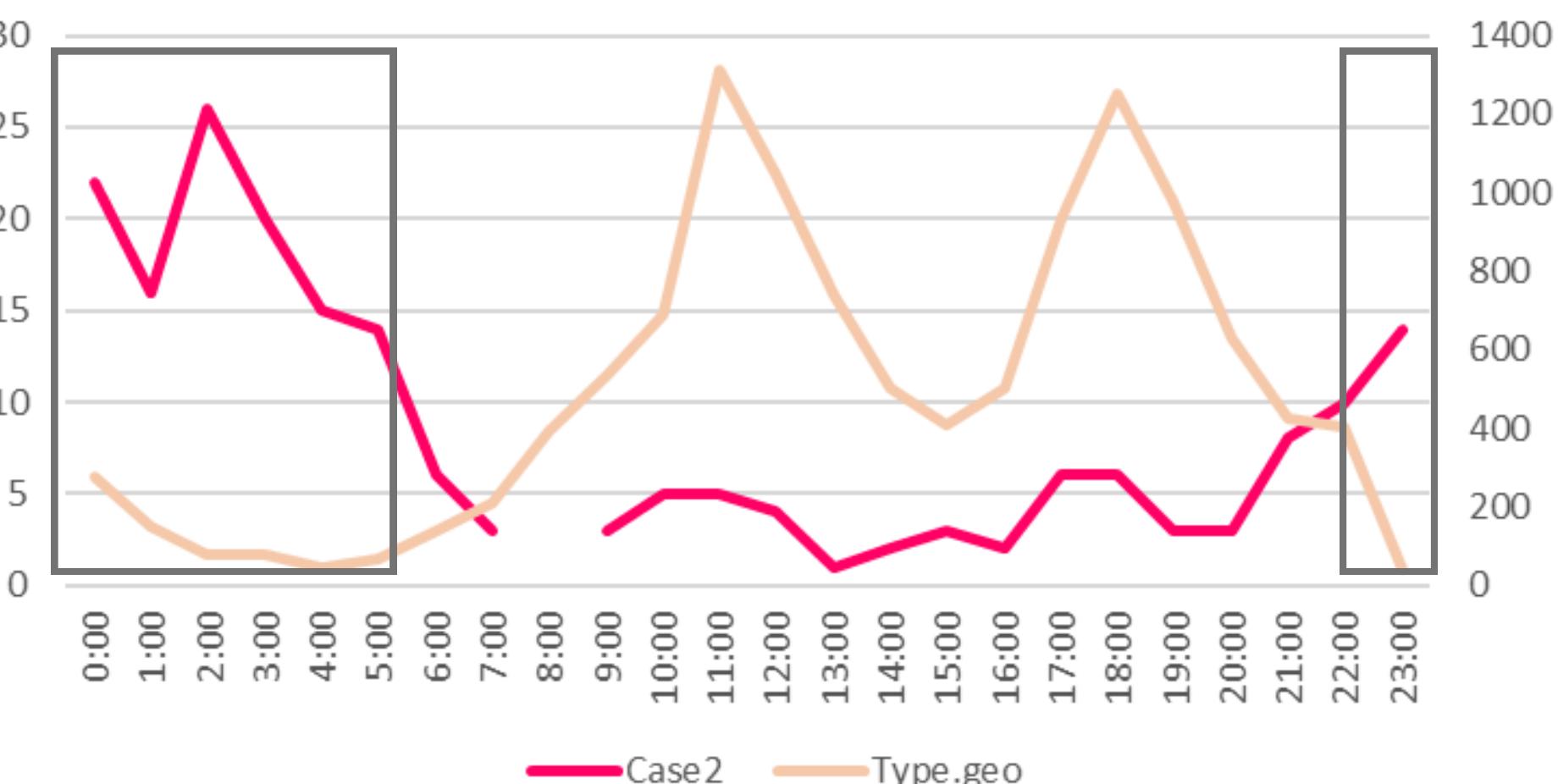
VENDOR SHOWCASE 2

	Primary Cuisine	Vendors Location	Order No.
8ea03224	台式	新莊區	197

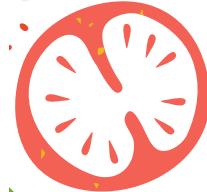
Case2: Tw food



Case2: Tw food -新莊區



22:00-5:00



SUPPLIER SHOWCASE 2

	Primary Cuisine	Vendors Location	Order No.
8ea03224	台式	新莊區	197

Only 573 TW restaurant open 0-5am

17% 573 / 3292

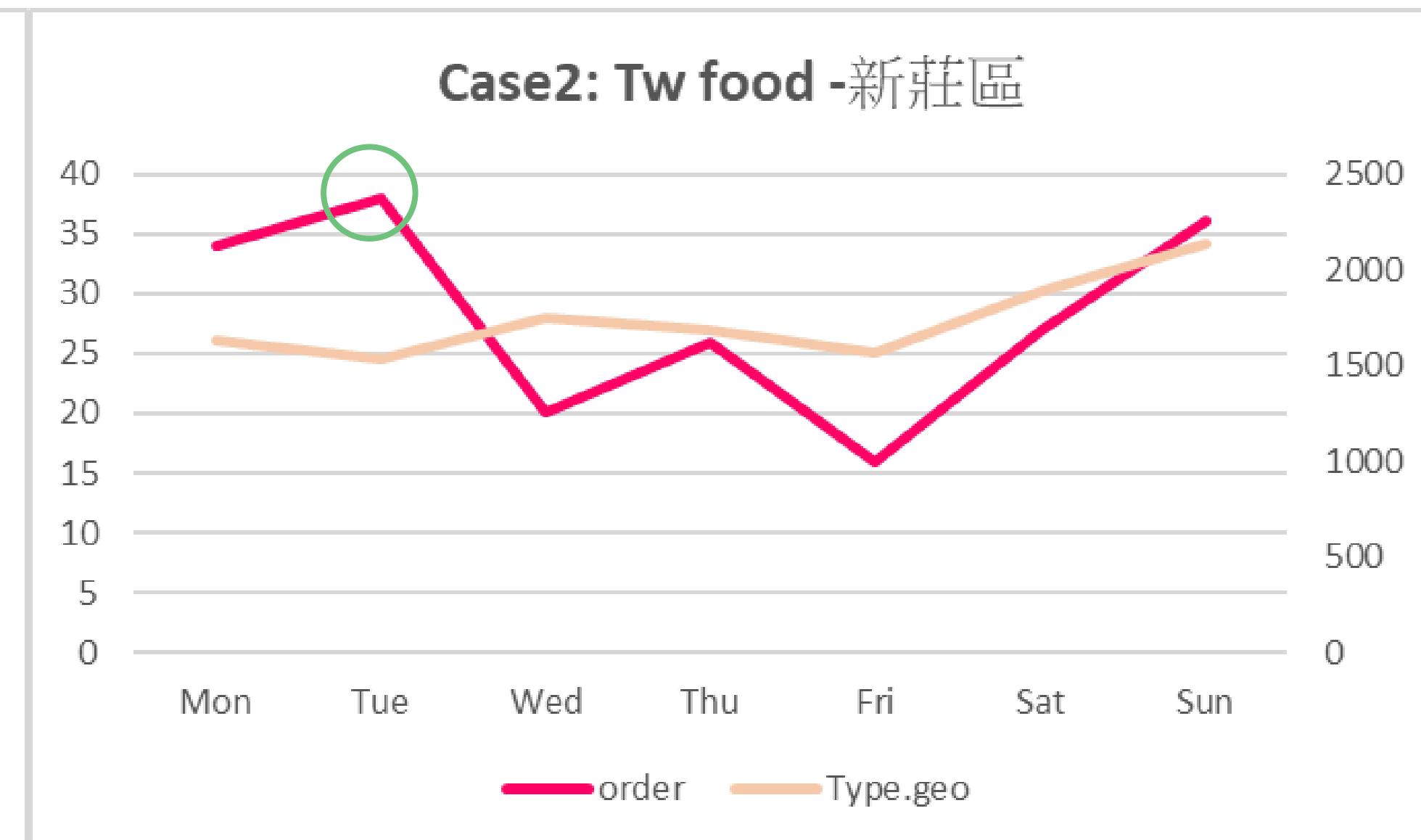
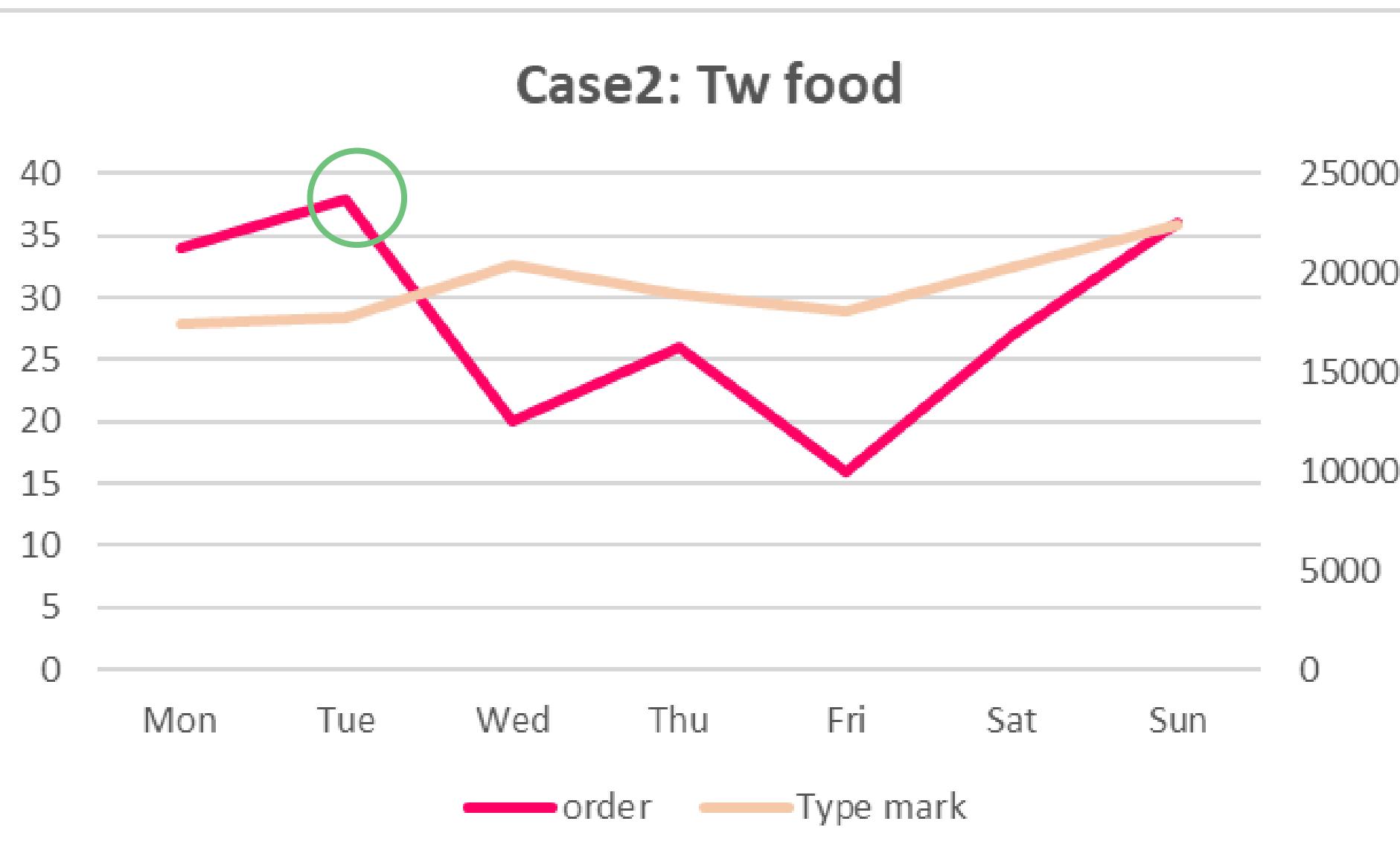
170 TW restaurant order number

their late-night hours (10 PM - 5 AM) more than during the day (6 AM - 9 PM)

30% 170 / 573

VENDOR SHOWCASE 2

	Primary Cuisine	Vendors Location	Order No.
8ea03224	台式	新莊區	197



SUMMARIES & STRATEGIC PLANNING



CUSTOMER BEHAVIOR

1. insert the overview on peaking time, types, Geo top1 etc

Day of week	No. of order
Monday	13.80%
Tuesday	13.48%
Wednesday	14.03%
Thursday	13.66%
Friday	14.26%
Saturday	14.95%
Sunday	15.81%

Location	Customer	Order	Vendor
中正區	22,741	32,503	984
中山區	21,027	30,411	838
桃園區	20,760	29,046	813
三重區	18,809	27,670	769
萬華區	17,372	25,355	646
新莊區	16,176	23,265	756
永和區	15,252	21,825	675
信義區	13,609	19,415	653

MARKETING

1. Observation: Many Clients using the service ONLY ONCE

- a. Solution
 - i. EDM
 - ii. Discount promotion message
 - iii. Rearrange food option based on geographic statistic differences

2. Observation: Top 5 Food / Vector showcase insight

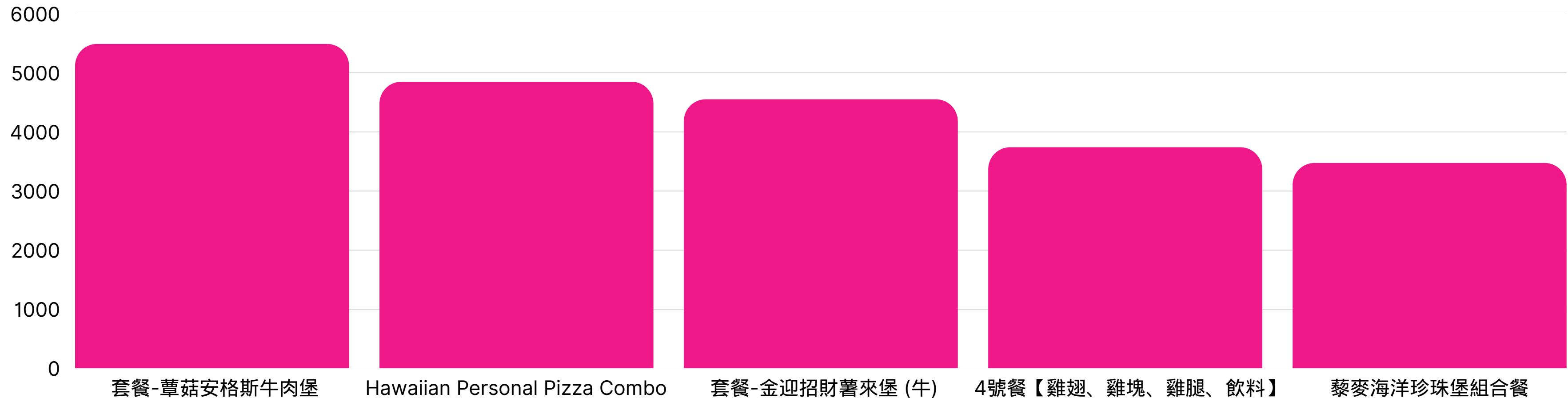
- a. App showing ordering (A/B testing)
 - i. Preview restaurant page: ranking engines
 - ii. Restaurant order page: recommend items

APP SHOWING ORDERING: RESTAURANT ORDER PAGE

TOP 5 transaction with drink set

● 套餐-蕈菇安格斯牛肉堡 ● Hawaiian Personal Pizza Combo ● 套餐-金迎招財薯來堡 (牛) ● 4號餐【雞翅、雞塊、雞腿、飲料】

● 黎麥海洋珍珠堡組合餐

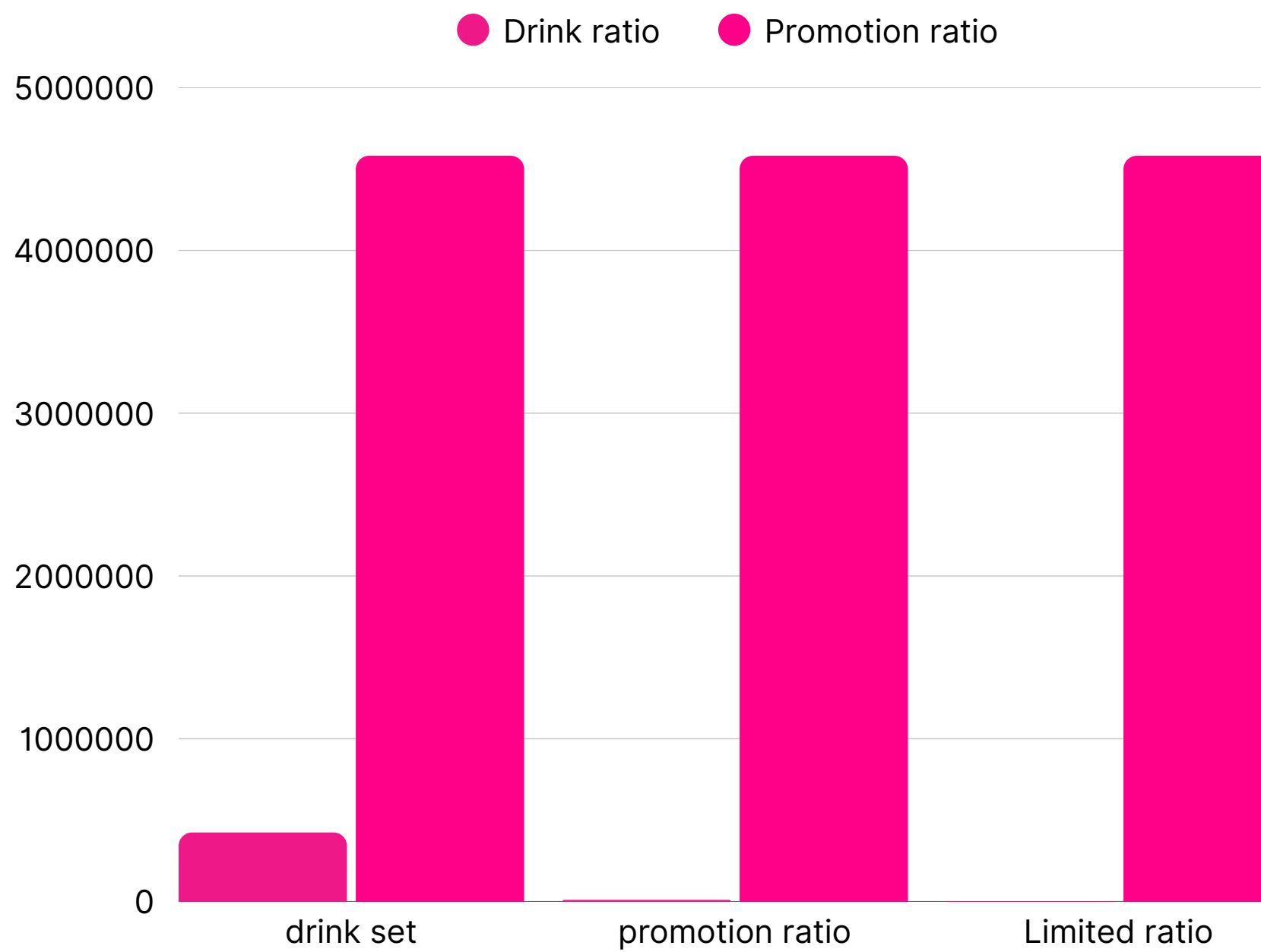


- All of the results are fast food
- Fast food restaurant always include drink set
- Promote more drink set option in different restaurant
- promotion tendency

BOTTLENECK IN OPTIMIZING FOODPANDA ORDER

With drink set/ Discount ordering is relevantly low in this dataset

- Define keywords that suggest food +drink or combo sets
- keywords-> 'combo', 'set', 'meal', 'drink', 'beverage', '套餐', '飲品', '餐'



424,186/4,581,346
9.25%

10,006/4,581,346
0.2%

2,464/4,581,346
0.05%

VENDOR- LOCATION

Observation: Over 50% Customer-Store Location Mismatch with few vendors

Restaurant types Expansion suggestion by distance
(need google search)

- 泰山區
- 蘆竹區
- 樹林區 (check most popular items/restaurant types)

Food preference for top 3 customer mismatch district

Top 5 food order in 新北市泰山區

count

primary_cuisine	name	time	count
小吃	甜不辣	14	201
台式	招牌鍋貼	10	186
小吃	甜不辣	15	182
		13	161
台式	招牌鍋貼	9	139
	酸辣湯	10	136
	招牌鍋貼	3	126
		11	122
小吃	甜不辣	12	120
		11	116

Food preference for top 3 customer mismatch district

Top 5 food order in 新北市泰山區

泰山美食資料庫

- 廟口早餐店 菜色 豬排翡翠抓餅 完整內容
- 廟口早餐店 菜色 翡翠蔥抓餅 完整內容
- 品卉越南 美食 菜色 牛肉河粉 完整內容
- 阿珍越南 美食 -臻辛麵對 菜色 越南牛肉河粉 完整內容
- 阿姿豆花攤 菜色 芋圓挫冰 ...
- 阿文魯肉飯 菜色 魯肉便當 ...
- 明志路美寧街附近排骨麵 菜色 招牌紅燒排骨麵 ...
- 余家鹽酥雞 菜色 鹽酥雞

泰山美食餐廳

- 彩京苑- 丽京栈酒店 4.8. (5 則評論) ...
- 大块牛排 5.0. ...
- Dazzler's British Beach Cafe. 4.7. ...
- 生活小事餐酒館 4.7. ...
- 泰山瓮缸鸡 (1 則評論) ...
- Tai Xing Live Seafood. (1 則評論) ...
- 真好麦中华料理餐厅 4.1. ...
- 丰米便当- 泰山店 5.0.

[更多項目...](#)



Tripadvisor

<https://www.tripadvisor.com.tw> , ... , 台灣 , 新北 , 泰山 :



10 大泰山最佳美食餐廳(2025) - Tripadvisor

- limited food choice
- Seek for more collaboration with “小吃” food type

Food preference for top 3 customer mismatch district

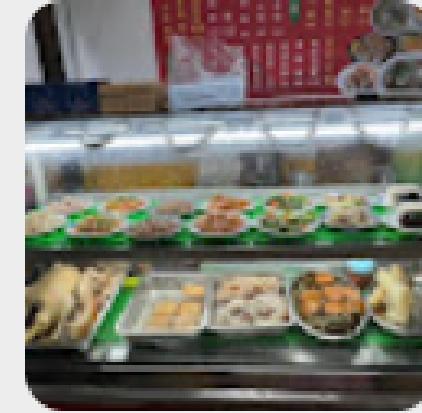
Top 5 food order in 新北市蘆竹區

志明肉羹/蘆竹美食/蘆竹小吃/附近美食/必吃/吃的/麵食

4.8 ★★★★★ (66) · \$1-200

中國菜 · ⚡ · 南山路二段395號

暫時關閉



From 200 result from google maps

阿國好之味鵝肉小吃

4.5 ★★★★★ (1,291) · \$200-400

熟食店 · ⚡ · 山林路一段26-2號

已打烊 · 開始營業時間：11:00



堂食 · 外賣自取 · 送貨/外送服務

烹鼎鵝肉

4.6 ★★★★★ (863) · \$1-200

小吃攤 · 南祥路13號

已打烊 · 開始營業時間：11:00



堂食 · 外賣自取 · 送貨/外送服務

香香傳統麵食館

4.5 ★★★★★ (316) · \$1-200

麵店 · 南竹路14巷

已打烊 · 開始營業時間：週五07:00



堂食 · 外賣自取 · 不設外賣速遞

食在點

4.5 ★★★★★ (210) · \$1-200



Food preference for top 3 customer mismatch district

Top 5 food order in 新北市樹林區

primary_cuisine	name	time	count
台式	燙青菜	10	50
	招牌鍋貼	11	48
飲料	L	5	43
台式	燙青菜	3	42
小吃	雞排	13	39
台式	酸辣湯	4	36
	招牌鍋貼	10	36
小吃	甜不辣	14	35
台式	韓式辣味鍋貼	10	34
小吃	雞排	14	34

<https://www.klook.com/zh-TW/blog/shulin-foods-recommend/>

Food preference for top 3 customer mismatch district

Top 5 food order in 新北市樹林區

From 200 result from google maps

兩點五元水餃

4.5 ★★★★★ (649) · \$1-200 · 餃子

台灣新北市樹林區

已打烊 · 開始營業時間：週四09:30

堂食 · 路邊自取 · 不設外賣速遞



<https://www.klook.com/zh-TW/blog/shulin-foods-recommend/>

韓時 時尚韓式料理餐廳

4.7 ★★★★★ (625) · \$400-600

韓國菜 · ✅ · 千歲街52號

已打烊 · 開始營業時間：週四11:30



堂食 · 外賣自取 · 不設外賣速遞

札克鍋物 Za-ku Shabu Shabu

4.9 ★★★★★ (100) · \$400-600

火鍋 · ✅ · 育英街142號一樓

已打烊 · 開始營業時間：週四11:30



堂食 · 路邊自取 · 送貨/外送服務

極 黑家 A Yi 腿庫飯

4.3 ★★★★★ (2,317) · \$1-200

餐廳 · 俊英街106-1號

供應在地街頭美食的簡約小吃店

營業中 · 結束營業時間：23:00



堂食 · 外賣自取 · 送貨/外送服務

碳厚囍

4.3 ★★★★★ (757) · \$1-200

早午餐 · ✅ · 樹新路140號

已打烊 · 開始營業時間：週四06:30



堂食 · 外賣自取 · 送貨/外送服務

樹林4元 黑豬肉水餃店

4.3 ★★★★★ (475) · \$1-200

小吃店 · ✅ · 博愛街113號1樓

營業中 · 結束營業時間：02:00



堂食 · 外賣自取 · 不設外賣速遞

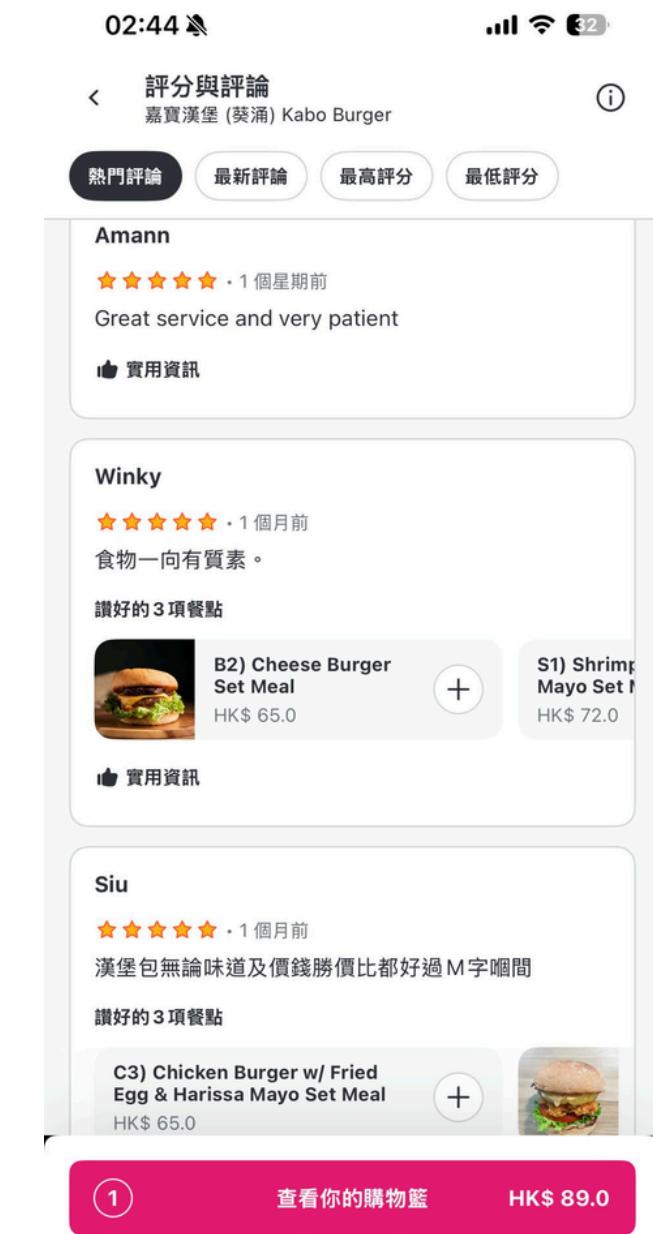
紫金閣素菜餐廳

4.4 ★★★★★ (933) · \$400-600



DATA LIMITATION

- Lack of some significant data
- price , user comment and delivery to track the customer behaviour
- “Client comment, delivery time” data, we can deeply analysis why 71% client only finish 1 order

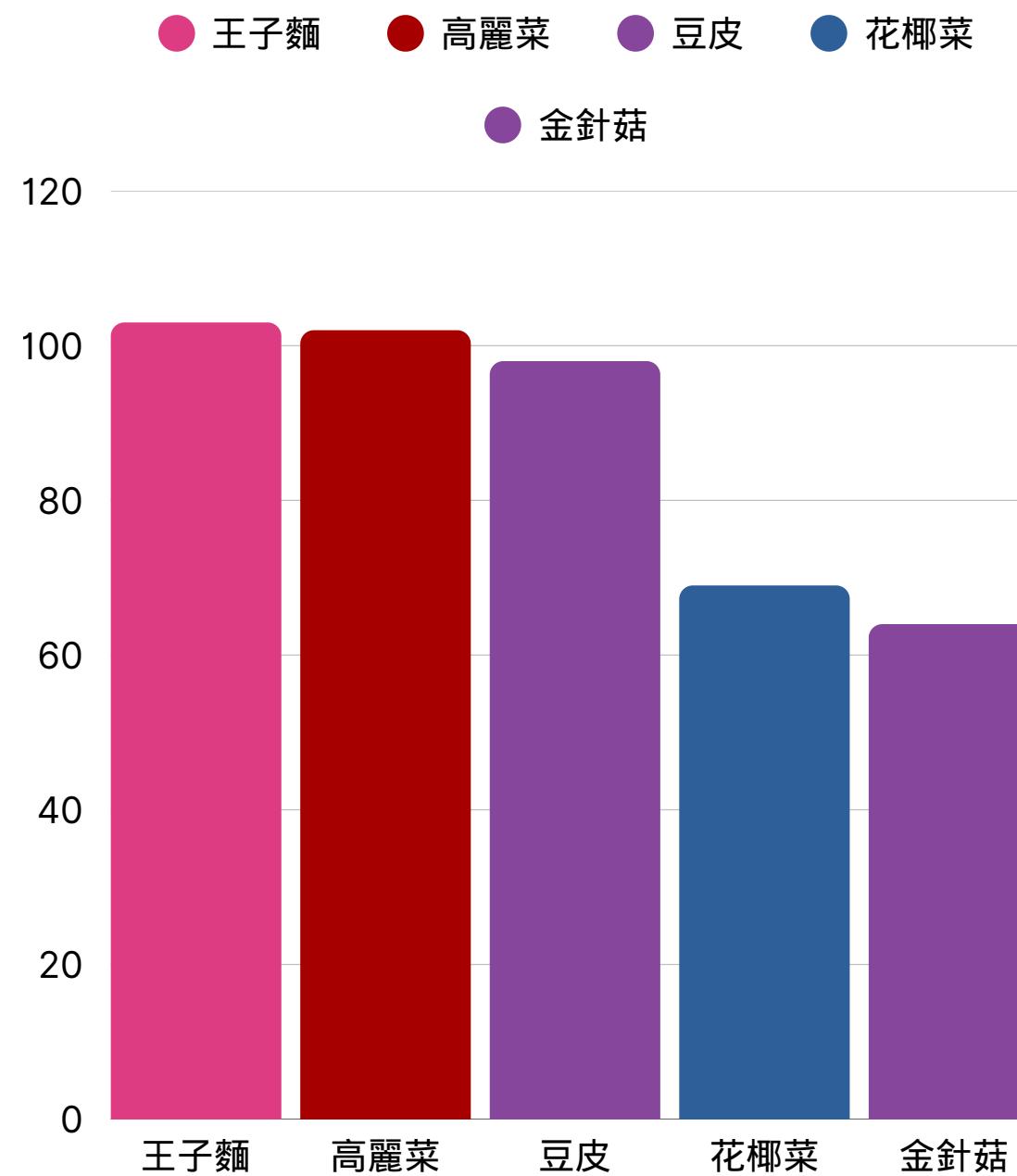


LIMITATION OF FOOD ORDERING

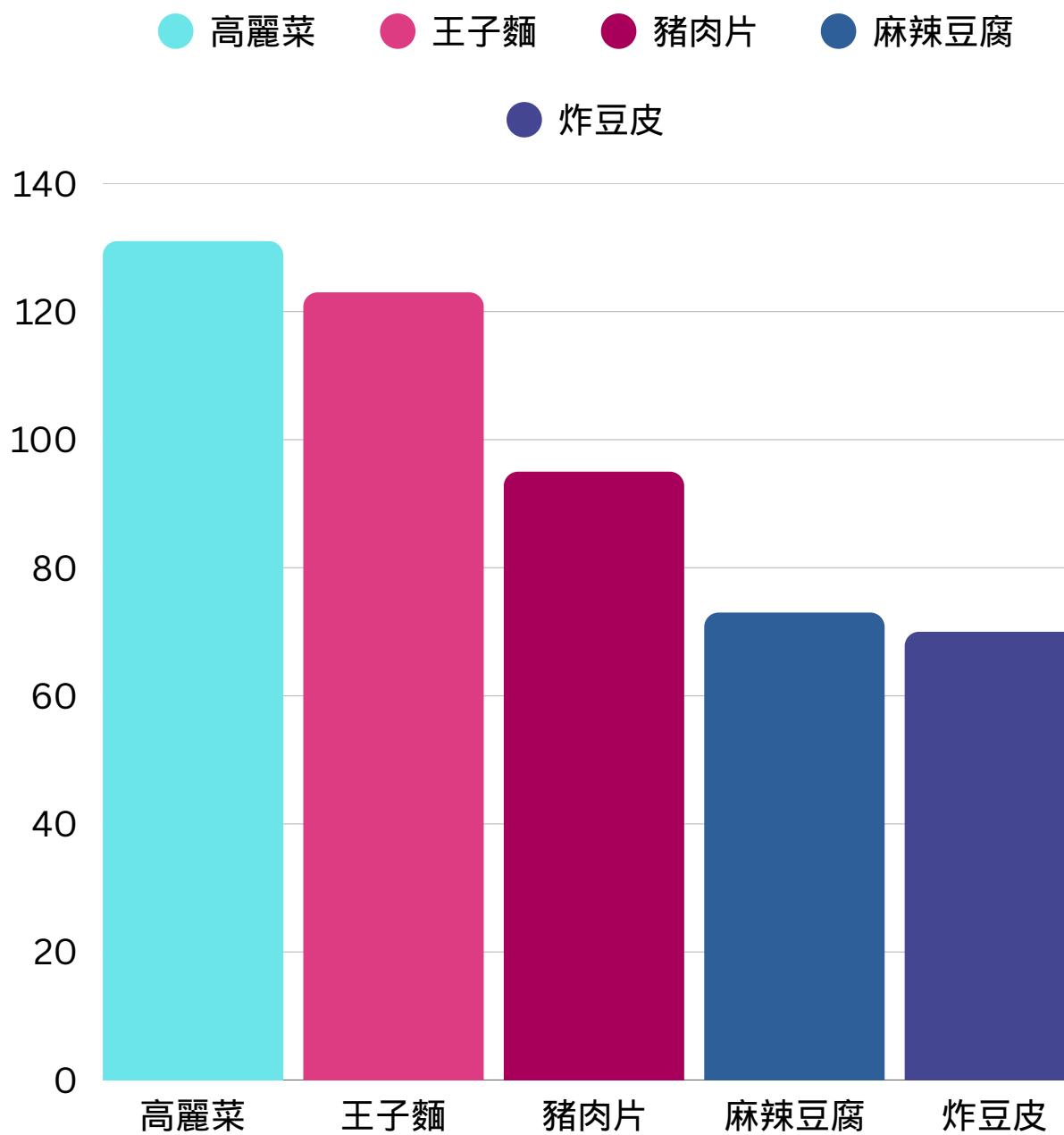


Inventory management: Food ordering from top 3 vendor transaction

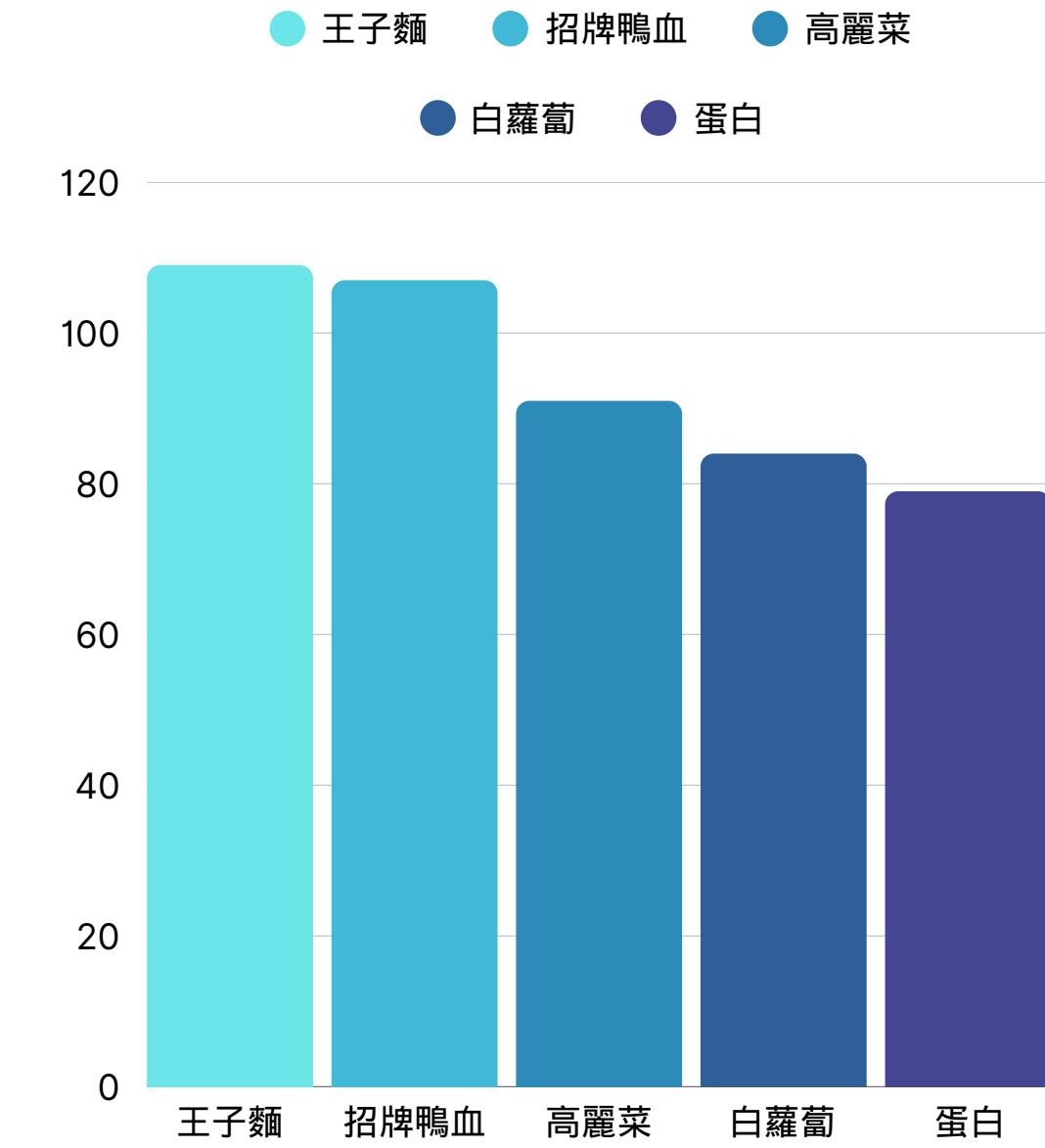
Top 1 vendor food ordering



Top 2 vendor ordering



Top3 food ordering





THANK YOU