

**VIET NAM NATIONAL UNIVERSITY HCM CITY  
UNIVERSITY OF ECONOMICS AND LAW**



**PROJECT REPORT**

**FINAL-TERM**

**SUBJECT: DIGITAL MARKETING  
ANALYTICS**

**TOPIC: ANALYSIS OF DATA FROM KFC**

**Lecturer: Su Le Hoanh  
Group: VÚT**

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## **Members of group**

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No.	Name	Student ID	Email
1.	Huỳnh Hồng Uyên	K204162006	uyenhh20416c@st.uel.edu.vn
2.	Châu Nguyễn Hương Thảo	K204162000	thaocnh20416c@st.uel.edu.vn
3.	Nguyễn Tường Vy	K204162009	vynt20416c@st.uel.edu.vn

# **Thank you**

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Once again, we sincerely thank you.

Group VÚT

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# Chapter 1: Overview

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## 1.1. Overview of KFC

### 1.1.1. Field of business

- Line of business: Food
- Sector: Fast food
- Development trend: Is the field of future development because people tend to be busier and busier. The higher the standard of living, the higher the standard of food, forcing the industry to always develop.
- The speed of urbanization has created momentum for the fast-food market to increase rapidly. The increasingly improved business environment and the process of international economic integration of Vietnam have promoted the development and competitiveness of this market.

### 1.1.2. KFC overview



Kentucky Fried Chicken, also known by its more familiar name, "KFC Fried Chicken" is a leading large American fast food chain specializing in fried chicken products with headquarters located in Louisville, Kentucky. . It is the second largest restaurant chain in the world (by revenue) and second only to McDonald's. Colonel Harland Sanders, the founder of KFC, created a secret recipe of 11 herbs and spices and a unique cooking technique that is still applied in each dish to preserve the special flavor of the product. their products (KFC Vietnam, 2022) [1].

The KFC logo: is the image of Colonel Harland Sanders - the brand ambassador as well as the person who laid the foundation for the great development of KFC. The logo is both a brand and homage to the person who gave birth to this brand. Until now, anyone who sees the image of an old man with a white beard with white hair smiling happily with a bag of fried chicken will immediately imagine the delicious pieces of KFC chicken and immediately want to enjoy it.

KFC's slogan: is very famous and can be found in many places "finger lickin' good

### **Global development: [2]**

- 1930**

When Colonel Harland Sanders turned 40, as a manager of a service restaurant in Corbin, Kentucky, Colonel directed his love of cooking and began to prepare and provide food for diners. , mainly those who travel long distances on the freeway. Harland Sanders opened his first restaurant in a small room in front of a gas station in Corbin, Kentucky. Here Sanders works as station operator, head chef, treasurer and "Sanders Court & Café" dining area manager.

- 1957**

Kentucky Fried Chicken is officially launched.

- 1964**

Kentucky Fried Chicken has more than 600 franchises in the United States, Canada and the first in the other continent, in the UK. Sanders sold his profits to a group of American investors led by John Y. Brown Jr. future governor of Kentucky for \$2,000,000. However, he is still the spokesman for the company.

- 1986**

PepsiCo, Inc acquires KFC from RJR Nabisco, Inc

- 1997**

PepsiCo, Inc announced a trio of fast food restaurants - KFC, Taco Bell and Pizza Hut - into Tricon Global Restaurants, Inc., the world's largest restaurant chain with more than 30,000 KFC, Taco Bell and Pizza Hut in more than 100 countries and territories

- 2002

Tricon Global Restaurants, Inc., the world's largest restaurant company, changes its company name to YUM! Brands



### Development in VietNam:



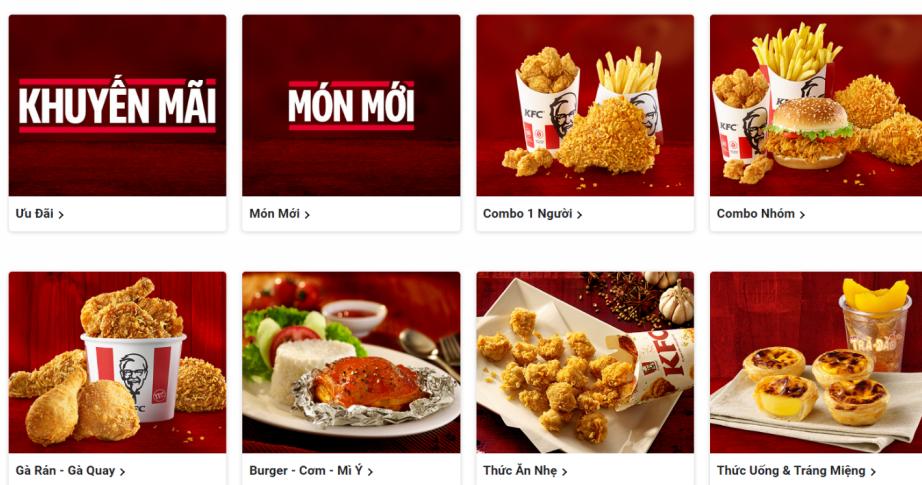
KFC is considered an "early bird" in the Vietnamese fast food industry. KFC first appeared in Ho Chi Minh City in 1997 and this partnership is known as a pioneer in fast-food development in Vietnam. By 2010, KFC was still the main Western franchise with some small competitors operating in the Vietnamese market. KFC soon realized the importance of product diversification by offering unique menus and developing new dishes based on local eating styles. KFC has focused on that by exploring some special options, such as the "Big 'n Juicy" (Foil Grilled Chicken) or larger servings for the whole family or group and the "KFC Chicken Rice" serving customers who like traditional food.

However, in the face of stiff competition from cheap traditional street food and

competition from other giant fast food chains like McDonald's and Burger King, KFC has struggled a lot to win the top spot. market during the initial period after 7 years of declining profits since the first store opened.

### **1.1.3. Products of KFC**

- Traditional fried chicken: from fresh chickens that are evenly fried with a secret blend of 11 different herbs and spices
- Combo group: dishes served in family style, in groups.
- New dish <special dish>: Fried chicken covered with sauce – makes a difference in taste (spicy, teriyaki,..)
- Combo for one person: Food in a bowl.
- Burger: a compact but equally delicious bread with meat filling (chicken, beef, shrimp, ..) for busy people.
- Spaghetti
- Rice: the dish is localized according to Vietnamese culture.
- Snacks: various and rich snacks (chicken balls, skewers, french fries, ..)
- Salads: mixed vegetables, food with green vegetables to balance taste and nutrition.
- Desserts and drinks: a KFC-style dessert meal, adapted to each region's culture.
- And finally, separate meals for children.
- KFC's dishes are "localized" and diverse for the cultural differences of each market.



Children's meals are also included.

*Figure. Products of KFC [1]*

## 1.2. Business environment

This is "big picture" of the business that affects decision-making and determines the strategy of the business:

*P - Political:*

- Political stability is one of Vietnam's strengths. Stable political background makes Vietnam a peaceful and prosperous country. In the world, political instability between Russia and Ukraine is a clear demonstration of the importance of this factor when a series of famous food companies such as KFC, McDonald's, Pizza Hut, .. suspended operations in Russia. The fact that Russia and some European countries, as well as the US, announced a state of mutual embargo, made it difficult to do business when the supply chain broke down; companies face an uncertain business future ahead in this market.

*E - Economic:*

- Vietnam has grown quite well even though during the COVID-19 period it had to go through many fluctuations such as: GDP decreased, unemployment rate skyrocketed. In general, Vietnam also had good performances such as: total turnover, import and export increased, the number of new enterprises as well as those returning to operation by the end of November 2021 was 160,000 enterprises, state budget

revenue increased, ...

*S - Sociocultural:*

- Vietnam has abundant human resources and a large market size, with the majority of the population being young. This is a potential market for the fast food industry in general and KFC in particular. Moreover, the population is mainly workers, so the fast food industry in general and KFC in particular can easily attract many people.

*T - Technology:*

- KFC is still lucky to approach the Vietnam market in the era of technology development. In recent decades, Vietnam has witnessed the rapid development of science and technology, especially in the fields of information technology, biotechnology, new material technology... Especially Vietnam, as one of the developed countries and promoting information technology, the number of people using the Internet and social networks is increasing (accounting for 70% of the population). The flourishing of “fast food” has appeared. where there is the rise of ordering and delivery apps. A Q&Me survey noted that, in 2020, “Now” is the most popular app for ordering fast food online, with 24% of respondents choosing, followed by Grab Food (20%). 87% of respondents ordered online from fast food chains, with KFC being the most popular, with 52%, followed by Lotteria (30%) and Pizza Hut (21%).
- And of course, in order for customers to have the easiest access to promotions as well as their products, KFC has launched the KFC application on Android and iOS platforms. It brings convenience to customers including promotions, MENU always available and updated with new dishes, door-to-door delivery technology, automatically searching for KFC stores near you.
- One of the difficulties that not only KFC but almost all food businesses have to face is the Covid 19 epidemic. No customers can go to crowded places, especially the distance policy makes it difficult for customers to go to crowded places. Stores must be closed. Therefore, applying online business is what KFC is aiming for first. Along with the separate applications of the store, KFC cooperates with many delivery units such as Now, Loship, Grab, ... helps KFC still maintain a part of sales even though customers cannot come to the store to enjoy.

*L - Law:*

- The first trademark and logo of KFC were registered for protection on May 20 and March 19, 1992, respectively, under the number 0-00008257-000. It was not until August 21, 2002 that the famous logo with the image of Harland Sanders and the words KFC was registered. After that, KFC's management company continuously applied for registration to the National Office of Intellectual Property for its brands such as: CHIZZA KFC, Slogan: Delicious taste on each finger
- And finally, the logo with that color on both sides of the Sanders image in the middle and the familiar KFC text at the bottom as it is now registered on April 11, 2019. With early trademark registration, KFC had its first store in Ho Chi Minh City in 1997. With its monopoly on brand and popularity, KFC easily attracted the first customers. first come to my store without fear of being copied.
- The law respects and encourages all business activities within the framework of the law.
  - Ordinance on food hygiene and safety
  - Food Safety Regulation
  - Commercial law and franchising activities
- The State cuts down on tools that limit international trade: tariffs, quotas, and administrative procedures, creating conditions for expanding and developing goods exchange and trade relations with other countries.

*E- Environmental:*

- Vietnam is a country with a favorable climate and a large land area. Along with a long agricultural tradition, chicken farms are increasing. This is a plus point for KFC in finding key ingredients available in Vietnam besides the supply of imported chicken from foreign businesses and companies. In Vietnam, KFC's chicken supply comes from CP, Unitech, and Long Binh farms
- Although the weather between regions across our country is not completely uniform. However, Da Lat is an extremely ideal area for growing quality vegetables, serving salads and side dishes. Criteria for carefully selecting ingredients like KFC cannot ignore this partner when entering the Vietnamese market

*C - Competitive: (5-forces model)*

## **Bargaining Power of Suppliers**

- Vietnam is an agricultural country, so farming and animal husbandry are the two main industries that are very developed in Vietnam. This is a great advantage for KFC when it can use local ingredients, reducing costs.
- KFC chooses farms in Vietnam to raise livestock such as Long Binh, ..

⇒ Medium competition

## **Bargaining Power of Buyers**

- Customers are a competitive pressure that can directly affect the entire production and business activities of the industry. The fast food industry is no exception. The main customers of the industry are retail customers and this is also the main object causing pressure for firms in the industry.
- With a large population and a rapidly growing urban population, a group of young people with relatively high incomes and high affordability have created a group of young people. It is a fact that, as the economy develops, every Vietnamese family is willing to pay more for delicious and quality meals.

⇒ Highly competitive

## **Threat of Substitute Products or Services**

- Vietnam is an agricultural country, with a very rich and diverse culinary culture, so the risk from this group of substitute products is not small for fast food companies. There are many types of food such as rice, cakes made from rice flour... and especially pho and vermicelli - dishes that not only Vietnamese people but the whole world love.
- In addition, consumers now tend to use healthy, low-fat products, so fast foods such as fried chicken, hamburgers, etc. are not meeting this demand of customers.

⇒ It can be seen that the pressure from substitute products for fast food products is really clear and not small. To reduce this pressure, KFC should know how to promote its strengths, and at the same time associate with other fast food companies if necessary to create a strong foothold in the Vietnamese market.

## **Threat of New Entrants:**

- Barriers to entry are factors that make entry into an industry more difficult and expensive.
- The following factors can be mentioned: Technology, Capital, Commercial factors such as Distribution system, brand, customer system and specific resources: Input materials (controlled), patents, human resources, government protection.
- However, in Vietnam, fast food companies are mainly distributed in large cities, densely populated and have a relatively high standard of living, so their distribution system is not considered developed and widespread.

⇒ From the above analysis, it can be seen that the barriers to entering the industry are not high.

- Besides assessing the barriers to entry, it is also necessary to analyze the attractiveness of the fast food industry. The attractiveness of the industry is reflected in many factors, but in summary, it will be generalized in 3 criteria: profitability ratio, number of customers, number of enterprises in the industry.

### **Rivalry Among Existing Firms**

- Currently, there are more and more foreign fast food companies operating in Vietnam and are continuing to penetrate deeply into this potential market with the opening of more stores, not only in Ho Chi Minh City but also in Ho Chi Minh City. in the provinces. This means that KFC has more and more competitors. Points can be mentioned: Lotteria, Jollibee, McDonald,...In which:
  - Lotteria: is a chain of fast food restaurants belonging to Lotte Group - one of the five largest corporations in Korea.
  - Jollibee: Compared to the two leading brands, Jollibee - a branch of the largest fast food group in the Philippines - is somewhat "born later, born late" when it took until 2005 to enter the market. Vietnam.
  - McDonald's: As one of the leading giants in the fast food industry in the world; however, McDonald's has not really succeeded in penetrating the Vietnamese market. As of early 2021, McDonald's Vietnam system only has a total of 24 locations across the country. A rather small number compared to direct competitors KFC and Jollibee.

## **1.3. Marketing strategy**

### **1.3.1. Market entry process**

Since the appearance of the first fast food restaurant of Kentucky Fried Chicken (KFC) at the Saigon Super Bowl Trade Center in late 1997, fast food has gradually entered the culinary culture of Vietnam.

KFC has faced many difficulties when approaching the Vietnamese market, when consumers are still unfamiliar with the concept of "fast food" and its taste. In addition, most of us Vietnamese still kept the habit of eating at home or the company canteen, eating out was quite luxurious at that time. The layout of the American fast food style is considered a foreign culture that has not been widely accepted.

Therefore, KFC has continuously suffered losses for 7 consecutive years since having its first store. The number of KFC stores grew very slowly and after 7 years there were only 17 stores. This slow development is due to the fact that KFC's distribution system is mainly expanded through retail space leasing, but the fees for opening a store and renting space are very high, so it is difficult to have more stores. . To overcome these initial difficulties, KFC has come up with important strategies in terms of products, prices and distribution systems.

In the first steps of entering the Vietnamese market, KFC used reasonable pricing tactics to enter the market cautiously, using low prices to attract a large market share before competitors caught up. In addition, KFC also defined a clear distribution strategy, hitting the youth's preference for Western style and professionalism.

Accordingly, potential customers that KFC targets are young people and this is also a long-term business strategy goal of KFC, in line with the young population structure of Vietnam.

In addition, KFC has started to launch dishes that are more tame according to the Vietnamese taste culture such as:

Main dishes such as:

- Grilled chicken with foil
- Old crispy boneless
- Crispy old basil

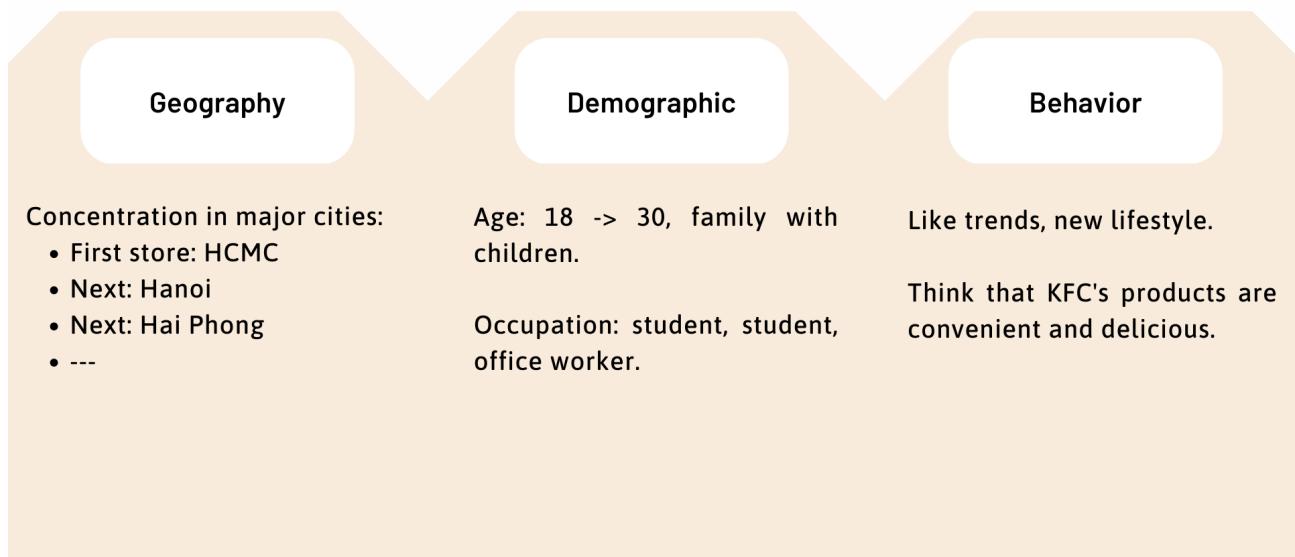
- Lemongrass chicken
- Chicken rice,...

Some desserts such as:

- Egg tarts
- Jam cake...

KFC also adds rice-based dishes to its lunch and dinner menu.

### **1.3.2. Market Segmentation**

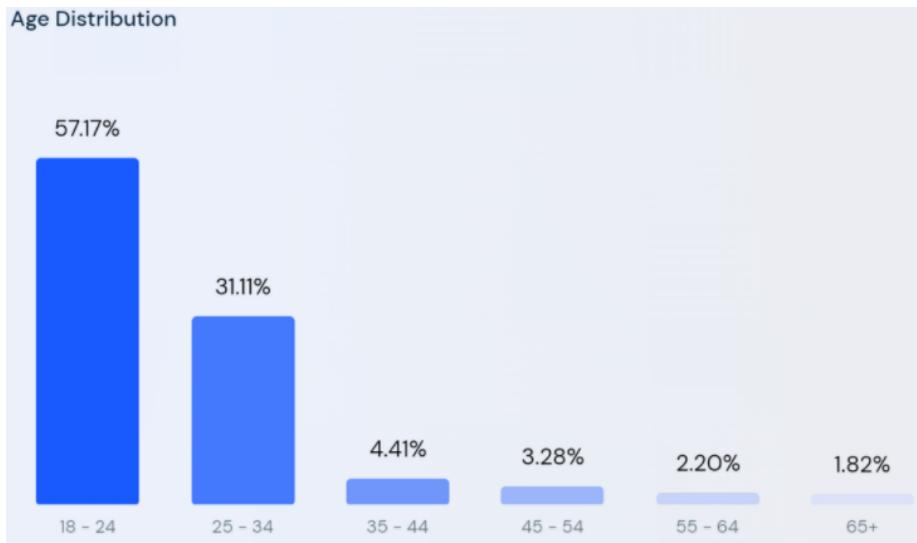


*Figure. Market Segmentation*

### **1.3.3. Targeting**

Vietnam, especially young people, is in the "golden population" period, but children-young people like to eat fast-food.

This is the customer segment by age of KFC in Vietnam. It can be easily seen that the age of "young people" from 18 to 24 is the most.



*Figure. The customer segment by age of KFC in Vietnam. [3]*

#### 1.3.4. Product Positioning

##### P-product:

KFC always adapts its menu internationally to suit the taste of each region and has nearly 300 dishes on the global menu. Example: In Muslim countries and the Middle East, the chicken served by KFC is halal chicken. In India, to cater to vegetarian customers, KFC offers vegetarian sandwiches and vegetarian meals. KFC Chicken Zinger burger is the best selling product of KFC. In the US states, the KFC sandwich is the company's best-selling product. We can see that KFC is always changing its products to target many different target markets.

Chicken rice is one of the dishes that KFC focuses on developing in Vietnam because it is a familiar dish that meets the criteria of "Fast, compact, light" for a nutritious meal.

##### P-price:

KFC's Marketing Strategy used a market penetration pricing strategy, using low prices so that people would get used to the brand, then customers would introduce themselves to friends. Then, when KFC had more competitors in Vietnam, KFC's Marketing Strategy deployed higher prices than competitors. This is a psychological strategy that shows customers that higher prices mean better quality.

- Package price: KFC combines different products into combos and sells them

to customers at a lower price than if they buy each product individually.

- Optional Pricing: Customers can purchase main courses from KFC's menu and can then choose "additional dishes" or "side dishes" to use as drinks or desserts .

⇒ Customers will enjoy the combo more (buy more)

#### **P-lace:**

Customers can visit these stores and enjoy KFC products, or can order online and have the food delivered to their door. KFC offers the option of ordering food online to customers through the KFC website and can also order KFC food from the top food ordering websites and apps that KFC has partnered with. In addition, the locations of KFC stores are often expensive, easy-to-see road surfaces, so it is easier to attract customers.

#### **P-romotion:**

Promotion and communication play an important role in KFC's marketing strategy, the company uses an appropriate mix of traditional and modern communication channels to create awareness and promote its products.

It is the strong product portfolio that sets itself apart from the competition. KFC uses all mediums such as TV, magazine, outdoor advertising, print press, online advertising, etc.

In addition, KFC's slogan "taste on every finger" since 1956 has become one of the most famous slogans of the 20th century.

#### **1.4. Competitor**



*Figure. Year in Vietnam*

From here we can see that KFC had a great advantage when entering the Vietnamese market at the earliest. In particular, we can see that the common point between the brands is that they all have their first store in Ho Chi Minh City. This can explain that this city is very attractive to investors and has a large consumption.

	KFC	Lotteria	McDonald	Jollibee
Gà rán truyền thống	35.000	35.000	38.000	30.000
Combo 1 người	42.000 - 84.000	43.000-86.000	79.000	55.000 - 75.000
Combo nhóm	78.000 - 254.000	136.000 - 265.000	141.000 - 299.000	139.000-295.000
Burger	41.000 - 47.000	40.000 - 134.000	75.000 - 112.000	55.000
Đồ ăn nhẹ	24.000 - 58.000	28.000 - 43.000	35.000 - 55.000	25.000-35.000
Thức uống	15.000 - 24.000	14.000 - 27.000	33.000 - 75.000	8.000- 23.000

*Figure. Compare prices between brands*

When comparing prices, McDonald's may be more expensive than other brands.

International fast food chains trying to increase market share in Vietnam are being challenged by consumers moving towards healthier options. Market research firm Euromonitor said in a recent report that international players that dominate the fast-food market are constrained in Vietnam because it is difficult to compete on price compared to local stores.

Market research firm Nielsen said in a recent report that a large percentage of Vietnamese consumers identify good health as a sign of success rather than monetary wealth. The report says increasing pollution and food scandals have made consumers more concerned about their health and that of their families.

Meanwhile, industry insiders say Vietnam's fast food market is a tough place because

local vendors provide food faster and cheaper than fast food chains.

The US channel CNBC last year reported that McDonald's and Burger King could not find a large following in Vietnam. McDonald's had just 17 stores last year, while Burger King had 13, a fraction of the number it has in other Asian countries like China and Japan. KFC entered Vietnam in 1997, took 7 years to open 17 stores and had to change the menu many times to suit local tastes. [4]

However, instead of blaming environmental causes:

- Should KFC consider its marketing strategies to overcome all threats from the market and reverse the current situation?
- Should their services and product variations be standardized to reduce costs during this market expansion?
- Would it be better to “tame” the taste and design of the product along with other elements of the marketing-mix based on local preferences?

After all, the main aim of any service provider including those in the restaurant industry is to meet the needs and expectations of the customers.

# Chapter 2: Data Collection

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## 2.1. Facebook

For our main goal to have a deeper understanding of marketing performance in the Fast food industry, we crawled data from the KFC fan page and also their competitors (McDonald and Lotteria). Thus, our team made use of an available Python library - `facebook_scraper` and `get_posts` function to select useful information supporting further analysis. Because of cyber security, data collectors are likely to deal with some obstacles by using *cookies* or *token* to access one's Facebook account.

## 2.2. Youtube

- By data scraping method, we get Youtube data through the python interpreter language. We use Youtube because it is a very popular video social networking platform in Vietnam, so it is an ideal platform for brands to promote their image. The 2 youtube channels that we use to analyze are KFC Vietnam and Jollibee Vietnam. Due to limited knowledge, we can only get youtube data of 2 brands Jollibee and KFC.
- Urlopen, BeautifulSoup, request library for crawling data content and googleapiclient.discovery to get API key.

## 2.3. Website (Foody)

- Foody is a platform that helps users search for places to eat, restaurants, eateries, bars, etc. The place allows you to find a restaurant and through comments and reviews of customers, you will check the quality of that restaurant.
- Here, the team uses python as the main language by using 2 popular data scraping libraries: beautiful soup and selenium, to get user rating data in 4 brands, kfc, mcdonald, lotteria, jollibee on eateries in HCM city.

# Chapter 3: Data Analytics and Result

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## 3.1. EDA

As mentioned above, we would like to analyze KFC's self-performance and also make a comparison with their competitors in Viet Nam fast food industry. Therefore, our team prepared at least two different data, which belong to KFC and their specific competitors.

In this part, we want to illustrate a general description of the data collected.

### 3.1.1. Facebook

Regarding KFC Vietnam, McDonald and Lotteria Facebook data, our team abstracted 11 variables with 4 categorical and 7 numeric variables. Moreover, the number of data observations is 1995 rows corresponding to 1995 KFC posts.

1	post_id	1995	non-null	int64
2	text	1952	non-null	object
3	post_text	1946	non-null	object
4	shared_text	42	non-null	object
5	original_text	0	non-null	float64
6	time	1995	non-null	datetime64[ns]
7	timestamp	1995	non-null	int64
8	image	1620	non-null	object
9	Image_factor	1995	non-null	object
10	images_description	1995	non-null	object
11	Video_factor	1995	non-null	object
12	video	360	non-null	object
13	likes	1995	non-null	int64
14	comments	1995	non-null	int64
15	shares	1995	non-null	int64
16	post_url	1995	non-null	object
17	link	644	non-null	object
18	available	1995	non-null	bool
19	Unnamed: 19	0	non-null	float64
20	was_live	1995	non-null	bool
21	fetched_time	1995	non-null	datetime64[ns]
22	like	1995	non-null	int64
23	love	1929	non-null	float64
24	haha	1251	non-null	float64
25	wow	1076	non-null	float64
26	sad	1138	non-null	float64
27	angry	603	non-null	float64
28	care	1187	non-null	float64
29	reaction_count	1995	non-null	int64
30	HashTag	1995	non-null	object

*Figure. KFC dataset statistics*

For analysis, some redundant variables will be removed. In addition, the variable react will be split into sub-variables corresponding to types of reactions, see also post text to abstract

hashtags and keywords.

post_id	text	post_text	shared_text	original_text	time	timestamp	image	image_lowquality	...	fetched_time	header	like	love	haha	wow	sad	angry	care	HashTag
5109623842403154	[KFC-GIAO-HÀNG-TÂN-NỘI] ĐÁT GÀ NGAY, LỐC ĐÉN ...	[KFC-GIAO-HÀNG-TÂN-NỘI] ĐÁT GÀ NGAY, LỐC ĐÉN ...	KFCVIETNAM.COM.VN/n[KFC-GIAO-HÀNG-TÂN-NỘI] ĐÁT...	KFCVIETNAM.COM.VN/n[KFC-GIAO-HÀNG-TÂN-NỘI] ĐÁT...	Nan	2022-12-07 00:00	1671433200	Nan	https://scontent-ord5-2.xx.fbcdn.net/vt15.525...	...	2022-12-19 18:02:48.178	Nan	21	3.0	NaN	NaN	NaN	NaN	[KFC, 'KFCVietnam']
5109457532419785	[KFC-GIAO-HÀNG-TÂN-NỘI] ĐÁT GÀ RUỘC LỐC, CHÂN...	[KFC-GIAO-HÀNG-TÂN-NỘI] ĐÁT GÀ RUỘC LỐC, CHÂN...			Nan	2022-12-02 30:00	1671417000	https://scontent-ord5-2.xx.fbcdn.net/vt39.308...	https://scontent-ord5-2.xx.fbcdn.net/vt39.308...	...	2022-12-19 18:02:50.108	Nan	585	17.0	2.0	3.0	NaN	NaN	[KFC, 'KFCVietnam', 'KFCDatGatNgayLocDenTai']
5101608996537972	Vì ngọt mới gọi, chẳng thể ngán cách làm KFC #...	Vì ngọt mới gọi, chẳng thể ngán cách làm KFC #...			Nan	2022-12-14 30:01	1671373801	https://scontent-ord5-2.xx.fbcdn.net/vt39.308...	https://scontent-ord5-2.xx.fbcdn.net/vt39.308...	...	2022-12-19 18:02:53.541	Nan	561	20.0	1.0	1.0	NaN	NaN	[KFC, 'KFCVietnam']
5101603133205225	Chọn món ăn ngọt, mồi lôi đì nèng nèng KFC #KFC	Chọn món ăn ngọt, mồi lôi đì nèng nèng KFC #KFC			Nan	2022-12-14 30:01	1671287401	https://scontent-ord5-2.xx.fbcdn.net/vt39.308...	https://scontent-ord5-2.xx.fbcdn.net/vt39.308...	...	2022-12-19 18:03:02.521	Nan	585	23.0	1.0	1.0	NaN	NaN	[KFC, 'KFCVietnam']
5092188784146660	GÀ MIẾNG GIÒN, MẮM TIỀN LƠI/n/nThêm gà mà ngai...	GÀ MIẾNG GIÒN, MẮM TIỀN LƠI/n/nThêm gà mà ngai...			Nan	2022-12-02 30:02	1671244202	https://scontent-ord5-2.xx.fbcdn.net/vt39.308...	https://scontent-ord5-2.xx.fbcdn.net/vt39.308...	...	2022-12-19 18:03:11.297	Nan	28	1.0	NaN	NaN	1.0	NaN	[KFC, 'KFCVietnam', 'KFCGaiMengNuggets']

Figure. Extract 5 rows of optimized data

### 3.1.2. Youtube

KFC Vietnam	Jollibee Vietnam																
<ul style="list-style-type: none"> <li>- 130K subscribers</li> <li>- Website: <a href="#">KFC Vietnam - YouTube</a> <table border="1"> <tr> <td>Count of Title</td> <td>9,076</td> </tr> <tr> <td>Likes</td> <td>18,652,455</td> </tr> <tr> <td>Views</td> <td>5,525,533,083</td> </tr> <tr> <td>Comments</td> <td>1,104,450</td> </tr> </table> </li> <li>- 9076 equivalent posts will have 9076 lines in the dataset</li> <li>- Date of data: from <b>May 10, 2011</b> to <b>November 14, 2022</b>.</li> </ul>	Count of Title	9,076	Likes	18,652,455	Views	5,525,533,083	Comments	1,104,450	<ul style="list-style-type: none"> <li>- 343K subscribers</li> <li>- Website: <a href="#">Jollibee Vietnam - YouTube</a> <table border="1"> <tr> <td>Count of Title</td> <td>5,200</td> </tr> <tr> <td>Likes</td> <td>86,925,600</td> </tr> <tr> <td>Views</td> <td>43,257,019,600</td> </tr> <tr> <td>Comments</td> <td>1,073,200</td> </tr> </table> </li> <li>- 5200 equivalent posts will have 5200 lines in the dataset</li> <li>- Data of data: from <b>November 2, 2015</b> to <b>October 3, 2022</b>.</li> </ul>	Count of Title	5,200	Likes	86,925,600	Views	43,257,019,600	Comments	1,073,200
Count of Title	9,076																
Likes	18,652,455																
Views	5,525,533,083																
Comments	1,104,450																
Count of Title	5,200																
Likes	86,925,600																
Views	43,257,019,600																
Comments	1,073,200																

Table. Overview youtube data

Compared to kfc and jollibee's youtube media, jollibee's channel is more developed, and more attractive. with only 5,200 posts, much less than KFC is 9 076 posts that Jollibee brings in total likes, and views are much more prominent, much more prominent than KFC. Regarding the comments on both channels, KFC has a little more than Jollibee, but with a higher number of posts than Jollibee, that number is not significant.

The number of subscribers to the channel in Jollibee is also higher than that of the channel subscribers at KFC, it can be seen that Jollibee's youtube media campaign is much more prominent than that of KFC.

Describe fields of youtube data:

- + Likes: the number of likes in 1 post.

- + Dislikes: Null.
- + Views: the number of views in 1 post.
- + Comments: the number of comments in 1 post.
- + Title: The title of the post .
- + Category\_id: Category post ID.
- + Tags: the topic of the post.
- + Written\_day: date the post was posted.
- + Written\_time: time the post was posted.

### 3.1.3. Foody

- Restaurant data:

Name	Description	Type
<ul style="list-style-type: none"> <li>- Tên</li> <li>- Đánh giá</li> <li>- Vị trí</li> <li>- Chất lượng</li> <li>- Phục vụ</li> <li>- Không gian</li> <li>- Lượt đánh giá</li> <li>- Vị trí chi tiết</li> </ul>	<ul style="list-style-type: none"> <li>- Restaurant name</li> <li>- Average rating</li> <li>- Location rating</li> <li>- Quality rating</li> <li>- Serving rating</li> <li>- Space rating</li> <li>- Sum reviews</li> <li>- detail restaurant address</li> </ul>	<ul style="list-style-type: none"> <li>- nvarchar</li> <li>- integer</li> <li>- integer</li> <li>- integer</li> <li>- integer</li> <li>- integer</li> <li>- integer</li> <li>- nvarchar</li> </ul>

- Review data:

Name	Description	Type
<ul style="list-style-type: none"> <li>- Địa điểm</li> <li>- Tên người dùng</li> <li>- Đánh giá chung</li> <li>- Ngày đánh giá</li> <li>- Tiêu đề</li> <li>- Nội dung</li> </ul>	<ul style="list-style-type: none"> <li>- Restaurant name</li> <li>- Name of review user</li> <li>- Review rating average</li> <li>- Date of the review</li> <li>- Review tile</li> <li>- Review content</li> </ul>	<ul style="list-style-type: none"> <li>- nvarchar</li> <li>- nvarchar</li> <li>- integer</li> <li>- date</li> <li>- nvarchar</li> <li>- nvarchar</li> <li>- nvarchar</li> </ul>

- Overview Foody data of 4 brand:

	<b>KFC</b>	<b>Jollibee</b>	<b>Lotteria</b>	<b>McDonald</b>
<b>Restaurant data</b>	62 rows	26 rows	76 rows	37 rows
<b>Review data:</b>	1370 rows	669 rows	1903 rows	879 rows
<b>Website:</b>	<a href="#">Gà Rán KFC - HCM   Foody.vn</a>	<a href="#">Gà Rán Jollibee - Thành Phố Hồ Chí Minh   Foody.vn</a>	<a href="#">Lotteria - Gà Rán - Sài Gòn   Foody.vn</a>	<a href="#">McDonalds</a>

### 3.2. Marketing analysis

#### 3.2.1. Facebook

##### 3.2.1.1. KFC general views



Figure. General information about page actions

Generally, our data stored information of KFC\_VN in one year (2021-2022). In the period of one year, KFC had 1995 posts with 1995 reactions per post on average.

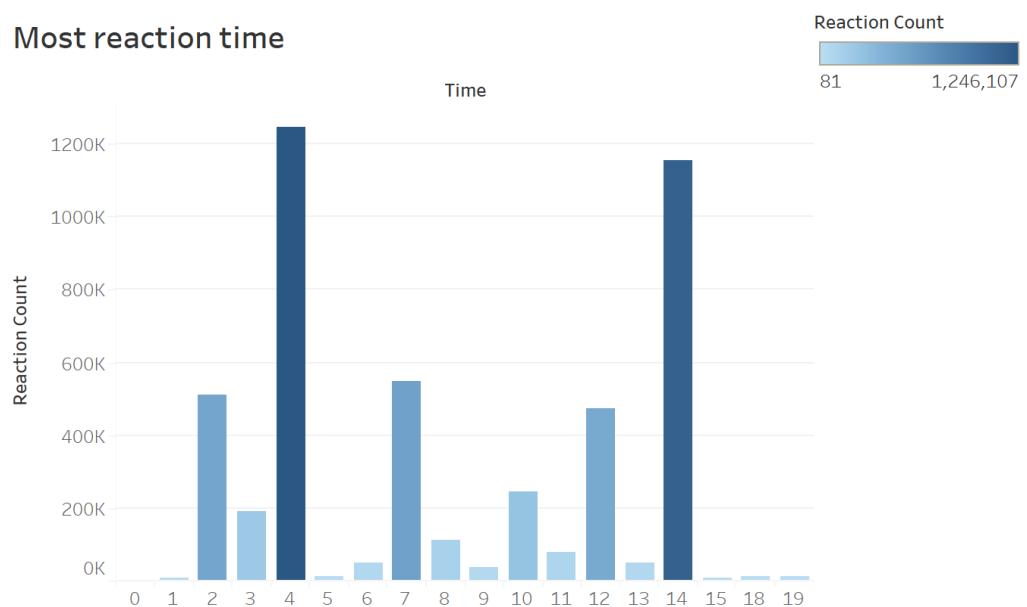


Figure. Post time by reactions

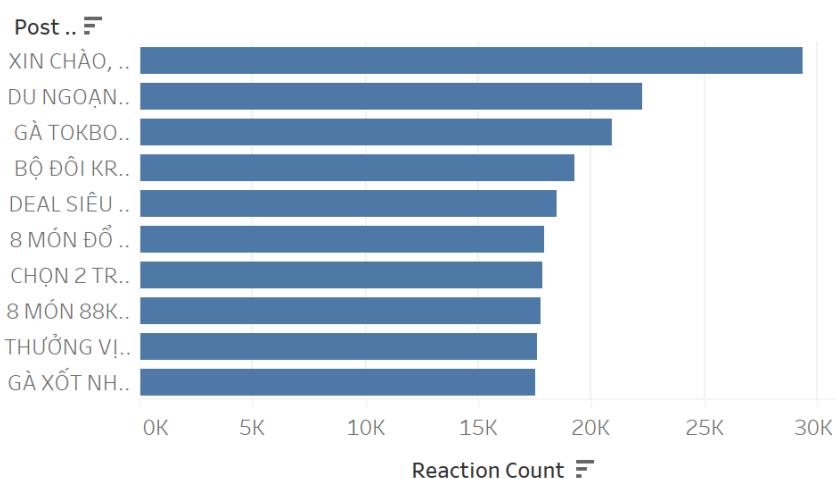
According to the graph, 4 am and 14 pm is the time that attracts the most reaction amount standing at about 1 million reactions of entire posts.

Image factor	Video factor	
No	No	4,734
	Yes	59,484
Yes	No	4,689,811

*Figure. Reactions impact on image and video*

There are some posts that do not have both image and video factors but most of the time their posts will include whether video or image factors. However, image posts' reactions outnumbered video ones.

### Top 10 posts by reactions



*Figure. Top10 posts by reactions*

At the top 10 posts having the most reactions, all posts were created in 2022. This may bring about the results of economic revivals after COVID-19.



*Figure. Top Hashtag by individual reactions*

As can be seen, #KFC and #KFCVietnam are 2 keywords mentioned in almost all posts considering article keywords to data bias. In addition, keywords such as ComboSieuUuDai, KFCSaladHat, and 88k8mon ... are also keywords that receive a lot of reactions from customers. In general, customers are likely to be interested in promotions from this page.

Giải lon ngày mua dụng Khoai mãi giao gồm  
Cơm đến ly trình GÀ và không giá vừa  
đồng nhận bánh với tại hàng NGON THƯỞNG  
cho đặc ưu KFC Chương Pepsi Combo để  
giòn Miếng Chiên Tây được ngay áp các trên  
chỉ xốt nhà từ Nuggets bao đơn

### *Figure. Test content impacts reactions.*

Similarly, we have a world cloud figure to demonstrate which related words appear in posts. It can be seen that KFC concentrated on dishes promotion and most of which mentioned the menu of cuisines.

### 3.2.1.2. Comparison

	LOTTERIA	KFC	MCDONALD
CREATED TIME	January 4, 2012	March 31, 2010	August 22, 2013
FOLLOWERS	1,397,039	58,639,053	82,020,033
LIKES	1,398,200	58,629,429	82,015,862

*Table. Overview comparison of 3 brands*

In spite of the pioneering position, the number of KFC's followers are considerably less than that of McDonald's, nearly 30 million dollars.



*Figure. McDonald overview post*

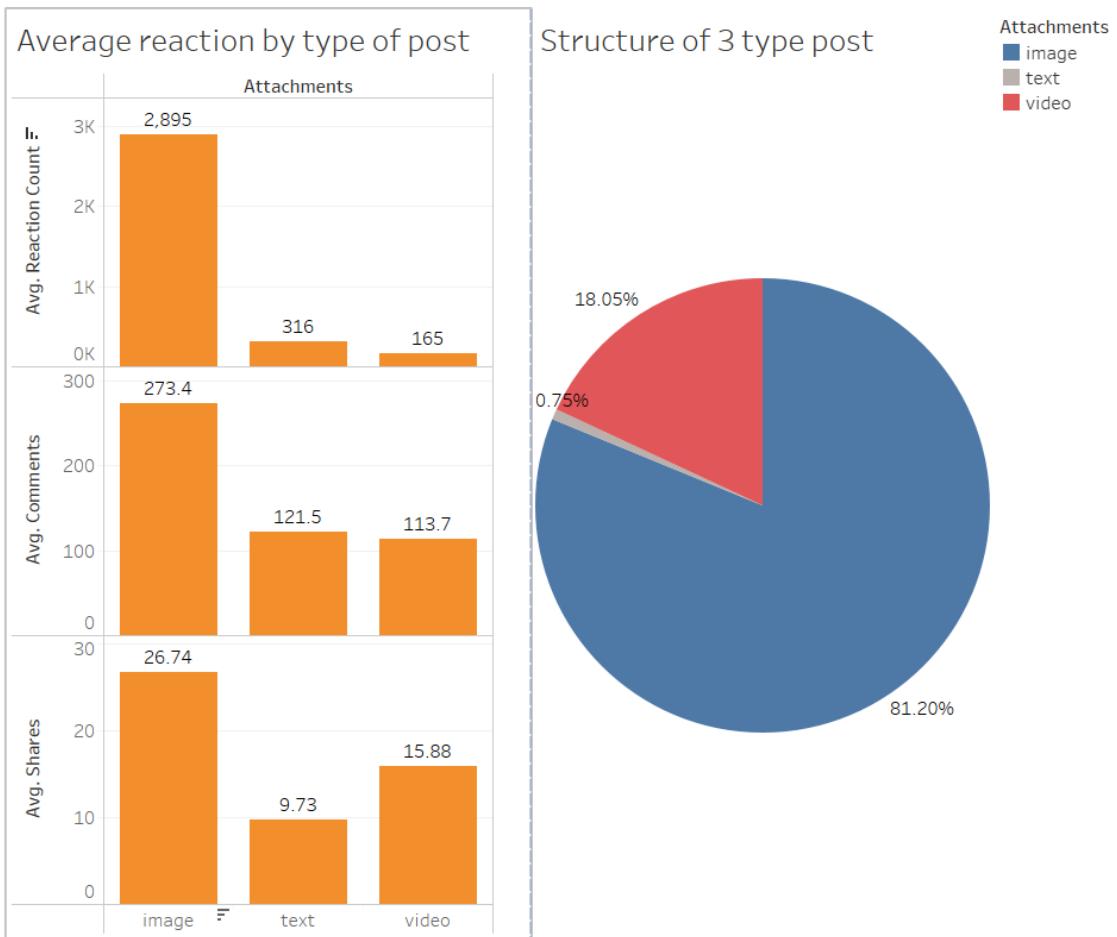
Specifically, McDonald created 1996 posts, which were the same as in KFC. This can be said that the more active posts, the more reactions that page attracts.



*Figure. Lotteria overview post*

Regarding the Lotteria page, they have only 596 posts with nearly 400 thousand reactions per post. This means that Facebook may not be their main social media selected to do any marketing strategies.

- Reaction by 3 types of post



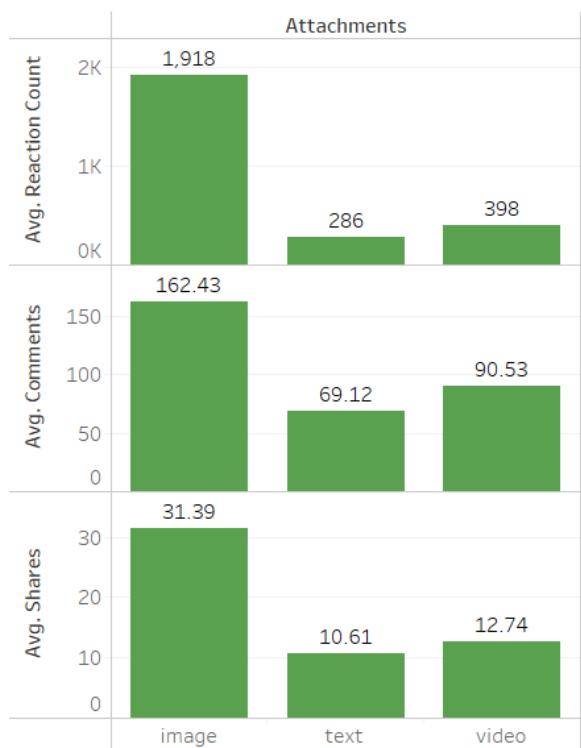
*Figure. KFC's types of posts*

KFC's posts accounted for the majority of posts with images at 81.2%, and only text made up a very low proportion, which was solely about 0.75%.

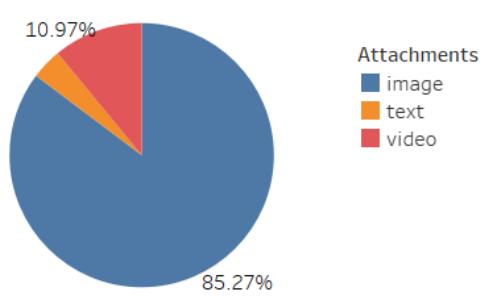
Looking at all 3 genres, the post with the image element has a much higher interaction, the reaction with the image has nearly 2,900 interactions, but the interaction with video and text is only about 300 reactions.

The amount of interaction on shares and comments with posts with video and text is higher for posts with videos than with text only. especially the interaction in the sharing section.

Average reaction by type of post



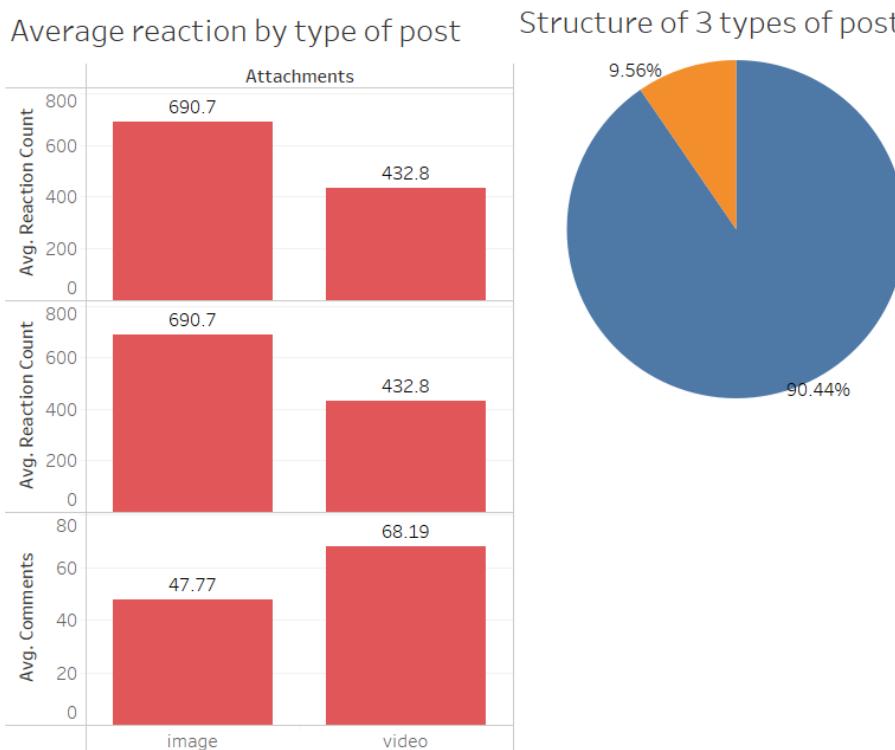
Struture of 3 types of post



*Figure. McDonald's types of posts*

Similar to KFC, McDonald's also has a high engagement for posts with images, while posts with videos and only photos have approximately the same amount of interaction.

McDonald has a high share with more text-only posts and fewer video posts.



*Figure. Lotteria's types of posts*

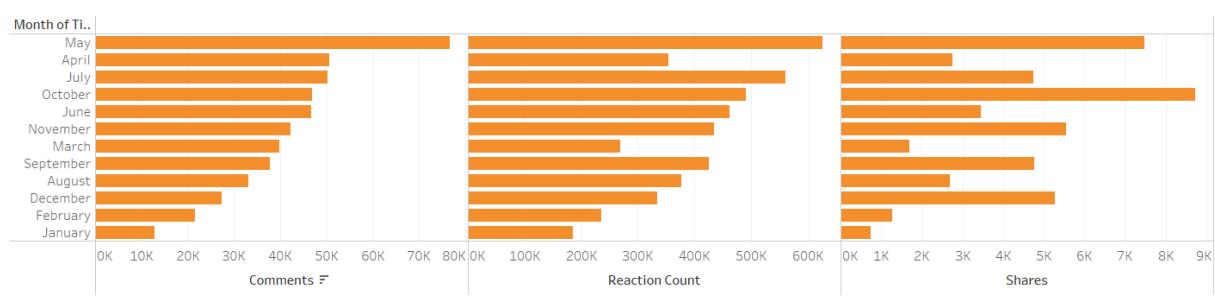
Unlike the above two brands, Lotteria only publishes articles in the form of a few videos and images, the amount of interaction for Lotteria's videos is quite high, almost equal to the amount of interaction with posts that are images, especially the amount of interaction. Comments on videos are more influential than comments on images.

Overall, all three brands post in the form of images, with higher engagement on images than both text-only and video-only posts. Regarding KFC's Facebook page, KFC has the fewest video posts, and KFC's videos are not as attractive compared to Lotteria.

- **Reactions by time:**

- **By months:**

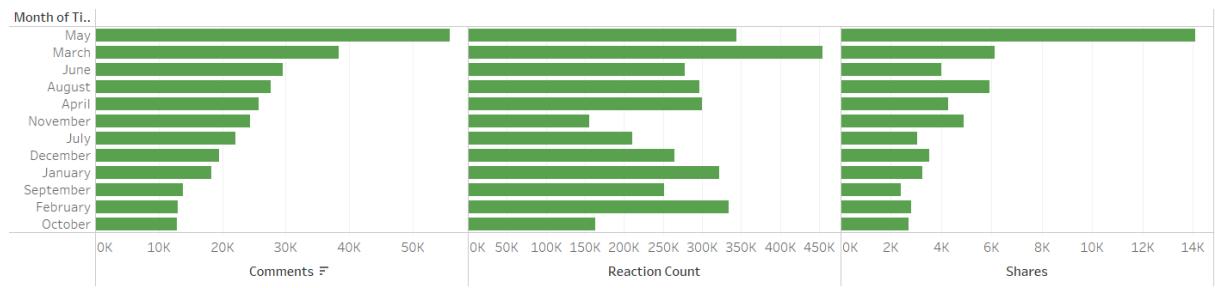
## KFC



*Figure. Bar chart KFC post reaction by months*

It is observed that Summer was the season having the number of reactions outnumbered other months. With 192 posts in total, KFC owned about 78 thousand comments and more than 600 thousand reactions in May. This may be a result of effective strategy promotions for students coming on their Summer vacations.

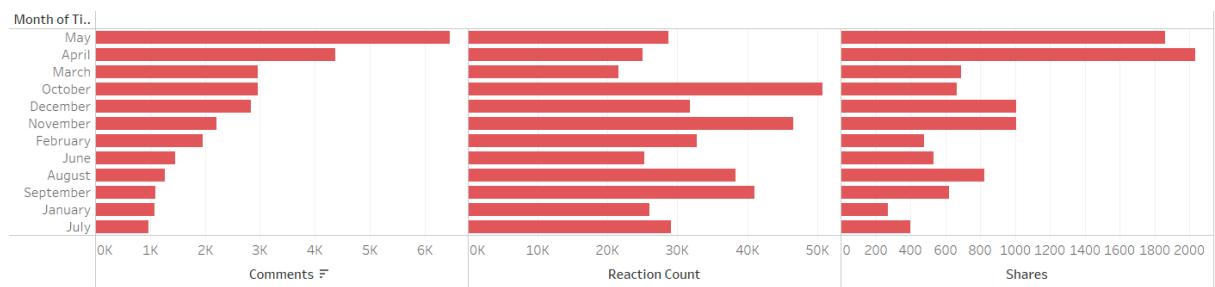
### **McDonalds**



*Figure. Barchart McDonald post reaction by months*

Similar to McDonald's case, May is the month that attracted the highest number of comments and shares, while that in the reaction was March instead.

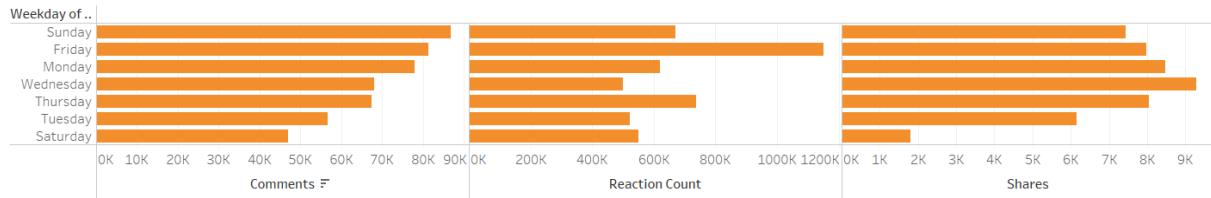
### **Lotteria**



*Figure. Barchart Lotteria post reaction by months*

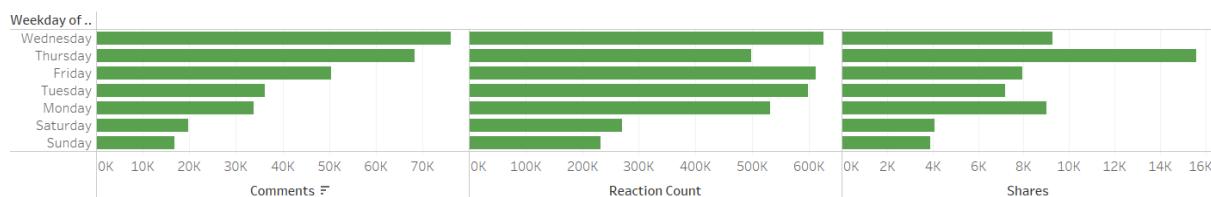
Having a more modest number of posts, it was at the end of the year when Lotteria attracted the highest number of reactions, while that for Comments and Shares was May.

- **By weekday**



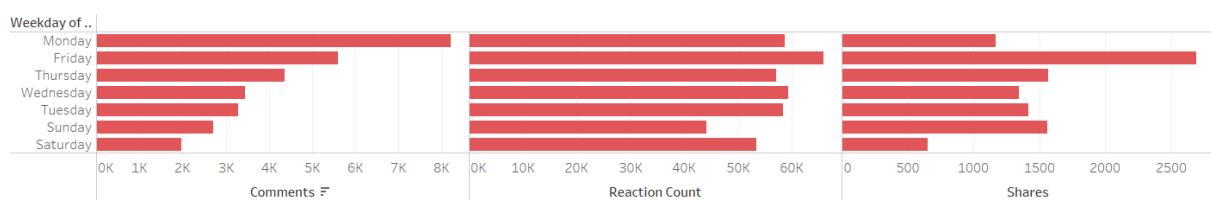
Sum of Comments, sum of Reaction Count and sum of Shares for each Time Weekday.

*Figure. Bar chart KFC's reactions by weekday.*



Sum of Comments, sum of Reaction Count and sum of Shares for each Time Weekday.

*Figure. Bar chart McDonald's reactions by weekday.*

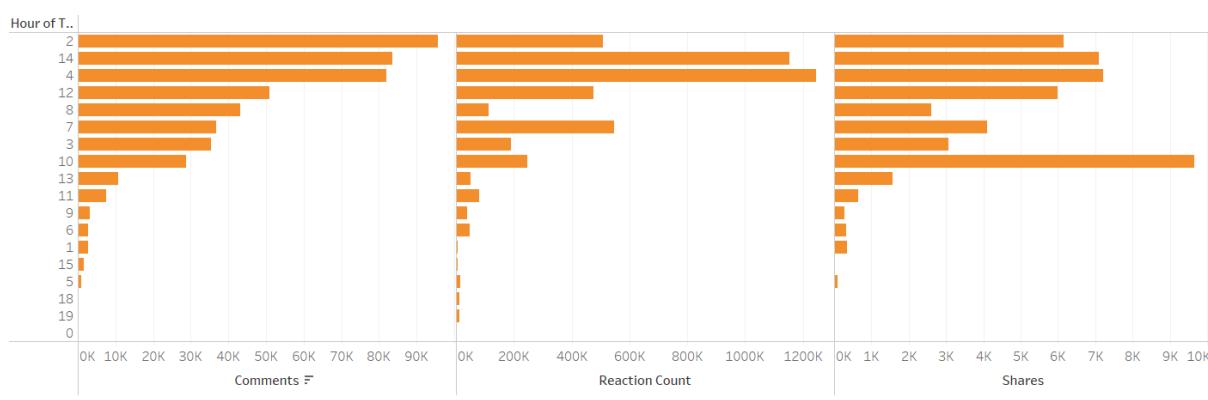


Sum of Comments, sum of Reaction Count and sum of Shares for each Time Weekday.

*Figure. Bar chart Lotteria's reactions by weekday.*

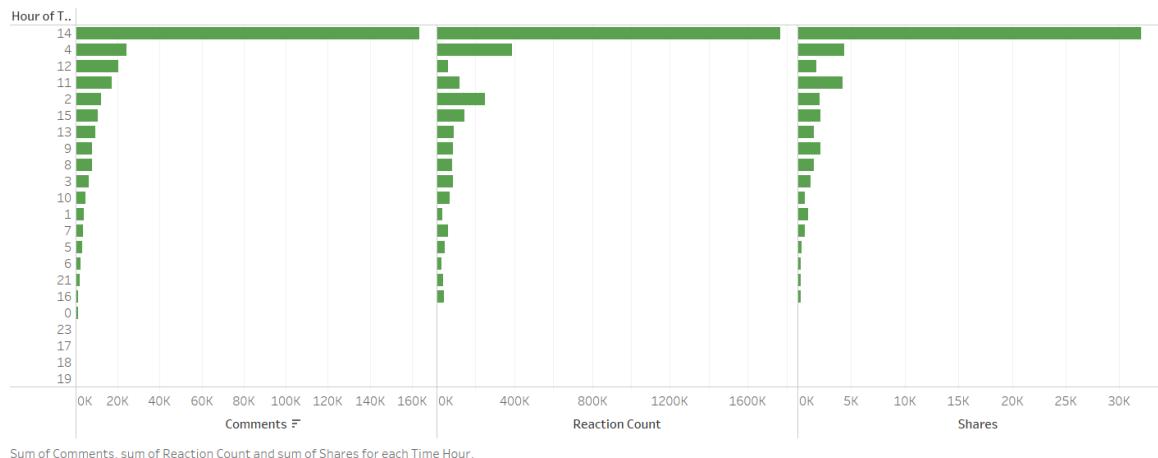
Regarding reactions distributed on weekdays, the weekends attracted most customers, especially on Sundays, while those in McDonald and Lotteria were on Wednesdays and Mondays respectively. This may be related to the different target customers of each brand, specifically, both Lotteria and McDonald's customers are workers contrasting to the young in KFC.

#### - By days:



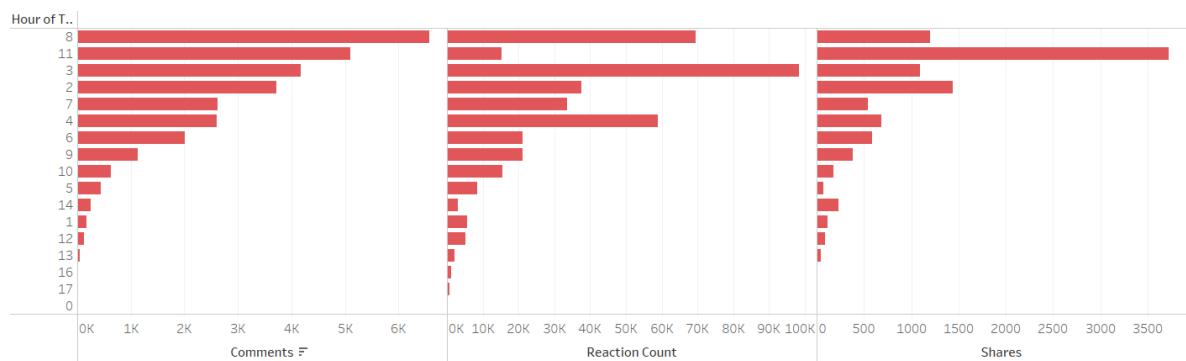
Sum of Comments, sum of Reaction Count and sum of Shares for each Time Hour.

*Figure. KFC reactions by hour of created posts.*



Sum of Comments, sum of Reaction Count and sum of Shares for each Time Hour.

*Figure. MC Donald reactions by hour of created posts.*



Sum of Comments, sum of Reaction Count and sum of Shares for each Time Hour.

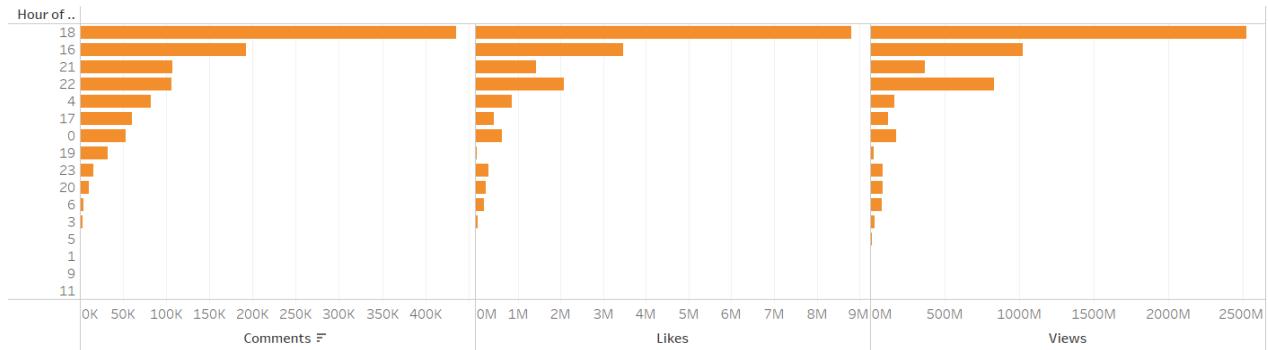
*Figure. Lotteria reactions by hour of created posts.*

In terms of posts created at about 2 pm from KFC and McDonald's, they considered the appropriate time to publish posts but this may be quite different from Lotteria's case.

### 3.2.2. Youtube

- **Reactions by hours**

**KFC**

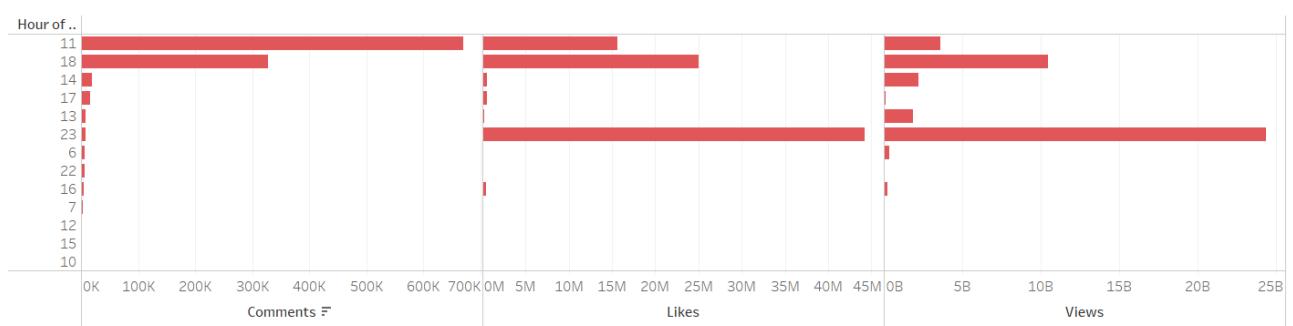


Sum of Comments, sum of Likes and sum of Views for each Written time Hour.

*Figure. KFC reactions by hour of created posts*

KFC has high interaction in the evening hours from 4pm to 10pm and the time to achieve outstanding interaction is at 6pm.

## Jollibee



Sum of Comments, sum of Likes and sum of Views for each Written time Hour.

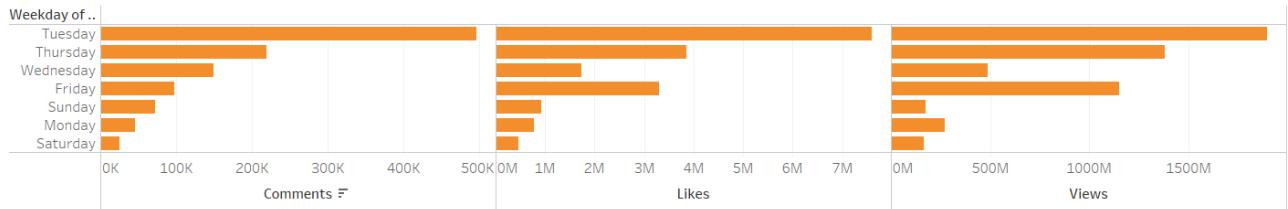
*Figure. Jollibee reactions by hour of created posts*

Jollibee has quite high interaction at 11pm and 6pm, quite similar to kfc, but jollibee channel's 11am has quite high interaction, while KFC is very low.

While KFC's views are only up to a few hundred million, Jollibee's views have reached several billion. The high interaction between users and Jollibee's youtube channel can be seen.

- **Reaction by weekday**

## KFC

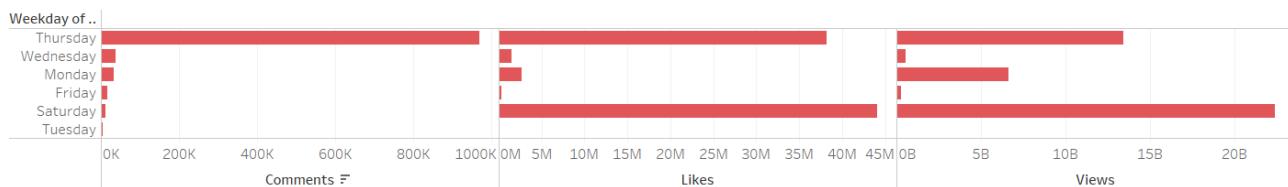


Sum of Comments, sum of Likes and sum of Views for each Written day Weekday.

*Figure. KFC reactions by weekday of created posts*

KFC has high engagement on Tuesdays, Thursdays, and Fridays. especially on Tuesday, the number of views, comments, and likes are all much higher than on Thursdays and Fridays.

## Jollibee



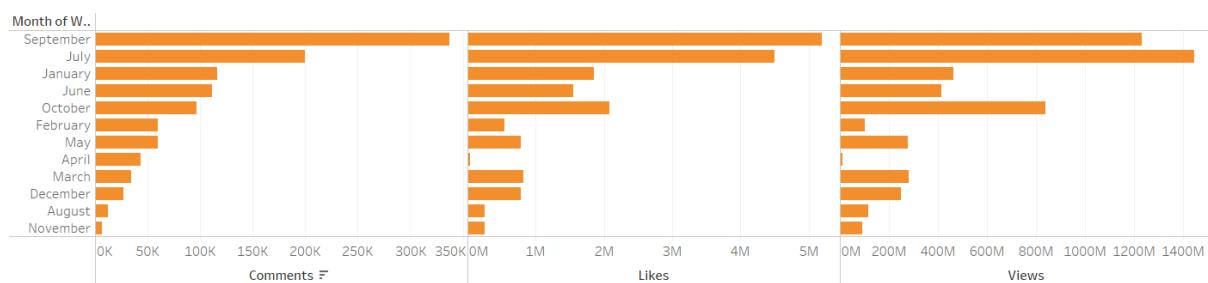
Sum of Comments, sum of Likes and sum of Views for each Written day Weekday.

*Jollibee reactions by weekday of created posts*

Similar to KFC, Jollibee's channel also has high interaction on Thursdays, but it has interactions on Saturdays and Mondays, two things that KFC has very low interaction. Besides, Jollibee doesn't post a single video on Sunday

## • Reaction by months

### KFC

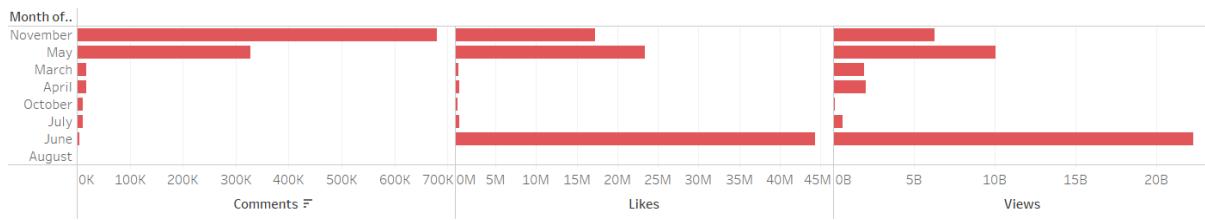


Sum of Comments, sum of Likes and sum of Views for each Written day Month.

*Figure. KFC reactions by months of created posts*

KFC has high engagement in September, July and October, and the highest is in September and July, in the third quarter of the year.

## Jollibee



Sum of Comments, sum of Likes and sum of Views for each Written day Month.

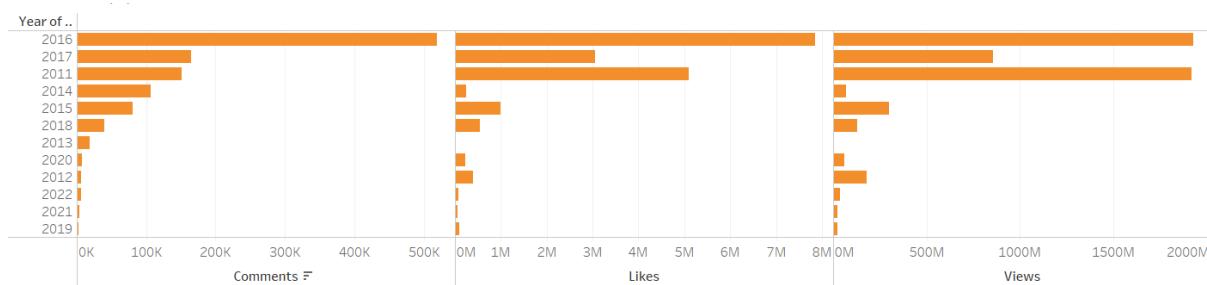
*Figure. Jollibee reactions by months of created posts*

Unlike KFC, Jollibee has the highest engagement in November, May, and August

In general, both brands have high interaction in the fall.

### • Reactions by years

#### KFC

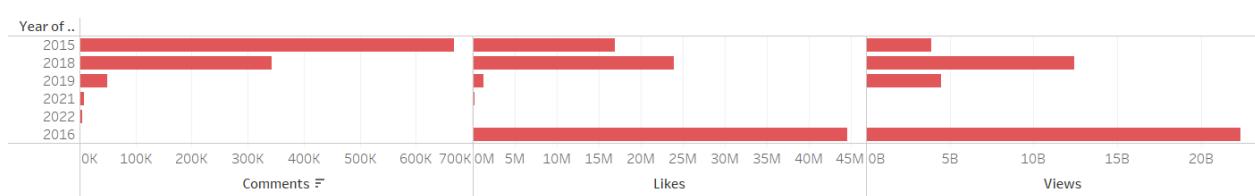


Sum of Comments, sum of Likes and sum of Views for each Written day Year.

*Figure. KFC reactions by years of created posts*

Compared to the years, the videos with high engagement are quite old, falling in the period 2011 to 2016, a long time ago. For 2019 to 2022, KFC's youtube videos have relatively low engagement.

#### Jollibee



Sum of Comments, sum of Likes and sum of Views for each Written day Year.

*Figure. Jollibee reactions by years of created posts*

Similar to KFC, jollibee's youtube videos with high engagement are also quite old in the period 2015-2016, but in general, the interaction in recent years is still higher than that of

KFC, especially 2018 and 2019 still have a high interaction, in which in 2020, Jollibee does not post any videos on youtube.

And if look at the year, jollibee's interaction is very prominent compared to KFC.

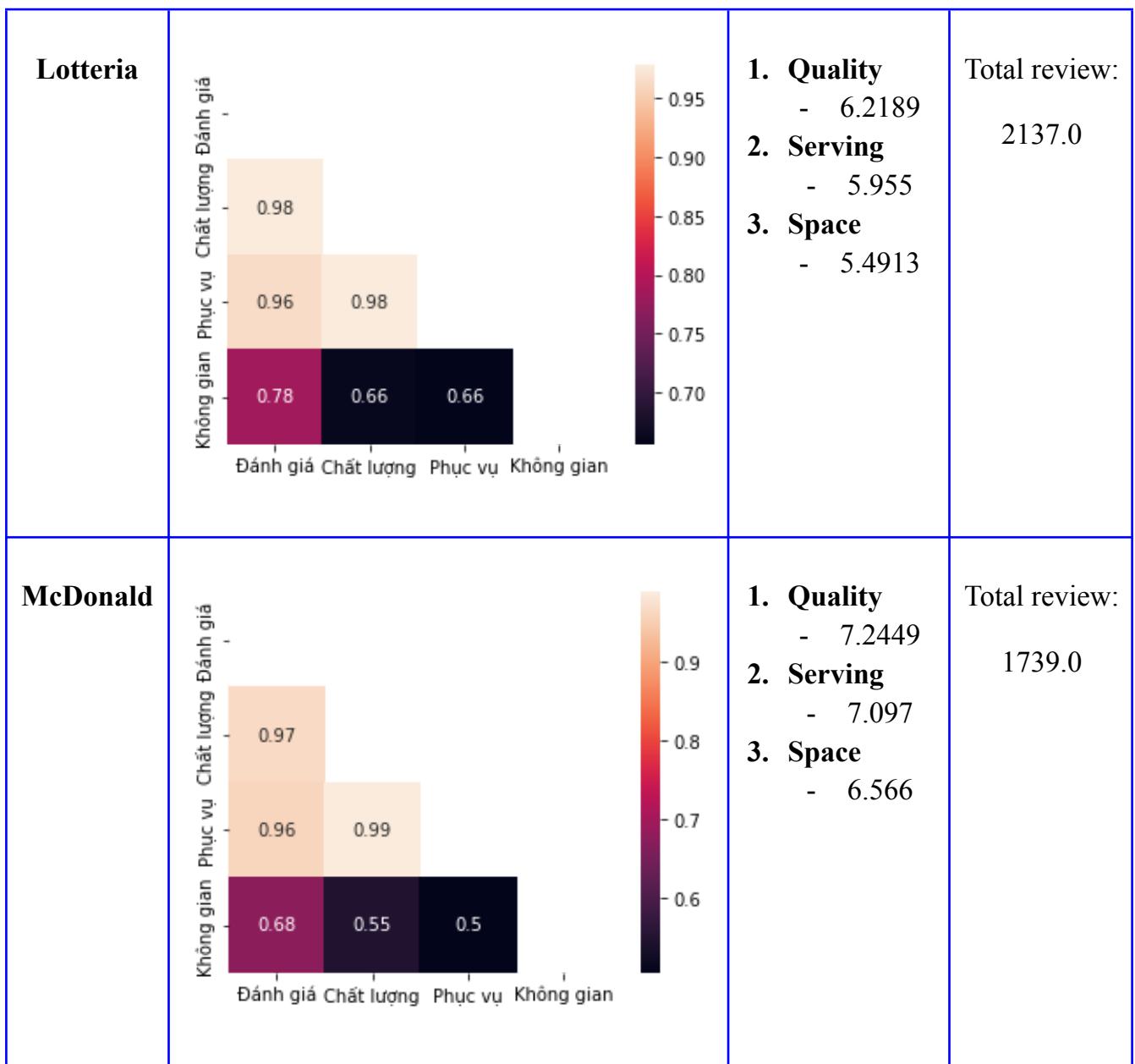
### 3.3. Business performance of branches analysis

Foody: Foody data will be experiences, direct reviews from customers, at all food stores of 4 brands KFC, McDonald, Lotteria, Jollibee in Ho Chi Minh City area.

#### 3.3.1. Overview Foody data

Comparison of 4 brand:

	Correlation	Average	Sum reviews																									
KFC	<table border="1"> <thead> <tr> <th></th> <th>Đánh giá</th> <th>Phục vụ</th> <th>Chất lượng</th> <th>Không gian</th> </tr> </thead> <tbody> <tr> <th>Đánh giá</th> <td>0.99</td> <td>0.96</td> <td>0.94</td> <td>0.95</td> </tr> <tr> <th>Phục vụ</th> <td>0.96</td> <td>-</td> <td>0.91</td> <td>0.97</td> </tr> <tr> <th>Chất lượng</th> <td>0.94</td> <td>0.91</td> <td>-</td> <td>0.97</td> </tr> <tr> <th>Không gian</th> <td>0.95</td> <td>0.97</td> <td>0.91</td> <td>-</td> </tr> </tbody> </table>		Đánh giá	Phục vụ	Chất lượng	Không gian	Đánh giá	0.99	0.96	0.94	0.95	Phục vụ	0.96	-	0.91	0.97	Chất lượng	0.94	0.91	-	0.97	Không gian	0.95	0.97	0.91	-	<ul style="list-style-type: none"> <li>1. Quality - 6.493</li> <li>2. Serving - 6.3283</li> <li>3. Space - 6.104</li> </ul>	Total review: 1390.0
	Đánh giá	Phục vụ	Chất lượng	Không gian																								
Đánh giá	0.99	0.96	0.94	0.95																								
Phục vụ	0.96	-	0.91	0.97																								
Chất lượng	0.94	0.91	-	0.97																								
Không gian	0.95	0.97	0.91	-																								
Jollibee	<table border="1"> <thead> <tr> <th></th> <th>Đánh giá</th> <th>Phục vụ</th> <th>Chất lượng</th> <th>Không gian</th> </tr> </thead> <tbody> <tr> <th>Đánh giá</th> <td>1</td> <td>0.97</td> <td>0.96</td> <td>0.95</td> </tr> <tr> <th>Phục vụ</th> <td>0.97</td> <td>-</td> <td>0.94</td> <td>0.99</td> </tr> <tr> <th>Chất lượng</th> <td>0.96</td> <td>0.94</td> <td>-</td> <td>0.99</td> </tr> <tr> <th>Không gian</th> <td>0.95</td> <td>0.99</td> <td>0.91</td> <td>-</td> </tr> </tbody> </table>		Đánh giá	Phục vụ	Chất lượng	Không gian	Đánh giá	1	0.97	0.96	0.95	Phục vụ	0.97	-	0.94	0.99	Chất lượng	0.96	0.94	-	0.99	Không gian	0.95	0.99	0.91	-	<ul style="list-style-type: none"> <li>1. Quality - 6.807</li> <li>2. Serving - 6.627</li> <li>3. Space - 6.446</li> </ul>	Total review: 734.0
	Đánh giá	Phục vụ	Chất lượng	Không gian																								
Đánh giá	1	0.97	0.96	0.95																								
Phục vụ	0.97	-	0.94	0.99																								
Chất lượng	0.96	0.94	-	0.99																								
Không gian	0.95	0.99	0.91	-																								



*Table. An overview comparison of 4 brands*

Found a very high correlation between evaluation scores and quality in all 4 brands, and found that diners care about quality the most. Next will be the service and finally the space.

KFC's food quality, service, and space are all inferior to McDonald's and Jollibee, but it's all better than Lotteria. KFC has a total rating of 1390 lower than Lotteria and McDonald's.

Visualize customer reviews for each KFC restaurant.

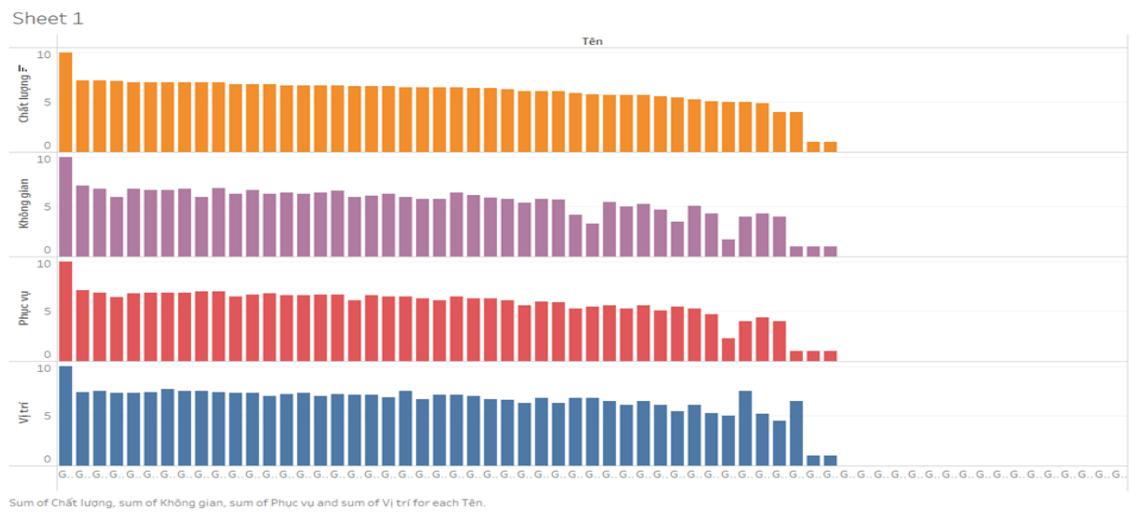
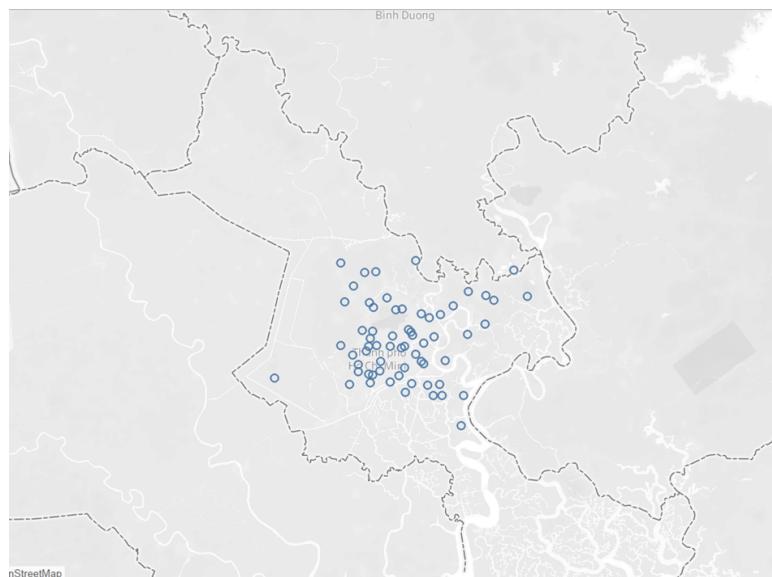


Figure. bar chart KFC restaurant reviews



*Figure. KFC locations in HCM city*

By longitude and latitude index it can be determined that most of the KFC stores will be concentrated mainly in the center of Ho Chi Minh City, most of them will be concentrated in District 7, District 5, District 3, District 1, and District 10.

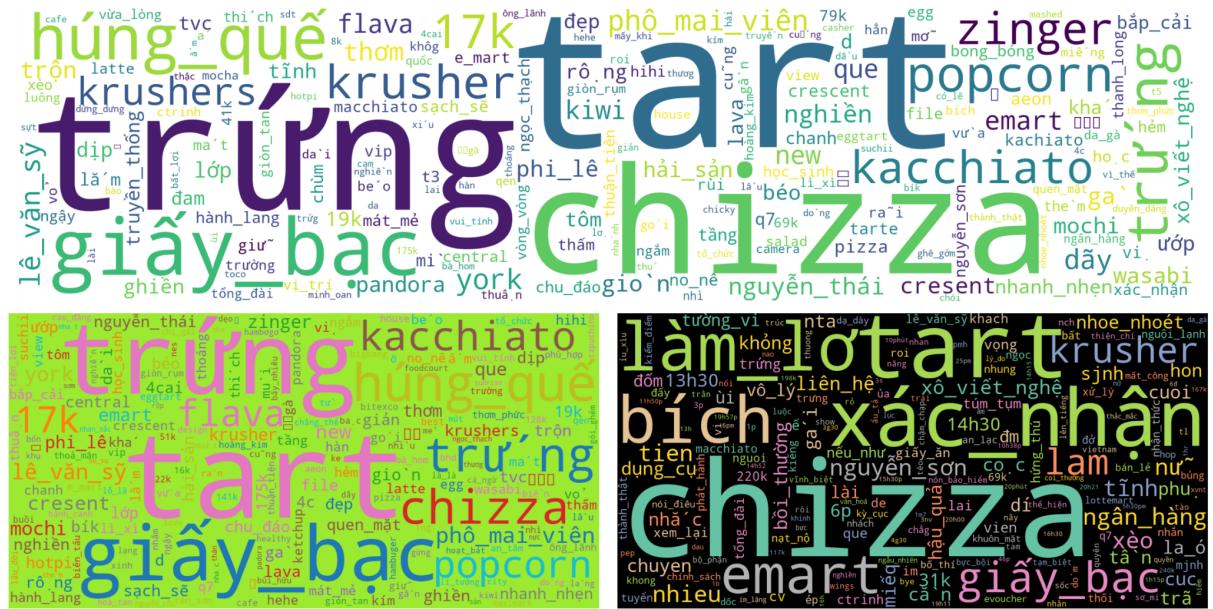
### 3.3.2. LDA

**LDA algorithm** extracts the most representative words for each brand that are rare in other brands, finally removes words that do not bring much value (stopwords), and builds wordcloud for brands by remaining word.

Word cloud will be divided into 3 parts, the white background is the typical review word of that brand, the green background is the featured word about the positive customer

comments with the overall rating above 7. and the background black will be typical negative comments of customers with overall rating below 5.5

KFC

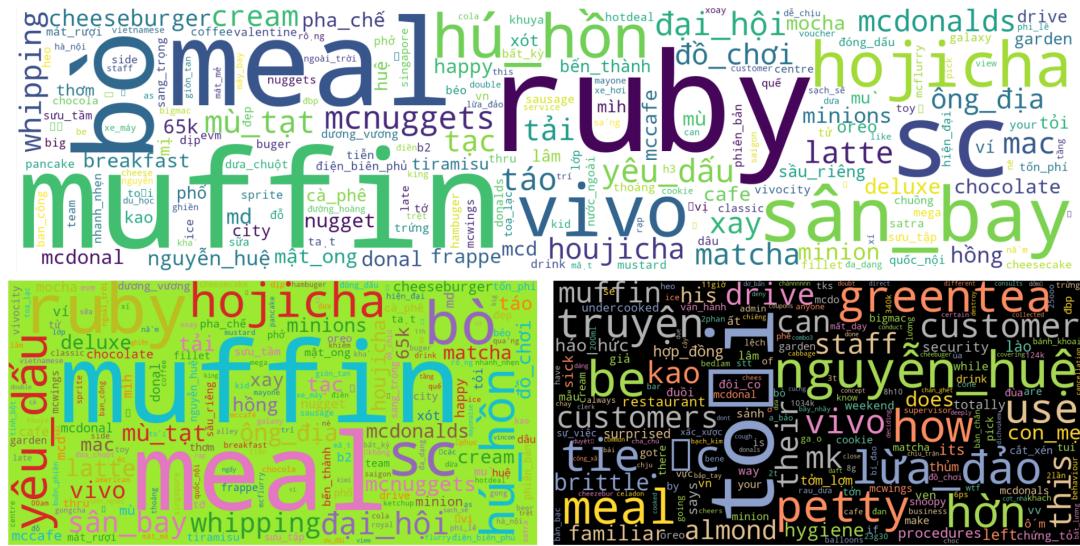


*Figure. KFC LDA*

Most of the positive comments about KFC will be related to the dishes, dishes that bring positivity to customers can be mentioned such as: eggs, tarts, basil, flava, foil chicken and drinks , the signature dessert at KFC is mochi, macchiato. In addition, the beautiful, clean space or attentive staff is a plus point at KFC. And the menus with the price of 17k also bring positive comments

However KFC's Chizza and Krusher brought negative reviews. The KFC Emart store is not appreciated by customers. In addition, negligent and unreasonable are negative adjectives when talking about KFC employees

Mc Donald

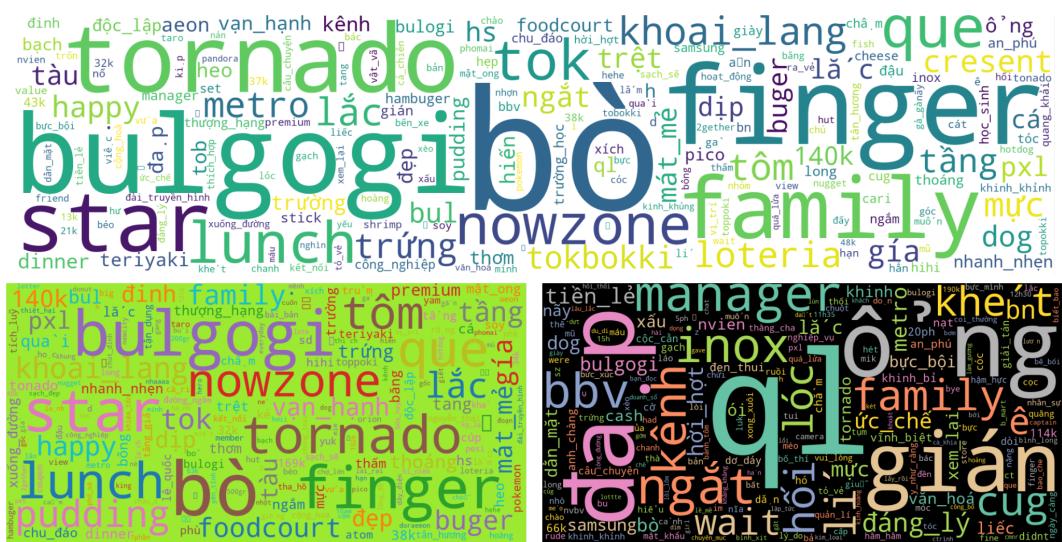


*Figure. McDonalds LDA*

McDonald's positive main dishes include chicken muffin, beef dishes, and hamburger deluxe. Besides that, whipping, hojicha, maccha, are the favorite desserts here. And airport eateries are also highly rated, and beloved is a positive adjective about McDonald.

Besides, drinks related to green tea also have quite negative reviews, so it can be seen that this is a drink that brings mixed opinions. "Eager" is the adjective that customers come to McDonalds but then give negative reviews, it can be seen that customers have quite high expectations about McDonald before coming here. and 'Scam' is a bad adjective when customers talk about McDonald

Lotteria

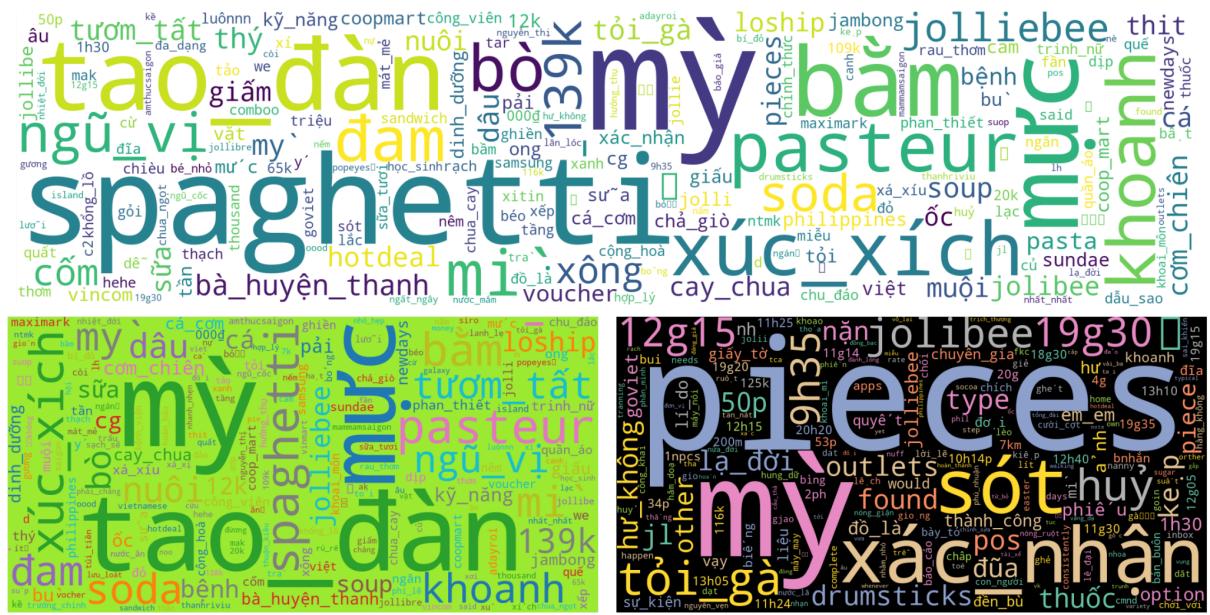


*Figure. Lotteria LDA*

Similarly, lotteria has finger fried chicken, bulgogi hamburger, and shrimp or beef dishes are also appreciated. And the desserts featured here are tornado ice cream and sweet potato shakes. Price, nimble, cool would be nice adjectives about Lotteria.

The presence of cockroaches in the cafeteria is a very negative point about lotteria. And the attitude of the staff is superficial, or contemptuous, or the food is burnt, which makes customers disappointed when coming here.

Jollibee



*Figure. Jollibee LDA*

About favorite dishes at jollibee will have less to do with chicken or hamburgers, but will involve dishes such as pasta, noodles, squid, five-spice fish, sausages. A very different menu variety than the 5 eateries above. And the eateries "Pasteur", "Tao Dan" are loved for their cleanliness. Soda is the favorite drink here, compared to other shops, Jollibee's drink is not very special.

12:15, 19:30, 9:35 are the time frames where customers complain for different reasons. And the chicken garlic dish here is not appreciated, with the noodle dish also bringing mixed opinions. And there are no special negative adjectives here.

## Chapter 4: Conclusions

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- **Facebook:**

In spite of the effectiveness of Fanpage's operation, KFC has to admit inferiority in some McDonald's indicators. And as mentioned, frequent posting strongly impacts gaining potential customers. Therefore, KFC had better increase the number of posts per day and also enhance creativity in both virtual and word content to attract more customers. In general, KFC's marketing strategy is robust and actively utilizes Facebook to attract customers, share promotions and schematics, and resolve customer grievances.

- **Youtube:**

According to research from YouTube, KFC is significantly worse than Jollibee. It is evident that Jollibee's content is much more contagious since, for instance, a well-known video in the Jollibee pandemic called "A Message from the Future" has drawn a lot of attention from viewers. Thanks to the content "catch the trend" of the epidemic scenario and the brand's demonstration of compassion and understanding. When Jollibee posted the video on its YouTube channel, it was able to garner 10.2 million views, 296 comments, and the support of a significant number of customers. Therefore, KFC should promote videos with more content and topics that can build viewers' feelings.

- **Foody:**

In general, the main menu in all 4 brands is quite similar. Special in 4 main brands is the variety of drinks and desserts. And the issue that diners care about is the cleanliness of each restaurant, and the negative comments typical of each restaurant are not specific.

Therefore, improving the quality and cleanliness of the restaurant are both necessary to improve the customer experience at KFC restaurants. And if the staff is positive and sociable, it will help KFC improve a lot in the evaluation of service quality.

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