

A Study on Impact of Food ordering Mobile Applications on Fast Food Consumption

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Abstract:

Restaurant business has gone through a major milestone in last few years due to a new model of food delivery business. The players in this industry enable food ordering from a website or a mobile phone app. The mobile phone apps provide ease of ordering from the comforts of home or office and also save time and efforts of the users. Additionally they induce more orders by giving discounts and other promotional offers on a frequent basis.

The paper aims to study if fast food consumption has been affected by introduction of such mobile apps that can be used to order food. Since fast food consumption and usage of various mobile phones apps, both are quite popular among young adults, they were used as respondents for research.

It was found that consumption of fast food has increased three times since the youth installed and started using the food ordering apps. Frequency of going to the restaurants and prefer using the apps due to ease and convenience.

The paper concludes that firms should reassign their marketing resources to encourage ordering of currently unpopular meals like breakfast and lunch and also spend on loyalty programs to incentivise frequent consumers.

Keywords: Food ordering apps, fast food consumption, sales promotion

Introduction:

We live in an era where eating out at restaurants pretty common and frequent. With the fast life in cities, the concept of fast food evolved over a period of time. Fast food meant that the food which was made available at a restaurant but needed much lesser time to be prepared after the order was placed. This concept has gained immense popularity over the last two decades. With advancement in technology, invention of smart phones and increased penetration of internet access, a lot of restaurants and independent businesses have come up

with websites and applications that enable users to order food online using their computers or smart phones. There is a wide range of options available to the users from where they can order food and have it delivered to their doorstep in very less time. When we remember timely food delivery, Dominos has a very high recall as a brand which guaranteed delivery in 30 minutes flat or the food would be free for the customer! Today local restaurants, quick service restaurant chains, coffee shops, all have a dedicated food ordering website and phone app. But what has seen a quick growth in popularity are the independent phone apps which enable you to place order for food from multiple restaurants in a single app. Zomato, Swiggy, FoodPanda, UberEats are some of the popular ones. The ever increasing consumption of restaurant food has increased even more due to these apps. This can be contributed to a variety of reasons like ease of ordering, convenience of getting food at your doorstep, less time consuming method of eating out compared to going to restaurants etc. The apps use many ways of attracting consumers towards ordering more frequently by coming up with sales promotional offers. They offer discounts on total bill, give quantity discounts such as a buy one and get one free offer. Some apps also have yearly memberships at a fee which will not only give discounts on online food ordering, but also extend to discounts on food bills at walk in visits to restaurants, thus making them even more lucrative. Apart from promotions, these apps give frequent notifications to users who have installed their apps. Such users may receive notifications which make food suggestions according to time of the day, day of the week, festivals, sports events etc. Notifications also intimate the users of current offers on food ordering which are available for a limited amount of time.

The strategy used by the food ordering apps is working of many levels. Consumers are being encouraged to order food home instead of going to restaurants. They are being encouraged to even order for a single food item without having to worry about minimum bill amount to be eligible for home delivery. They are being tempted to think of ordering even when they have not planned it, via notifications we discussed above.

What we need to study is whether consumers have marked a change in their consumption of fast food after they installed these apps. It needs to be studied if their frequency has increased post installation of food ordering apps. It will be helpful to know which benefits of using the food ordering apps are more beneficial from the consumer perspective.

Literature Review:

Bendegul Okumus (2014) found that smartphone apps are an effective channel to influence individual's behaviour changes. The services offered by such apps allow users to modify their food habits.

Spence, C. and Piqueras-Fiszman, B. (2013) suggest that there is little research data available on how smart phone apps support consumers in functions like ordering at restaurants.

Doub, A., Levin, A., Heath, C. et al (2015) found that one fifth of the food related decision makers in households had highly-favourable attitudes towards technology and food. They enjoyed ordering food from their mobile devices. This segment perceived food-related apps to be practical, had ease of usage and was enjoyable too.

Jeanne Hopkins (2015) Companies spend a lot of money on developing smart phone apps because they want to raise brand awareness, increase customer retention, expand sales and also make it easy for users to shop using the apps.

Hsiu-Yu Wang (2013) confirms that emotions have significant effect on intention to use mobile apps.

Chunawala (2007) has concluded that sales promotion techniques are all about trying to induce the consumer to make a purchase. He says that such methods work well in the short run.

Asian Journal of Marketing (2005) mentions that money spent on promoting sales is seeing a steep upward trend with each passing year.

Sherlekar (2009) suggests that when a firm decreases the price of a product, consumer is induced to buy a higher quantity than planned or purchased in the past, of the same product.

Sherlekar (2009) suggests that when a firm increases the amount of money it plans to invest in promotions, it has a direct impact on its sales figures within the same time period.

Huda and Hossain (2009) note a growing preference towards and popularity of fast food. Competitive pricing as well as variety offered in terms of fast food have a bearing on its sales.

Objective of study:

- To compare if there is a change in frequency of ordering food after installing/using food ordering apps.
- Reasons for using food ordering apps
- Impact of notifications sent by food ordering apps on food consumption

Methodology of study:

Purpose of research: This paper helps to study the impact of food ordering mobile applications on fast food consumption.

Research design used: This study uses exploratory method to see users who install and use food ordering apps on their smart phones change their consumption. The study also explores the reasons why users prefer such apps.

Population: Residents of Mumbai suburban area, within the age group of 18 to 24 years

Sample size: A total of 80 respondents selected to collect data

Sampling method: Simple random sampling

Main study variable: Effect on fast food consumption due to usage of food ordering apps

Hypothesis:

Ho: There is no significant change in the frequency of ordering food after installing/using food ordering apps

Ha: There is a significant change in the frequency of ordering food after installing/using food ordering apps

Data collection methods:

- Primary data was collected using questionnaire method employed for collecting primary data.
- Secondary data collected from journals, books and online sources

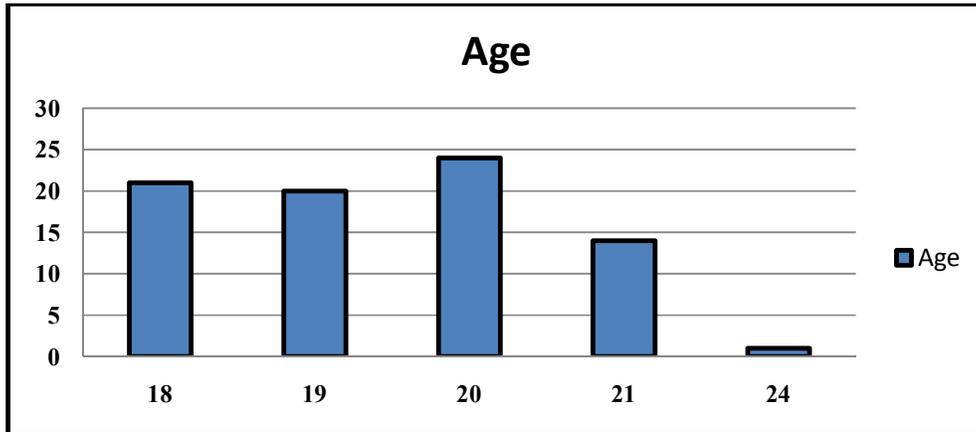
Statistical tools applied: A paired sample t test was applied to see if there was a significant change in frequency of ordering food from restaurants, after installing and using food ordering apps. SPSS software was used to run the t test.

Research limitations: The study is limited to a sample of 80 respondents. The geographical area covered for this research is restricted to the suburbs of Mumbai only.

Practical implications: The findings will help the fast food restaurants as well as third party apps of online food ordering to understand the impact of these apps on total sales. It would be useful for them to have data that throws light on contribution of such apps on their total sales. The firms can use the findings to refine their app based notifications and the promotion offers. Since the paper also explores the reasons why users prefer certain apps over others, firms can make changes to make their apps more user-friendly.

Results:

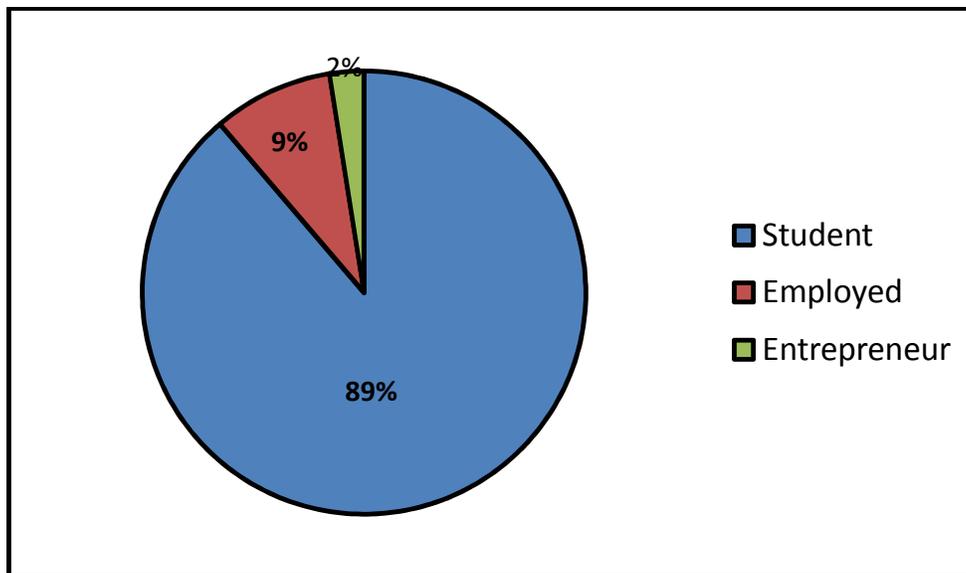
Chart 1: Composition of age:



Source: Researchers compilation

Most of the respondents are between 18 and 21 years of age.

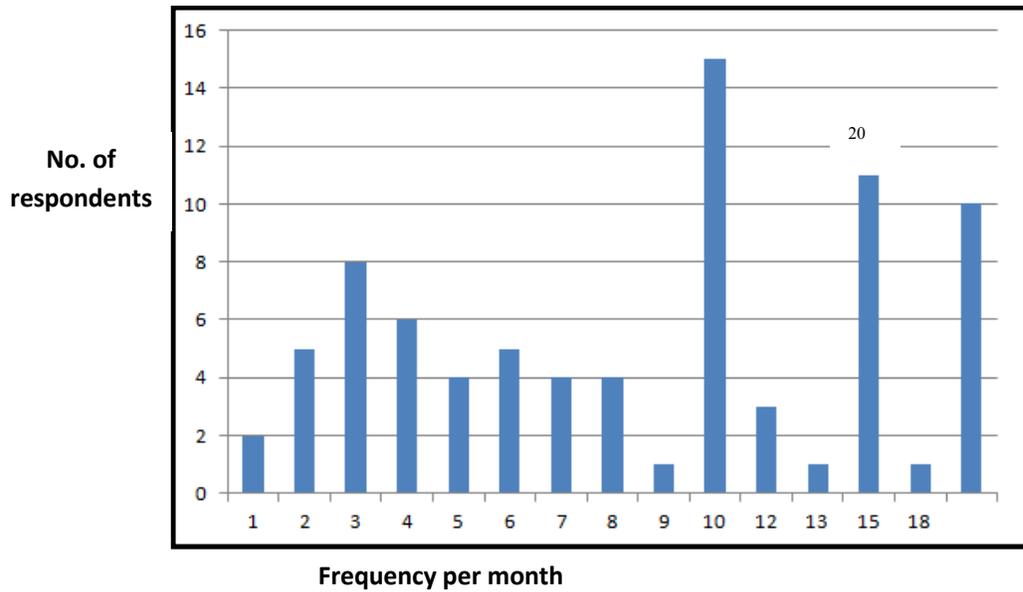
Chart 2: Composition by occupation



Source: Researchers compilation

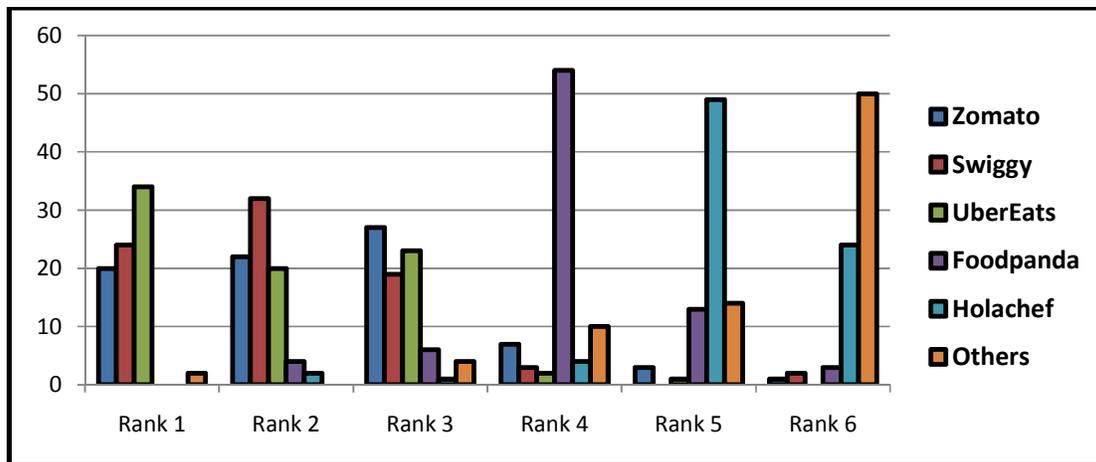
Almost 90% of the respondents are students, 9% are employed and only 2% are entrepreneurs.

Chart 3: Frequency per month of ordering restaurant food



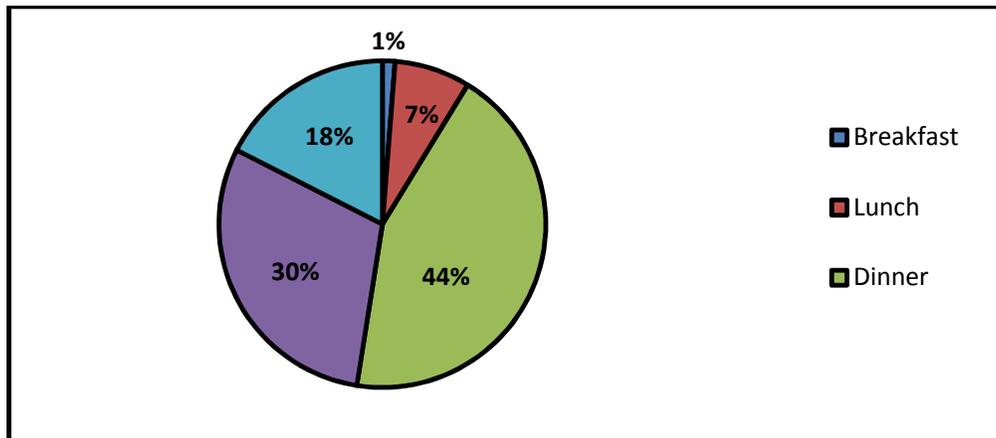
More than 50% of the respondents order food 10 or more times per month using food ordering apps.

Chart 4: Ranking for food ordering app



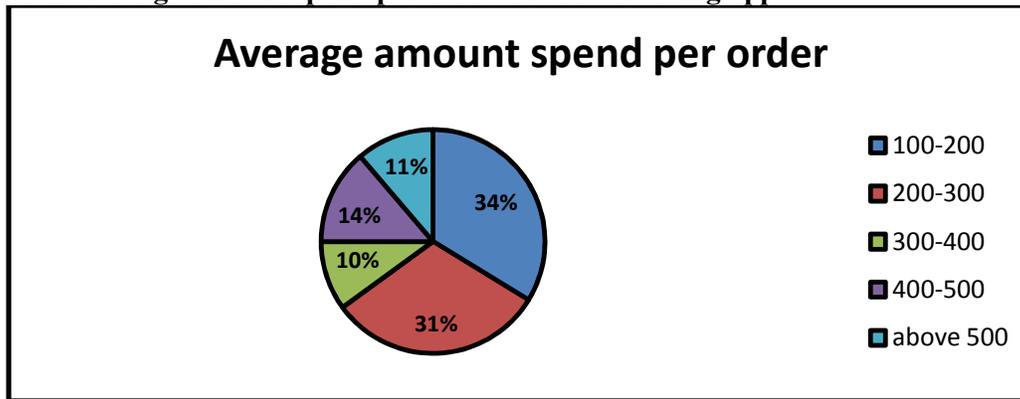
Uber Eats was ranked 1st by 42.5% respondents, Swiggy was ranked 2nd by 40% respondents and Zomato was ranked 3rd by 33.75% respondents.

Chart 5: Preference of meal ordered from food ordering app



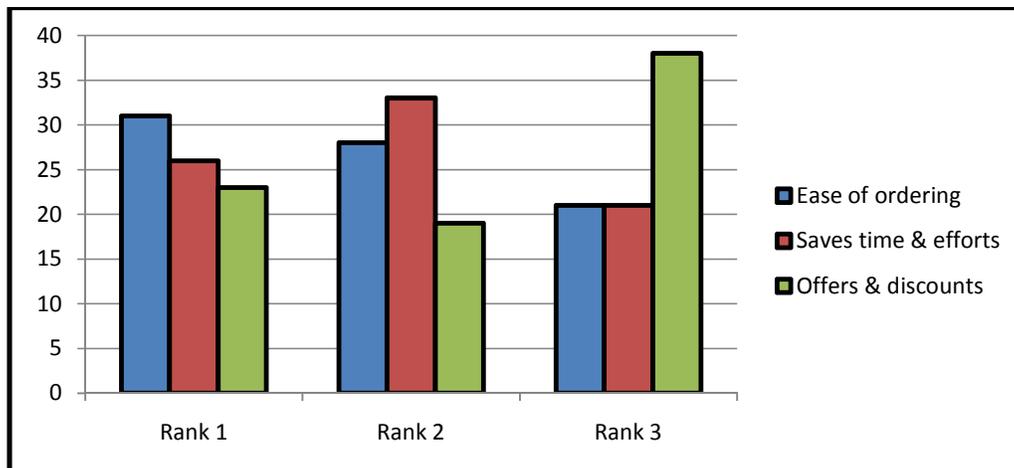
Dinner was the most preferred meal that 44% respondents preferred ordering followed by mid day snacks and late night snacks.

Chart 6: Average amount spend per order on food ordering app



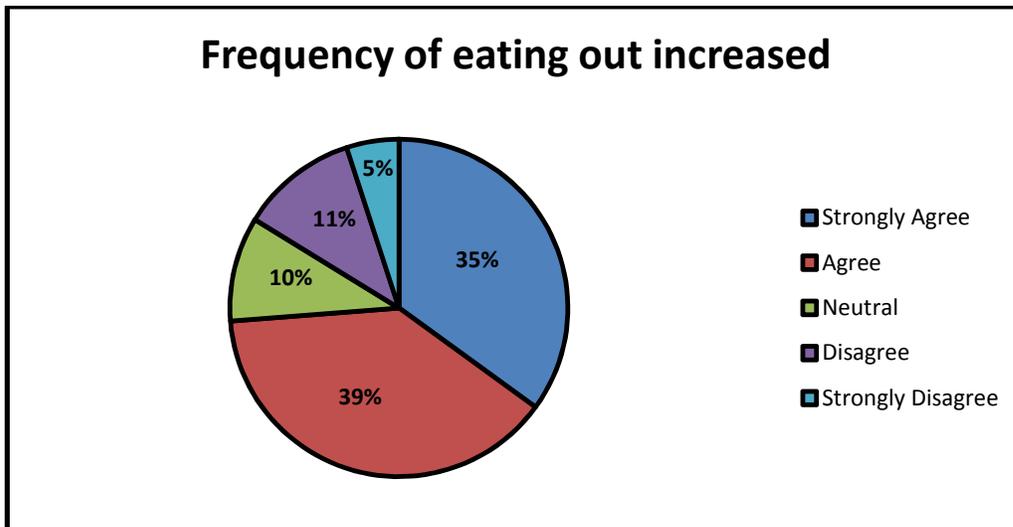
34% of the respondents spend less than Rs.200 per order and 31% spend between Rs.200 and Rs.300 per order.

Chart 7: Reasons for using food ordering app



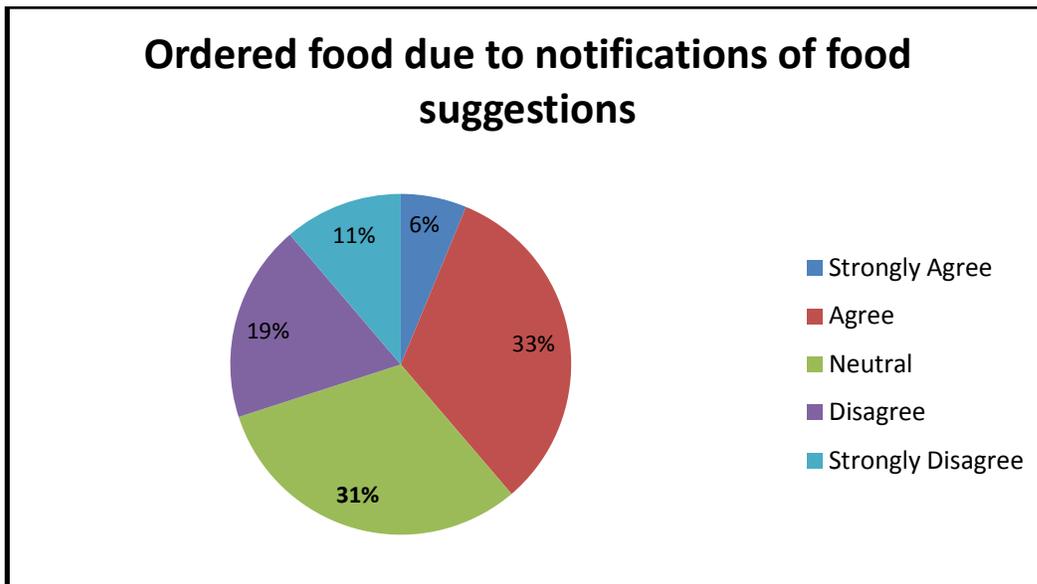
38.75% respondents used food ordering apps due to ease of ordering while the lowest rank was given to offers and discounts as a reason for using food ordering apps.

Chart 8: Increase in frequency of consumption after using food ordering apps



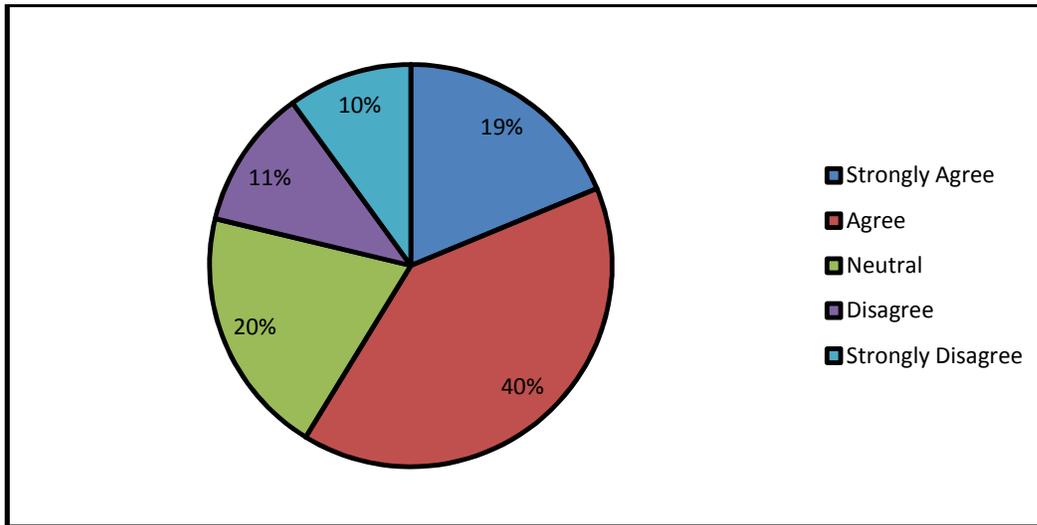
74% of the respondents have noted an increase in their frequency of eating out after starting to use food ordering apps.

Chart 9: Food ordered due to notifications giving food suggestions



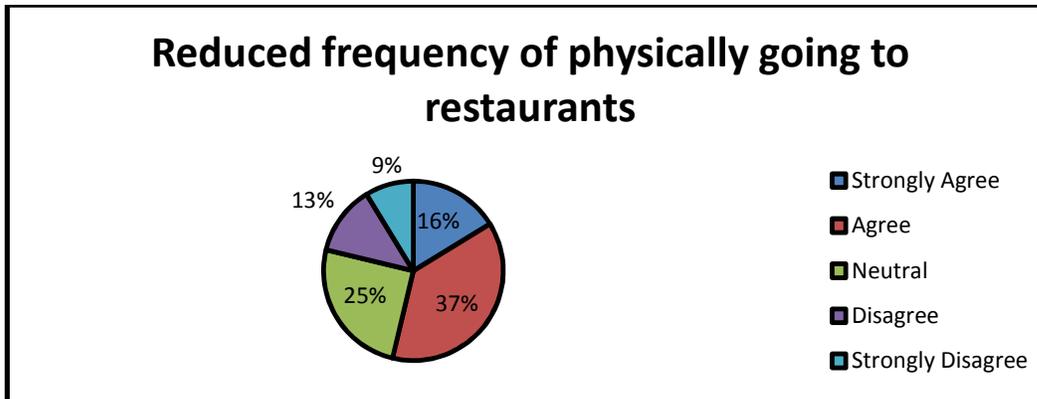
33% respondents noted that they ordered food after receiving food suggestions from food ordering apps. 30% respondents said that they were not affected by such notifications.

Chart 10: Food ordered due to notifications of promotional offers



59% respondents agreed to have ordered food due to offer notification on food ordering apps.

Chart 11: Reduced frequency to go to restaurants in person



53% respondents felt that their frequency of visiting restaurants has reduced since they started using food ordering apps.

Statistical analysis:

Objective: To compare if there is a significant change in the frequency of ordering food after installing/using food ordering apps.

A paired sample t-test was conducted to compare the frequency of ordering food in a month by college students (18-24) before installing/using food ordering apps and after installing/using food ordering apps.

The following hypothesis were drawn to test –

Ho: There is no significant change in the frequency of ordering food after installing/using food ordering apps

Ha: There is a significant change in the frequency of ordering food after installing/using food ordering apps

SPSS output

Paired Samples Statistics

| | Mean | N | Std. Deviation | Std. Error Mean |
|-----------------------------|------|----|----------------|-----------------|
| Order frequency before apps | 3.16 | 80 | 2.799 | .313 |
| Order frequency after apps | 9.51 | 80 | 5.807 | .649 |

Paired Samples Correlations

| | N | Correlation | Sig. |
|-----------------------------|----|-------------|------|
| Order frequency before apps | 80 | .294 | .008 |
| Order frequency before apps | | | |

| Paired Samples Test | | | | | | | | |
|---|--------------------|----------------|-----------------|---|--------|---------|----|-----------------|
| | Paired Differences | | | | | t | df | Sig. (2-tailed) |
| | Mean | Std. Deviation | Std. Error Mean | 95% Confidence Interval of the Difference | | | | |
| | | | | Lower | Upper | | | |
| Pair 1 OrderBeforeApps – OrderAfterApps | -6.350 | 5.657 | .632 | -7.609 | -5.091 | -10.040 | 79 | .000 |

Result

There was a significant difference in the scores for ‘frequency of ordering food before installing/using food ordering apps’ (M=3.16, SD=2.799) and ‘frequency of ordering food after installing/using food ordering apps’ (M=9.51, SD=5.807); $t(79) = -10.040$, $p=.000 < 0.05$.

Hence we reject the null hypothesis.

Findings:

- On an average, young adults order food using food ordering apps 9.5 times a month, while their frequency of ordering food before they ever installed or used any food ordering app was an average of 3.16 per month. This clearly indicates that use of food ordering apps on cell phones has increased the food consumption of young adults.
- UberEats was ranked 1st in terms of preferred food ordering app by 42% of the respondents, while Swiggy, Zomato and Foodpanda were ranked 2nd, 3rd and 4th respectively
- 44% of the respondents used food ordering apps to order dinner, while 30% used it for ordering mid day snacks. 18% respondents preferred using the apps for ordering late night snacks. Lunch and breakfast were least preferred meals to be ordered from the apps at 7% and 1% respectively
- Respondents preferred using food ordering apps when the amount spent per order was low. 34% spent as low as Rs.100 to Rs.200 per order on an average while 31% spent between Rs.200 and Rs. 300 per order. Only 11% respondents spent more than Rs.500 per order on the food ordering apps.
- 74% agreed that their frequency of eating at restaurants has increased since they started using food ordering apps.
- Respondents used food ordering apps mainly for the ease involved in ordering. The second popular reason was that using these apps saved their time & efforts. The least of the reasons to use the apps was to avail offers and discounts.
- Majority of respondents did not find notifications from food ordering apps giving suggestions of foods that could be ordered to be effective. Only 39% felt that such notifications induced them in ordering food while 61% felt that such notifications did not have any/positive impact on their consumer behaviour.
- Respondents popularly found that notifications which informed them about offers or discounts on food orders had a positive impact on their behaviour. 59% observed that such notifications induced them to order food from the apps and avail of the offers.
- 53% respondents noted that their frequency of visits to restaurants has decreased since they started using food ordering apps for home delivery of food.

Suggestions:

- It has been observed that young adults find it more appealing to use food ordering app for dinners or snacks only. The firms can provide incentives to users to order other meals like breakfast or lunch as there is potential to increase revenue.
- An option of ordering for meals a day n advance may increase the chances of more orders for breakfast and lunch, as this is a busy time for young adults and they may not find time or have inclination to use the apps then.
- Since most of the respondents spent a low amount of money per order, promotion offers could be devised that give incentives on bill amounts over a certain amount. For example, an additional discount could be given on the next order if order value exceeded Rs.500
- The strategy of food ordering apps of sending regular notifications to their users suggesting different tempting food options isn't working as effectively. Instead the firms should concentrate on using these notifications to inform the users about promotion offers if any. This will reduce clutter of notifications from a particular app and hence avoid the annoyance that users often experience due to continuous notifications.
- Since ordering frequency is higher for snacks and meals in the second half of the day, food ordering apps could adjust their availability of delivery staff accordingly.
- Respondents lay a lot of importance of ease of ordering and saving of their time and efforts as the reason why they use food ordering apps. Firms must make a note of this and continuously work on their app to make it as user friendly with regular updates of the app. They could also work on logistics to improve their delivery speeds and avoid incidents of service failure, as users might have low tolerance for time consuming delivery.
- The apps are already responsible for successfully reducing the number of trips that respondents make to their favourite restaurant. To encourage this trend and thus improve revenue generated by the apps, the firms must ensure that they have tie ups for food delivery with maximum restaurant outlets in each locality that they service. This will further encourage users to order from the apps than visit restaurants.
- Users who order regularly and/or frequently using an app, must be given some loyalty bonus in terms of a free membership to avail of additional discounts, quicker delivery,

high priority customer service etc, thus encouraging them to continue the high consumption in future.

Conclusion:

The study clearly shows that there has been a shift in consumption of restaurant food by young adults over a period of time. This shift has been a positive one where consumption has increased more than 3 times. The downloading and use of food ordering apps like UberEats, Swiggy, Zomato and others has been responsible for this increase in consumption. These apps have made it easier for the young consumer to order food from a restaurant of their choice and it saves their time and efforts compared to visiting a restaurant for snacks or a meal. There is untapped potential that can be tapped by increasing the food orders during breakfast and lunch time. Resources spent by firms in sending food suggestions to their users can be diverted to efforts on notifying them about promotional offers, devising loyalty programs etc.

Scope for further study: Research can be conducted in future to know why the users prefer certain food ordering apps over others. Research can also be conducted to see the reasons behind why ordering of snacks and dinner is more popular over ordering of breakfast or dinner,

References:

- Bendegul Okumus, Anil Bilgihan, (2014) "Proposing a model to test smartphone users' intention to use smart applications when ordering food in restaurants", Journal of Hospitality and Tourism Technology, Vol. 5 Issue: 1, pp.31-49
- Spence, C. and Piqueras-Fiszman, B. (2013) 'Technology at the dining table', Flavour, Vol. 2, No. 1, pp. 16
- Doub, A., Levin, A., Heath, C. et al. J Direct Data Digit Mark Pract (2015) 17: 114.
- Jeanne Hopkins, Jamie Turner (July 2015), Go Mobile – Location Based Marketing, Apps, Mobile optimisation Ad Campaigns, 2D codes, and other mobile strategies to grow your business, p.79-80
- What Affects Mobile Application Use? The Roles of Consumption Values, Hsiu-Yu Wang, Chechen Liao & Ling-Hui Yang, International Journal of Marketing Studies; Vol. 5, No. 2; 2013
- Chunawalla, S. (2016). Advertising Sales And Promotion Management. S.L.: Himalaya Publishing House, p.2, p.260
- Sherlekar, (2009). Marketing Management, p.29-30
- Muzakkeerul, Huda, and Hossain, Tamima. (2009), Consumer attitude towards restaurants in Dhaka city: an empirical study