Consumer's alternative choice of restaurant substitution

CRG
CENTRAL RESTAURANTS GROUP

ZEN
CORPORATION GROUP

MK
RESTAURANTS

MINOR
INTERNATIONAL

OISHI
GROUP
PUBLIC COMPANY LIMITED

SINGHA

1. Introduction

- Objective of the study : To define the market definition of the restaurant chain market and understand the factors that affected the customer behaviour toward the restaurant selection.
- Scope of study : Restaurant chain of Big corporates in Thailand (Central, Minor, and MK groups) and the expected of 300 to 350 set of data gathered from the online survey of all the customers resided in Thailand.
- Significance of Study : The result from this study can be used as a guideline for both restaurant businesses to develop their business model and government regulators to implement the policies effectively in accordance with the results from this research study.
- Limitation of Research : Time constraint , the Covid-19 situation, and the accuracy of the data gathered from the respondents because it was personal opinion

2. Literature review

The restaurants in Thai malls

By: Thansettakij, 2018

- The expansion of branches of Thai malls
- New strategy that make department stores as “ food destination “
- The increase of restaurants area

How do the restaurant chains group plan their restaurants?

By: Karen Glanz phD, 2007

- There are 6 main restaurant chains
- Launching all types of restaurant that are on market demand
- Marginal profit is the key of making decision

2. Literature review

The Japanese restaurant in Thai malls By: Pitsinee, 2019

- Thailand is the largest Asean market for Japanese food
- There are many Japanese restaurants that are conducted by the big food chain groups
- the growth of the market share that increase more than 10%
- Thai consumer behavior toward Japanese food is that they easily accept the Japanese food

The North-east Thai restaurants in Thai malls By: Marketeer, 2019

- Esan food has progressed in the food industry
- it can serve every lifestyle of Thai people and foreigners as well

2. Literature review

The factors that make consumer's restaurant selection

By: **Frank Cullen**

Quality of the food

- Hygiene
- Taste

Restaurant's service

- Environment
- Service
- Comfort
- Noise
- Queue
- Parking

2. Literature review

The evaluation of waiting time

By: Piyush Kumar, Manohar U. Kalwani,Maqbool Dada

Waiting time

creates dissatisfaction

Reduce
waiting time

Waiting time guarantee

brings back satisfaction

3. Industry Background

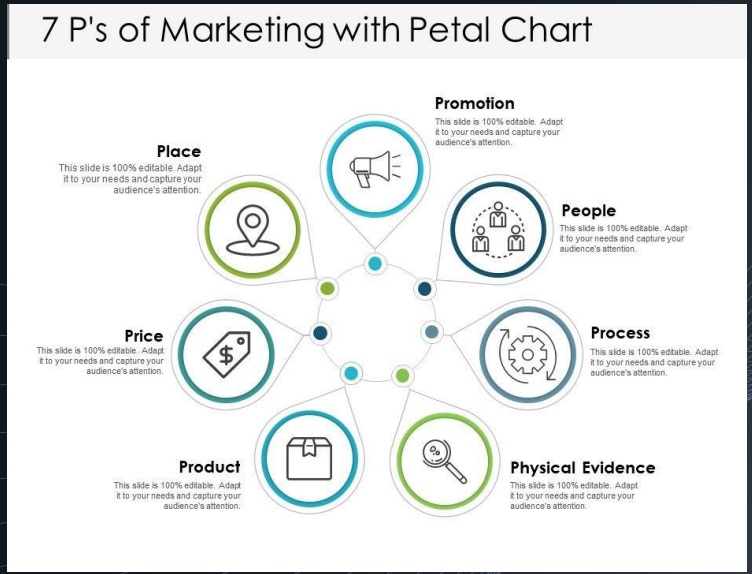
- Total market value of 400 billion Baht

- There was 61,760 restaurants registered in the system (2012)
  - Independent restaurants
  - Franchise

- 6 Major Players : Singha Corporation, Oishi Group, Minor International, MK restaurant group, Zen orporation, and Central restaurant group
- The top 5 restaurant type that has the highest market share (400 billion Baht)
  - Cafe : 20 billion Baht
  - Hot pot restaurant : 19 billion Baht
  -Fast food (Chicken) : 18.7 billion Baht
  -Japanese restaurant : 18 billion Baht
  -Somtum restaurant : 16 billion Baht

4. Theoretical framework

Marketing mix (7Ps)



SCP Paradigm

- **Market Structure**
  - Market Value of the Food Service Market
  - Major Players in the Market
  - Market Characteristics

- **Market Conduct**
  - Market Strategies
  - Trends
  - Innovations

- **Market Performance**
  - Growth rate and expected growth rate
  - Chained and Unchained restaurant

5. Methodology

- Research method : Online survey
- Type of data : Cross-sectional data
- Population: Men/Women Location: Bangkok and metropolitan region
- Samples : 603 online surveys

Factors that affect the alternative restaurant selection

1. Demographic factors Ex: Gender, Age, Occupation, Living province
2. Frequency factors Ex: Frequency of going to restaurant at mall, Frequency of eating fast food at malls, Frequency of eating Japanese food at malls
3. Lifestyle factors Ex: Taste, service, brand , who you usually go with

Survey Summary

Total of 603 responses

- Gender : Male : 107 persons , Female : 489 persons, Others : 7 persons

- Age : Lower than 20 (116 persons), 20-25 year old (395 persons), 26-30 year old (34 persons), 31-35 year old (11 persons), 36-40 year old (6 persons), 41-45 year old (5 persons), and higher than 45 (36 persons)

- Occupation : Student (390 persons), Private employee (123 persons), Government Officer (30 persons), Entrepreneur (22 persons), Freelancer (12 persons), Driver (1 person), and Unemployed (22 persons)

-Average Income per month (bahts) : Below 8,000 (177 persons), 8,000-15,000 (195 persons), 15,001-25,000 (101 persons), 25,001-35,000 (58 persons), 35,001-45,000 (28 persons), and Above 45,000 (44 persons)

-Resident : Lived in Bangkok (372 persons) , Lived in other regions (231 persons)

Overall summary of data

Variable	Obs	Mean	Std. Dev.	Min	Max
gender	603	.8341625	.4022698	0	2
age	603	1.14262	1.030865	0	5
income	603	1.497512	1.478948	0	5
student	603	.6467662	.4783714	0	1
publicoffi~r	603	.2106136	.4080829	0	1
govofficer	603	.0497512	.2176111	0	1
bus	603	.0364842	.1876474	0	1
unemploy	603	.0381426	.1916995	0	1
freelance	603	.0199005	.1397743	0	1
bkk	603	.6169154	.4865422	0	1
notbkk	603	.3830846	.4865422	0	1
frqrest	603	1.154229	1.01374	0	3
frqff	603	1.330017	.5637539	0	2
frqwf	603	1.112769	.5192821	0	2
frqjf	603	1.311774	.648774	0	2
frqhp	603	1.427861	.5928869	0	2
frqef	603	.9966833	.7313499	0	2
frqtf	603	.7943615	.6603392	0	2
frqcf	603	.6235489	.6360509	0	2
taste	603	4.598673	.6084659	1	5
clean	603	4.524046	.650072	1	5
service	603	4.067993	.807165	1	5
brand	603	3.351575	1.041869	1	5
location	603	3.73466	1.032323	1	5
environment	603	3.633499	.8835929	1	5
variety	603	3.298507	1.161587	1	5
alone	603	.8756219	.6767025	0	2
fml	603	1.422886	.580932	0	2
partner	603	.6799337	.838472	0	2
friend	603	1.429519	.5614329	0	2
colleague	603	.7263682	.6569975	0	2
wtime	603	1.870647	.943513	0	4
same	603	1.092869	.4625499	0	2
diff	603	1.447761	.5515073	0	2
gohome	603	.5257048	.644877	0	2
_est_m	603	1	0	1	1

Variables	Variables Title	Description of Variables
Dependent variable (Yj) Dependent variable (Yk) Dependent variable (Yl)	same diff gohome	In case that the target restaurant are not available, for all of the dependent variables : Never happen = 0, Sometime = 1, Often = 2
Demographic factors (Xi)	gender age income student publicofficer govofficer bus unemploy freelance bkk notbkk	Male = 0, Female = 1, Other = 2 Income per month (in a unit of Baht) One is student =1, Otherwise = 0 One is public officer = 1, Otherwise = 0 One is government officer = 1, Otherwise = 0 One is bus driver =1, Otherwise = 0 One is unemployed = 1, Otherwise = 0 One is freelance =1, Otherwise = 0 One is resided in BKK = 1, Otherwise = 0 One is not resided in BKK = 1, Otherwise = 0

Frequency Factors (Fi)	frqrest frqff frqwf frqjf frqhp frqef frqtf frqcf	The frequency of restaurants visiting before the Covid-19 situation : Lower than once a week = 0, 1-2 times per week = 1, 2-3 times per week = 2, More than thrice a week = 3. From frqff to frqcf : Never = 0, Sometime = 1, Often = 2 frqff = Fast food frqwf = Western food frqjf = Japanese food frqhp = Hot pot restaurant frqef = Isaan food restaurant frqtf = Thai food frqcf = Chinese food
Lifestyle Factors (Li)	taste clean service brand location environment variety alone fml partner friend colleague wtime	Taste of food Cleanliness of the restaurant Service quality of the restaurant Brand awareness Location of the restaurant Atmosphere of the restaurant Variety of menus Go to restaurant alone Go to restaurant with family Go to restaurant with partner Go to restaurant with friend Go to restaurant with colleague **(All the factors including alone, fml, partner, friend, and colleague : Never = 0 , Sometime = 1, Often = 2) Waiting time

$$Pr(Y = p) = \Sigma X_{pi} \beta^*_p + \Sigma F_{pi} \delta^*_p + \Sigma L_{pi} \gamma^*_p + \varepsilon_i$$

$i=1....603,\ p=0,1,2$

Model 1: When the dependent variable is same (***Yj***)

$$Pr(Y_j = 0,1,2) = \Sigma X_{pi} \beta^*_p + \Sigma F_{pi} \delta^*_p + \Sigma L_{pi} \gamma^*_p + \varepsilon_i$$

Model 2: When the dependent variable is diff (***Yk***)

$$Pr(Y_k = 0,1,2) = \Sigma X_{pi} \beta^*_p + \Sigma F_{pi} \delta^*_p + \Sigma L_{pi} \gamma^*_p + \varepsilon_i$$

Model 3: When the dependent variable is gohome (***Yl***)

$$Pr(Y_l = 0,1,2) = \Sigma X_{pi} \beta^*_p + \Sigma F_{pi} \delta^*_p + \Sigma L_{pi} \gamma^*_p + \varepsilon_i$$

- ***Y*** is the dependent variable consisted of Y_j, Y_k *and* Y_l (same,diff,gohome)
- X_{pi} is the demographic factors that are consisted of gender, age, income, student, publicofficer, govofficer, bus, unemploy, freelance,bkk and not bkk
- F_{pi} is the frequency factors that are consisted of frqrest, frqff, frqwf, frqjf, frqhp, frqef, frqtf and frqcf
- L_{pi} is the lifestyle factors that are consisted of taste, clean, service, brand, location, environment, variety, alone, fml, partner, friend and colleague.

Correlation of the demographic factors and frequency of eat-out in restaurants at malls

```
. correlate gender age income student publicofficer govofficer bus unemploy freelance b
> kk notbkk frqrest
(obs=603)
```

	gender	age	income	student	public~r	govoff~r	bus	unemploy
gender	1.0000							
age	-0.0390	1.0000						
income	-0.1906	0.5036	1.0000					
student	0.1094	-0.0762	-0.0189	1.0000				
publicoffi~r	-0.0803	0.2483	0.5224	0.0073	1.0000			
govofficer	0.0375	0.3386	0.2533	-0.0383	-0.1182	1.0000		
bus	-0.0297	0.2908	0.2398	-0.0598	-0.1005	-0.0445	1.0000	
unemploy	0.0391	0.1910	-0.0846	-0.0159	-0.1029	-0.0456	-0.0388	1.0000
freelance	-0.0298	0.0610	0.0083	-0.0438	-0.0736	-0.0326	-0.0277	-0.0284
bkk	-0.0875	0.0561	0.1845	-0.0114	0.2146	-0.1805	-0.0468	-0.0212
notbkk	0.0875	-0.0561	-0.1845	0.0114	-0.2146	0.1805	0.0468	0.0212
frqrest	-0.0512	-0.0545	0.1338	-0.0382	0.0980	-0.0650	0.0140	-0.0132

	freela~e	bkk	notbkk	frqrest
freelance	1.0000			
bkk	-0.0098	1.0000		
notbkk	0.0098	-1.0000	1.0000	
frqrest	-0.0100	0.1907	-0.1907	1.0000

Correlation of the types of restaurant, who going with and waiting time

```
. correlate frqff frqwf frqjf frqhp frqef frqtf frqcf alone fml partner friend colleagu
> e wtime
(obs=603)
```

	frqff	frqwf	frqjf	frqhp	frqef	frqtf	frqcf	alone
frqff	1.0000							
frqwf	0.4344	1.0000						
frqjf	0.1724	0.2850	1.0000					
frqhp	0.0838	0.1775	0.3350	1.0000				
frqef	0.0470	0.1060	0.1877	0.2485	1.0000			
frqtf	-0.0182	0.0241	0.1770	0.1869	0.4079	1.0000		
frqcf	0.0320	0.0835	0.2326	0.1767	0.3080	0.5352	1.0000	
alone	0.0860	0.0400	0.0317	-0.0369	-0.0948	-0.0425	-0.0858	1.0000
fml	-0.0616	0.1005	0.1212	0.2262	0.1558	0.1491	0.1393	-0.2590
partner	-0.0538	-0.0123	0.1746	0.1256	0.1879	0.1329	0.1911	-0.1991
friend	0.1864	0.1584	0.1425	0.1556	0.1168	0.1490	0.0861	-0.0166
colleague	0.1142	0.1295	0.1147	0.1433	0.1710	0.1573	0.1466	-0.0543
wtime	0.1179	0.0502	-0.0344	-0.0167	0.0331	0.0159	0.0018	0.0372

	fml	partner	friend	collea~e	wtime
fml	1.0000				
partner	-0.0047	1.0000			
friend	-0.0893	-0.0745	1.0000		
colleague	0.0121	0.1272	0.2111	1.0000	
wtime	-0.0091	-0.0629	0.0204	0.0339	1.0000

.

Marketing mix

```
. su brand clean environment location service taste variety
```

Variable	Obs	Mean	Std. Dev.	Min	Max
brand	603	3.351575	1.041869	1	5
clean	603	4.524046	.650072	1	5
environment	603	3.633499	.8835929	1	5
location	603	3.73466	1.032323	1	5
service	603	4.067993	.807165	1	5
taste	603	4.598673	.6084659	1	5
variety	603	3.298507	1.161587	1	5

```
. tab same
```

same	Freq.	Percent	Cum.
0	39	6.47	6.47
1	469	77.78	84.25
2	95	15.75	100.00
Total	603	100.00	

```
. tab diff
```

diff	Freq.	Percent	Cum.
0	17	2.82	2.82
1	299	49.59	52.40
2	287	47.60	100.00
Total	603	100.00	

```
. tab gohome
```

gohome	Freq.	Percent	Cum.
0	336	55.72	55.72
1	217	35.99	91.71
2	50	8.29	100.00
Total	603	100.00	

Result

```
. margins, dydx(*) pr(out(0))

Average marginal effects                        Number of obs     =        603
Model VCE    : OIM

Expression   : Pr(same==0), predict(out(0))
dy/dx w.r.t. : gender age income student publicofficer govofficer bus unemploy
               freelance bkk notbkk frqrest frqff frqwf frqjf frqhp frqef frqtf frqcf
               taste clean service brand location environment variety alone fml
               partner friend colleague wtime
```

	dy/dx	Delta-method Std. Err.	z	P>|z|	[95% Conf.	Interval]
gender	-.0147405	.0288205	-0.51	0.609	-.0712276	.0417465
age	.0005947	.0128329	0.05	0.963	-.0245574	.0257468
income	-.0061897	.0111433	-0.56	0.579	-.0280302	.0156508
student	.0266752	.0231628	1.15	0.249	-.0187231	.0720735
publicofficer	.0441504	.0331078	1.33	0.182	-.0207398	.1090405
govofficer	-.7877262	55.38242	-0.01	0.989	-109.3353	107.7598
bus	.0219952	.0718918	0.31	0.760	-.1189101	.1629005
unemploy	.0660251	.0425302	1.55	0.121	-.0173326	.1493828
freelance	-.7673789	92.45798	-0.01	0.993	-181.9817	180.4469
bkk	-.0083582	.0221471	-0.38	0.706	-.0517656	.0350492
notbkk	0	(omitted)				
frqrest	.0010315	.0114649	0.09	0.928	-.0214393	.0235023
frqff	.0007054	.0191746	0.04	0.971	-.0368762	.0382869
frqwf	-.036736	.0231338	-1.59	0.112	-.0820774	.0086054
frqjf	-.0049636	.0162099	-0.31	0.759	-.0367344	.0268071
frqhp	-.0243374	.0177627	-1.37	0.171	-.0591517	.0104769
frqef	-.0102641	.015978	-0.64	0.521	-.0415804	.0210523
frqtf	.0167318	.0185515	0.90	0.367	-.0196285	.053092
frqcf	-.0168031	.0191645	-0.88	0.381	-.0543648	.0207586
taste	.0063905	.015718	0.41	0.684	-.0244163	.0371973
clean	.0120781	.0164534	0.73	0.463	-.0201699	.0443262
service	-.0172071	.0139278	-1.24	0.217	-.044505	.0100909
brand	.0128071	.0105224	1.22	0.224	-.0078164	.0334305
location	-.0277457	.0107127	-2.59	0.010	-.0487422	-.0067492
environment	.006453	.0135716	0.48	0.634	-.0201468	.0330528
variety	-.0167741	.0093569	-1.79	0.073	-.0351133	.001565
alone	-.0064759	.01541	-0.42	0.674	-.0366788	.0237271
fml	.0073676	.0183459	0.40	0.688	-.0285898	.043325
partner	-.0337267	.0168868	-2.00	0.046	-.0668241	-.0006293
friend	.0003983	.0200308	0.02	0.984	-.0388613	.0396579
colleague	.0139965	.0174281	0.80	0.422	-.0201618	.0481549
wtime	.0037118	.009922	0.37	0.708	-.0157349	.0231584

```
. margins, dydx(*) pr(out(1))

Average marginal effects                        Number of obs     =        603
Model VCE    : OIM

Expression   : Pr(same==1), predict(out(1))
dy/dx w.r.t. : gender age income student publicofficer govofficer bus unemploy
               freelance bkk notbkk frqrest frqff frqwf frqjf frqhp frqef frqtf frqcf
               taste clean service brand location environment variety alone fml
               partner friend colleague wtime
```

	dy/dx	Delta-method Std. Err.	z	P>|z|	[95% Conf.	Interval]
gender	-.0175445	.0458724	-0.38	0.702	-.1074527	.0723638
age	-.0054104	.0234096	-0.23	0.817	-.0512924	.0404716
income	-.01375	.0171326	-0.80	0.422	-.0473293	.0198294
student	.0234048	.0356221	0.66	0.511	-.0464133	.0932229
publicofficer	.0224187	.0568716	0.39	0.693	-.0890477	.133885
govofficer	.7302397	46.06322	0.02	0.987	-89.552	91.01248
bus	.107272	.1209565	0.89	0.375	-.1297983	.3443424
unemploy	.0077933	.104896	0.07	0.941	-.1977991	.2133856
freelance	.7451174	76.90004	0.01	0.992	-149.9762	151.4664
bkk	.0218495	.0373555	0.58	0.559	-.0513659	.0950649
notbkk	0	(omitted)				
frqrest	-.0124668	.018414	-0.68	0.498	-.0485576	.0236239
frqff	-.0271968	.0341017	-0.80	0.425	-.0940348	.0396412
frqwf	.0189436	.0370873	0.51	0.610	-.0537462	.0916334
frqjf	.0222075	.0288954	0.77	0.442	-.0344264	.0788413
frqhp	.0455535	.0306987	1.48	0.138	-.0146149	.1057219
frqef	-.0384036	.0265932	-1.44	0.149	-.0905253	.0137182
frqtf	-.0023589	.0322282	-0.07	0.942	-.0655251	.0608072
frqcf	.0401773	.0328259	1.22	0.221	-.0241603	.1045149
taste	.0005861	.0308418	0.02	0.985	-.0598628	.061035
clean	-.0893721	.0316842	-2.82	0.005	-.151472	-.0272722
service	.050349	.0246461	2.04	0.041	.0020435	.0986546
brand	.0066793	.0181622	0.37	0.713	-.028918	.0422766
location	.0335219	.0183464	1.83	0.068	-.0024364	.0694803
environment	-.0295061	.0225542	-1.31	0.191	-.0737116	.0146993
variety	.0227514	.0154538	1.47	0.141	-.0075375	.0530403
alone	-.0009294	.0267982	-0.03	0.972	-.0534528	.0515941
fml	.0025463	.0313146	0.08	0.935	-.0588291	.0639217
partner	.02311	.0237361	0.97	0.330	-.0234118	.0696318
friend	-.0979063	.0336847	-2.91	0.004	-.1639271	-.0318854
colleague	.0076944	.0287904	0.27	0.789	-.0487337	.0641225
wtime	.019729	.0178462	1.11	0.269	-.0152489	.0547069

```
. margins, dydx(*) pr(out(2))

Average marginal effects                        Number of obs     =        603
Model VCE    : OIM

Expression   : Pr(same==2), predict(out(2))
dy/dx w.r.t. : gender age income student publicofficer govofficer bus unemploy
               freelance bkk notbkk frqrest frqff frqwf frqjf frqhp frqef frqtf frqcf
               taste clean service brand location environment variety alone fml
               partner friend colleague wtime
```

	dy/dx	Delta-method Std. Err.	z	P>|z|	[95% Conf.	Interval]
gender	.032285	.0397583	0.81	0.417	-.0456398	.1102097
age	.0048157	.0213048	0.23	0.821	-.0369409	.0465724
income	.0199396	.0144643	1.38	0.168	-.0084099	.0482892
student	-.05008	.0299564	-1.67	0.095	-.1087934	.0086334
publicofficer	-.066569	.0500353	-1.33	0.183	-.1646365	.0314984
govofficer	.0574865	9.319675	0.01	0.995	-18.20874	18.32371
bus	-.1292672	.1082849	-1.19	0.233	-.3415017	.0829672
unemploy	-.0738184	.1013679	-0.73	0.466	-.2724958	.1248591
freelance	.0222615	15.55861	0.00	0.999	-30.47206	30.51658
bkk	-.0134913	.0328542	-0.41	0.681	-.0778844	.0509018
notbkk	0	(omitted)				
frqrest	.0114353	.0157737	0.72	0.468	-.0194806	.0423512
frqff	.0264914	.0305316	0.87	0.386	-.0333495	.0863324
frqwf	.0177924	.0319112	0.56	0.577	-.0447524	.0803372
frqjf	-.0172438	.0257034	-0.67	0.502	-.0676216	.0331339
frqhp	-.0212161	.0270516	-0.78	0.433	-.0742362	.031804
frqef	.0486676	.0231331	2.10	0.035	.0033276	.0940077
frqtf	-.0143728	.0285272	-0.50	0.614	-.0702851	.0415395
frqcf	-.0233742	.0290277	-0.81	0.421	-.0802675	.033519
taste	-.0069766	.0276071	-0.25	0.800	-.0610854	.0471323
clean	.077294	.0291594	2.65	0.008	.0201426	.1344453
service	-.033142	.0216218	-1.53	0.125	-.0755199	.0092359
brand	-.0194863	.0160286	-1.22	0.224	-.0509018	.0119291
location	-.0057762	.0161615	-0.36	0.721	-.0374522	.0258998
environment	.0230531	.0195376	1.18	0.238	-.0152398	.061346
variety	-.0059773	.0134644	-0.44	0.657	-.0323671	.0204125
alone	.0074052	.0237556	0.31	0.755	-.0391549	.0539653
fml	-.009914	.0274042	-0.36	0.718	-.0636252	.0437973
partner	.0106167	.0193758	0.55	0.584	-.0273591	.0485926
friend	.0975079	.0296002	3.29	0.001	.0394926	.1555233
colleague	-.021691	.0249349	-0.87	0.384	-.0705624	.0271805
wtime	-.0234408	.0159029	-1.47	0.140	-.0546099	.0077283

```
Average marginal effects                        Number of obs     =        603
Model VCE    : OIM

Expression   : Pr(diff==0), predict(out(0))
dy/dx w.r.t. : gender age income student publicofficer govofficer bus unemploy
               freelance bkk notbkk frqrest frqff frqwf frqjf frqhp frqef frqtf frqcf
               taste clean service brand location environment variety alone fml
               partner friend colleague wtime
```

	dy/dx	Delta-method Std. Err.	z	P>|z|	[95% Conf.	Interval]
gender	.0256254	.0201321	1.27	0.203	-.0138328	.0650836
age	.0113834	.0078554	1.45	0.147	-.0040129	.0267797
income	.0085163	.0057129	1.49	0.136	-.0026809	.0197135
student	.0005749	.0141323	0.04	0.968	-.0271239	.0282738
publicofficer	-.0222063	.0245053	-0.91	0.365	-.0702359	.0258233
govofficer	-.3395936	20.77399	-0.02	0.987	-41.05586	40.37667
bus	.008069	.0282569	0.29	0.775	-.0473135	.0634516
unemploy	-.3146555	22.08787	-0.01	0.989	-43.60608	42.97677
freelance	-.3097824	23.89896	-0.01	0.990	-47.15089	46.53132
bkk	-.0192718	.0147744	-1.30	0.192	-.048229	.0096854
notbkk	0	(omitted)				
frqrest	.0123222	.0068665	1.79	0.073	-.0011359	.0257803
frqff	-.0088964	.0120347	-0.74	0.460	-.032484	.0146911
frqwf	-.02559	.0149863	-1.71	0.088	-.0549626	.0037826
frqjf	.0043806	.0115926	0.38	0.706	-.0183404	.0271017
frqhp	-.0109407	.0125837	-0.87	0.385	-.0356043	.0137229
frqef	.0065491	.0105558	0.62	0.535	-.0141399	.0272381
frqtf	.0156364	.0130916	1.19	0.232	-.0100226	.0412955
frqcf	-.0087913	.0123255	-0.71	0.476	-.0329488	.0153662
taste	.0033708	.0101915	0.33	0.741	-.0166043	.0233458
clean	-.0007322	.0091651	-0.08	0.936	-.0186955	.0172311
service	-.0129425	.0090455	-1.43	0.152	-.0306713	.0047862
brand	.0004624	.0067851	0.07	0.946	-.0128362	.0137609
location	-.0243072	.0078946	-3.08	0.002	-.0397802	-.0088341
environment	.0253847	.0098656	2.57	0.010	.0060485	.044721
variety	-.0083867	.006228	-1.35	0.178	-.0205933	.0038199
alone	.0113854	.0108361	1.05	0.293	-.0098529	.0326238
fml	-.0229634	.0126863	-1.81	0.070	-.0478281	.0019013
partner	-.0042909	.0097625	-0.44	0.660	-.0234251	.0148433
friend	.0078754	.013904	0.57	0.571	-.0193759	.0351267
colleague	-.0092279	.0122325	-0.75	0.451	-.0332031	.0147473
wtime	-.0021792	.0069126	-0.32	0.753	-.0157277	.0113693

```
. margins, dydx(*) pr(out(1))

Average marginal effects                        Number of obs     =        603
Model VCE    : OIM

Expression   : Pr(diff==1), predict(out(1))
dy/dx w.r.t. : gender age income student publicofficer govofficer bus unemploy
               freelance bkk notbkk frqrest frqff frqwf frqjf frqhp frqef frqtf frqcf
               taste clean service brand location environment variety alone fml
               partner friend colleague wtime
```

	dy/dx	Delta-method Std. Err.	z	P>|z|	[95% Conf.	Interval]
gender	-.1128443	.0532462	-2.12	0.034	-.2172049	-.0084837
age	.0136578	.0273102	0.50	0.617	-.0398693	.0671848
income	-.0120291	.02102	-0.57	0.567	-.0532276	.0291693
student	-.0170186	.0425576	-0.40	0.689	-.10043	.0663928
publicofficer	.0515247	.0687201	0.75	0.453	-.0831643	.1862136
govofficer	.3108215	10.45	0.03	0.976	-20.1708	20.79244
bus	.0214909	.129407	0.17	0.868	-.2321422	.2751241
unemploy	.21809	11.11083	0.02	0.984	-21.55873	21.99491
freelance	.2811162	12.0221	0.02	0.981	-23.28176	23.844
bkk	-.0056774	.0450372	-0.13	0.900	-.0939487	.0825939
notbkk	0	(omitted)				
frqrest	-.0245792	.022447	-1.09	0.274	-.0685745	.019416
frqff	-.0643743	.0410132	-1.57	0.117	-.1447587	.0160102
frqwf	-.0263827	.0452412	-0.58	0.560	-.1150539	.0622885
frqjf	-.0273744	.0358245	-0.76	0.445	-.0975891	.0428403
frqhp	.0431793	.0380616	1.13	0.257	-.0314201	.1177788
frqef	-.0181219	.0317749	-0.57	0.568	-.0803996	.0441558
frqtf	-.0517244	.0387245	-1.34	0.182	-.1276232	.0241743
frqcf	.0062423	.0391486	0.16	0.873	-.0704875	.0829721
taste	-.0740131	.0360686	-2.05	0.040	-.1447063	-.0033199
clean	.0376437	.0366348	1.03	0.304	-.0341592	.1094467
service	.053899	.0299871	1.80	0.072	-.0048746	.1126726
brand	.0116693	.0216533	0.54	0.590	-.0307703	.0541089
location	-.008355	.0227099	-0.37	0.713	-.0528655	.0361556
environment	-.0115922	.0276811	-0.42	0.675	-.0658461	.0426617
variety	.0023545	.0187877	0.13	0.900	-.0344687	.0391778
alone	-.0333748	.0322372	-1.04	0.301	-.0965585	.029809
fml	.0099779	.0383339	0.26	0.795	-.0651552	.0851109
partner	.0265177	.0271395	0.98	0.329	-.0266748	.0797101
friend	.0477438	.0398464	1.20	0.231	-.0303538	.1258413
colleague	.000296	.035461	0.01	0.993	-.0692064	.0697983
wtime	.0061072	.0216154	0.28	0.778	-.0362582	.0484727

```
. margins, dydx(*) pr(out(2))

Average marginal effects                        Number of obs     =        603
Model VCE    : OIM

Expression   : Pr(diff==2), predict(out(2))
dy/dx w.r.t. : gender age income student publicofficer govofficer bus unemploy
               freelance bkk notbkk frqrest frqff frqwf frqjf frqhp frqef frqtf frqcf
               taste clean service brand location environment variety alone fml
               partner friend colleague wtime
```

	dy/dx	Delta-method Std. Err.	z	P>|z|	[95% Conf.	Interval]
gender	.0872189	.0534986	1.63	0.103	-.0176363	.1920742
age	-.0250412	.0273719	-0.91	0.360	-.0786891	.0286068
income	.0035128	.0210603	0.17	0.868	-.0377646	.0447903
student	.0164437	.0424883	0.39	0.699	-.0668319	.0997192
publicofficer	-.0293184	.068619	-0.43	0.669	-.1638092	.1051725
govofficer	.0287722	10.32525	0.00	0.998	-20.20834	20.26589
bus	-.02956	.1299827	-0.23	0.820	-.2843214	.2252015
unemploy	.0965655	10.97815	0.01	0.993	-21.42022	21.61335
freelance	.0286662	11.87856	0.00	0.998	-23.25289	23.31022
bkk	.0249492	.0449894	0.55	0.579	-.0632284	.1131267
notbkk	0	(omitted)				
frqrest	.012257	.0224637	0.55	0.585	-.0317711	.0562851
frqff	.0732707	.0409969	1.79	0.074	-.0070818	.1536232
frqwf	.0519727	.0450799	1.15	0.249	-.0363823	.1403277
frqjf	.0229938	.0357457	0.64	0.520	-.0470666	.0930541
frqhp	-.0322386	.0379743	-0.85	0.396	-.1066669	.0421897
frqef	.0115728	.0317381	0.36	0.715	-.0506327	.0737782
frqtf	.036088	.0387043	0.93	0.351	-.0397711	.1119471
frqcf	.002549	.0391045	0.07	0.948	-.0740945	.0791925
taste	.0706423	.036239	1.95	0.051	-.0003847	.1416694
clean	-.0369115	.0366313	-1.01	0.314	-.1087076	.0348845
service	-.0409565	.0301003	-1.36	0.174	-.099952	.018039
brand	-.0121317	.0216557	-0.56	0.575	-.054576	.0303126
location	.0326621	.0227643	1.43	0.151	-.0119551	.0772793
environment	-.0137925	.0277122	-0.50	0.619	-.0681075	.0405224
variety	.0060322	.0187655	0.32	0.748	-.0307475	.0428119
alone	.0219893	.0322704	0.68	0.496	-.0412594	.0852381
fml	.0129855	.0383195	0.34	0.735	-.0621193	.0880904
partner	-.0222268	.0271878	-0.82	0.414	-.075514	.0310604
friend	-.0556192	.0398303	-1.40	0.163	-.1336851	.0224467
colleague	.0089319	.0353608	0.25	0.801	-.0603739	.0782378
wtime	-.0039281	.0215713	-0.18	0.856	-.0462071	.0383509

```
. margins, dydx(*) pr(out(0))

Average marginal effects                        Number of obs     =        603
Model VCE    : OIM

Expression   : Pr(gohome==0), predict(out(0))
dy/dx w.r.t. : gender age income student publicofficer govofficer bus unemploy
               freelance bkk notbkk frqrest frqff frqwf frqjf frqhp frqef frqtf frqcf
               taste clean service brand location environment variety alone fml
               partner friend colleague wtime
```

	dy/dx	Delta-method Std. Err.	z	P>|z|	[95% Conf.	Interval]
gender	.0722417	.052005	1.39	0.165	-.0296863	.1741697
age	.0344994	.0267643	1.29	0.197	-.0179576	.0869564
income	.0080243	.0204886	0.39	0.695	-.0321327	.0481813
student	.0244126	.041749	0.58	0.559	-.057414	.1062391
publicofficer	.0227176	.0689257	0.33	0.742	-.1123742	.1578095
govofficer	-.107272	.111694	-0.96	0.337	-.3261881	.1116442
bus	-.1807419	.1222297	-1.48	0.139	-.4203076	.0588239
unemploy	-.0878572	.1111106	-0.79	0.429	-.30563	.1299157
freelance	-.0518108	.1496706	-0.35	0.729	-.3451598	.2415381
bkk	.0576679	.0440052	1.31	0.190	-.0285806	.1439165
notbkk	0	(omitted)				
frqrest	-.0220366	.0221134	-1.00	0.319	-.0653781	.0213049
frqff	-.0326409	.0405705	-0.80	0.421	-.1121577	.046876
frqwf	-.0134734	.0444136	-0.30	0.762	-.1005225	.0735757
frqjf	.0625271	.0349785	1.79	0.074	-.0060295	.1310836
frqhp	.0356798	.0373372	0.96	0.339	-.0374998	.1088594
frqef	-.0391291	.0314441	-1.24	0.213	-.1007585	.0225003
frqtf	.0039467	.0384957	0.10	0.918	-.0715035	.0793969
frqcf	.0042292	.0389448	0.11	0.914	-.0721012	.0805597
taste	.1057349	.0351789	3.01	0.003	.0367855	.1746844
clean	.0035658	.0363572	0.10	0.922	-.067693	.0748246
service	-.0289054	.0298446	-0.97	0.333	-.0873997	.029589
brand	.0221611	.0213962	1.04	0.300	-.0197748	.0640969
location	.0540702	.0220631	2.45	0.014	.0108273	.0973132
environment	-.0522768	.02713	-1.93	0.054	-.1054507	.0008971
variety	-.0193707	.018532	-1.05	0.296	-.0556929	.0169514
alone	-.0665763	.0314553	-2.12	0.034	-.1282276	-.004925
fml	-.0378015	.0377816	-1.00	0.317	-.1118521	.0362492
partner	-.0107203	.0267519	-0.40	0.689	-.0631532	.0417125
friend	-.0063457	.0393012	-0.16	0.872	-.0833745	.0706832
colleague	.0005588	.0349371	0.02	0.987	-.0679166	.0690341
wtime	-.0389576	.0211576	-1.84	0.066	-.0804259	.0025106

```
. margins, dydx(*) pr(out(1))

Average marginal effects                        Number of obs     =        603
Model VCE    : OIM

Expression   : Pr(gohome==1), predict(out(1))
dy/dx w.r.t. : gender age income student publicofficer govofficer bus unemploy
               freelance bkk notbkk frqrest frqff frqwf frqjf frqhp frqef frqtf frqcf
               taste clean service brand location environment variety alone fml
               partner friend colleague wtime
```

	dy/dx	Delta-method Std. Err.	z	P>|z|	[95% Conf.	Interval]
gender	-.029032	.0505421	-0.57	0.566	-.1280928	.0700288
age	-.0329085	.0262066	-1.26	0.209	-.0842725	.0184555
income	.0002969	.019994	0.01	0.988	-.0388906	.0394844
student	-.0054253	.0406709	-0.13	0.894	-.0851388	.0742881
publicofficer	.0716869	.0656798	1.09	0.275	-.0570431	.200417
govofficer	.1467173	.1058767	1.39	0.166	-.0607973	.3542319
bus	.150782	.1181526	1.28	0.202	-.0807929	.3823569
unemploy	.050326	.1075957	0.47	0.640	-.1605577	.2612096
freelance	.0411332	.1443718	0.28	0.776	-.2418302	.3240967
bkk	-.0113459	.0430007	-0.26	0.792	-.0956259	.072934
notbkk	0	(omitted)				
frqrest	.0308787	.0213222	1.45	0.148	-.010912	.0726694
frqff	-.0118937	.0395486	-0.30	0.764	-.0894075	.0656201
frqwf	-.0247347	.043223	-0.57	0.567	-.1094502	.0599809
frqjf	.0004386	.0343016	0.01	0.990	-.0667914	.0676685
frqhp	-.0334654	.0364891	-0.92	0.359	-.1049826	.0380519
frqef	.0415268	.0305654	1.36	0.174	-.0183802	.1014338
frqtf	-.0023793	.0373371	-0.06	0.949	-.0755587	.0708001
frqcf	.0088158	.0373608	0.24	0.813	-.0644101	.0820417
taste	-.1126507	.0336764	-3.35	0.001	-.1786551	-.0466462
clean	.0240835	.0350805	0.69	0.492	-.044673	.09284
service	.02422	.029186	0.83	0.407	-.0329835	.0814235
brand	-.0315757	.0207588	-1.52	0.128	-.0722622	.0091107
location	-.0514441	.0213715	-2.41	0.016	-.0933314	-.0095568
environment	.0350465	.0265164	1.32	0.186	-.0169246	.0870176
variety	.0054904	.0180023	0.30	0.760	-.0297934	.0407742
alone	.0534919	.030739	1.74	0.082	-.0067553	.1137392
fml	.0727537	.0367206	1.98	0.048	.0007827	.1447246
partner	.0051179	.0258932	0.20	0.843	-.0456319	.0558676
friend	.0411934	.038273	1.08	0.282	-.0338203	.1162071
colleague	-.0094102	.0342039	-0.28	0.783	-.0764485	.0576282
wtime	.049472	.0205655	2.41	0.016	.0091645	.0897796

```
. margins, dydx(*) pr(out(2))

Average marginal effects                        Number of obs     =        603
Model VCE    : OIM

Expression   : Pr(gohome==2), predict(out(2))
dy/dx w.r.t. : gender age income student publicofficer govofficer bus unemploy
               freelance bkk notbkk frqrest frqff frqwf frqjf frqhp frqef frqtf frqcf
               taste clean service brand location environment variety alone fml
               partner friend colleague wtime
```

	dy/dx	Delta-method Std. Err.	z	P>|z|	[95% Conf.	Interval]
gender	-.0432097	.0282659	-1.53	0.126	-.0986098	.0121903
age	-.0015909	.0153552	-0.10	0.917	-.0316866	.0285049
income	-.0083211	.0124203	-0.67	0.503	-.0326644	.0160222
student	-.0189872	.0230188	-0.82	0.409	-.0641034	.0261289
publicofficer	-.0944046	.0505485	-1.87	0.062	-.1934779	.0046687
govofficer	-.0394454	.0662205	-0.60	0.551	-.1692352	.0903445
bus	.0299598	.0651891	0.46	0.646	-.0978084	.157728
unemploy	.0375312	.0541576	0.69	0.488	-.0686158	.1436781
freelance	.0106776	.0634083	0.17	0.866	-.1136004	.1349555
bkk	-.046322	.0244355	-1.90	0.058	-.0942148	.0015708
notbkk	0	(omitted)				
frqrest	-.0088421	.0129369	-0.68	0.494	-.034198	.0165138
frqff	.0445346	.0233492	1.91	0.056	-.001229	.0902981
frqwf	.0382081	.0249813	1.53	0.126	-.0107543	.0871705
frqjf	-.0629656	.0203617	-3.09	0.002	-.1028739	-.0230574
frqhp	-.0022144	.0209449	-0.11	0.916	-.0432656	.0388368
frqef	-.0023977	.017805	-0.13	0.893	-.0372949	.0324994
frqtf	-.0015674	.0224852	-0.07	0.944	-.0456375	.0425027
frqcf	-.0130451	.0244226	-0.53	0.593	-.0609125	.0348223
taste	.0069158	.0187823	0.37	0.713	-.0298969	.0437284
clean	-.0276493	.0191313	-1.45	0.148	-.065146	.0098474
service	.0046854	.0165043	0.28	0.776	-.0276624	.0370332
brand	.0094147	.0114202	0.82	0.410	-.0129685	.0317978
location	-.0026261	.0123136	-0.21	0.831	-.0267604	.0215082
environment	.0172304	.0147138	1.17	0.242	-.0116081	.0460688
variety	.0138803	.0106796	1.30	0.194	-.0070513	.0348119
alone	.0130844	.0170933	0.77	0.444	-.0204178	.0465867
fml	-.0349522	.0206931	-1.69	0.091	-.07551	.0056056
partner	.0056025	.0158468	0.35	0.724	-.0254566	.0366615
friend	-.0348477	.0218985	-1.59	0.112	-.077768	.0080725
colleague	.0088514	.0191614	0.46	0.644	-.0287042	.046407
wtime	-.0105144	.0113669	-0.93	0.355	-.032793	.0117643

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Conclusion

- Regression of Multinomial Logistic form.
- Analyze the correlation between variables and statistical data.

Results :

1. Income, occupation, living region only affect the frequency of going to restaurant in malls
2. People value taste as the first priority followed by cleanliness, service quality
3. Isaan food restaurant is the type of restaurant that consumers highly intend to stick with the same type when it comes to their alternate choice.
4. People tend to still go to other restaurants instead of eating outside malls
5. People’s preference is more than one since their second choice tend to be different type of restaurants more than same types as their alternative choice

Suggestion

- Food chain groups should consider various type of restaurants
- People tend to eating out with family and friend, they mostly go with their family and they usually value the taste of food as their top priority of restaurant selection
- Isaan food is on the uprising trend which has the market value of 16 billion Baht

Limitations

- Time constraint
- Sample size is not big enough compare with the actual size of the population
- COVID-19 pandemic that influence the biased survey outcome

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