A Research on Cloud Kitchen Prerequisites and Branding Strategies

H.M.Moyeenudin, R. Anandan, ShaikJaveedParvez, Bindu. G

*Abstract: The Emerging trend for smart food delivery is cloud kitchen concept, this is a modern phenomenon in a contemporary scenario around the world, and this concept is developing at the most noteworthy stage with a Compound Annual Growth Rate (CAGR) when contrasted with other slice of food and beverage outlets like Restaurants and fast food outlets. The aim of this study is to analyze demand and requirements of cloud kitchen. Secondly it focuses on the marketing strategy need to be adopted by cloud kitchen. As the fundamental method is to adopt a right branding strategy for cloud kitchen the results proveswith Pearson's correlation about the requirements as Online APP by (r = .690**, p = .000) is significant with 0.01 level in association and also with online application then web ads with a value(b = .245, p = .000) from linear regression for the reference of online reviews before ordering food.*

Keywords: Cloud Kitchen, Food Delivery, Virtual Kitchen, Branding Cloud Kitchen.

I. INTRODUCTION

This Cloud kitchens, at times called ghost outlets, virtual cafés, and Dark or Invisible kitchens. Most recent on the scene is cloud kitchens, the boundaries are small but it is possible to enhance the cloud kitchen branch by helping them to scale-up rapidly, by giving development capital as well as a focal emotionally supportive network that will empower speedy development and advance overhead expenses. Online food delivery agencies are concerned on expanding a conventional model for food and beverage delivery kitchen that offers an access to different cuisines through a solitary online food delivery outlet [1], The food and beverages will be only ordered through website or mobile application, as many multi cuisine restaurants and restaurant chains are started delivering therefore a cloud kitchen concept is initiated,an essential takeaway food and beverage outlet that gives no dine in facility in its premises,

there have been numerous restaurateurs raving over the idea and much all the moreattempting to make sense of its complexities, this kitchen unit work as a food production team with a space for the food preparation and delivery.food through online food delivery applications [2], they have initiated and some structured cloud kitchen outlets to only deliver the food ordered through online subsequently, the name cloud kitchen or Virtual Kitchen came in to existence as-an administration with a combination of cuisine, similarly now one of the most famous food delivery app Swiggy has organized its own cloud kitchen with a combination of familiar food brands. The demand of cloud kitchen is increased with these food delivery application like Uber Eats, Swiggy, Zomanto and some restaurant chains only focused to cloud kitchen in order to eliminate expenses on providing bigger space to dine in facility [3]. There is no necessity to have a physical area for food service and no need to appoint servers. The operational efficiency will be improved in terms of cloud kitchen, while traditional restaurants need to focus on food delivery during peak lunch and dinner sessions although they involved in catering food to with dine in guest [4]. There's only a common kitchen, with staff preparing choice dinners and a conveyance group dispersing the nourishment to the customers ordered food by home or at work by signing in to the site or the application, customers can rapidly look at menus, costs, and surveys from consumers [5]. This application gather a fixed edge of the request, which is paid by the consumer, and the eatery handles the real conveyance, there is no extra cost to the buyer [6]. The major area on these cloud kitchen need to be focused is the type of food and menu along with marketing strategy, as this a virtual kitchen they need to develop their own apps and website to promote their rather than distributing flyers and paper adds [7]. To such an extent, that cloud kitchens are being considered as the more intelligent approach to maintain the Food and Beverage sales. These cloud kitchen also concentrate on having restaurant partners in order to provide distinct menu with plenty of choices and packages to meet the customer expectation.

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II. MATERIALS & METHODS

This research is carried out through gathering the information by means of measureable data in a dedicated questionnaire for the consumers utilize online food delivery applications for consuming food. There are 150 questionnaires are distributed among the customers of online food delivery application to identify the source branding this survey questionnaires are dispersed casually to the customers and only 120 completed questionnaires are taken for this research.

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This research was carried out from October 2019 to November 2019 at the Multi-National Companies in Chennai.

The Statistical Package for Social Sciences (SPSS 24 version) is used to examine the relationship between these variables using Pearson Correlation, Linear Regression and Graph board template to evaluate the dependent and independent variables with its association.

III. RESULTS

A. Correlations

Table 1 Correlation on Cloud Kitchen Relationship with Consumers

		Refer to online review	How many applications	online low price	Order food from Apps brand	Food by restaurant brand	Food by online app by web
Refer to online reviews	Pearson Correlation	1	-.008	-.024	-.645**	.112	.690**
	Sig. (2-tailed)		.932	.791	.000	.222	.000
	N	120	120	120	120	120	120
applications you use	Pearson Correlation	-.008	1	.079	-.098	.012	.089
	Sig. (2-tailed)	.932		.392	.286	.893	.334
	N	120	120	120	120	120	120
Food from online low price	Pearson Correlation	-.024	.079	1	-.304**	.039	.275**
	Sig. (2-tailed)	.791	.392		.001	.676	.002
	N	120	120	120	120	120	120
Order food from Apps brand	Pearson Correlation	-.645**	-.098	-.304**	1	-.042	-.905**
	Sig. (2-tailed)	.000	.286	.001		.647	.000
	N	120	120	120	120	120	120
Food by restaurant brand	Pearson Correlation	.112	.012	.039	-.042	1	.062
	Sig. (2-tailed)	.222	.893	.676	.647		.500
	N	120	120	120	120	120	120
online app by web adds	Pearson Correlation	.690**	.089	.275**	-.905**	.062	1
	Sig. (2-tailed)	.000	.334	.002	.000	.500	
	N	120	120	120	120	120	120

**. Correlation is significant at the 0.01 level (2-tailed).

In Table 1. The correlation between the variables has been having a good association with a significant value p = .000 and a strong correlation with a value r = .690** for using food apps in selecting restaurant outlets as to identify a proximity of food delivery and to make consumers attempt to order nourishment, you could get into tie-ups with different cafés who are not your immediate rivals.

For instance, on the off chance that you run a Cloud Kitchen with a sweet brand, you could tie-up with cafés not having their very own pastry menu with plans like, purchase a feast for two and get a Pastry free.

There is a significant value p = .000 with a strong correlation between ordering food by brand and by the applications are used with a value r = -.905**. The comparison of price with the help of online apps indicates that there is a strong association with a value of r = .275** along with the significant value p = .002.

This correlation results shows a strongest association between ordering food through online apps by web ads and referring to online reviews with a value r = .690** with a significant value p = .000. it also proves that with correlation value r = -.645** is negatively associated with ordering food by brand and referring to online reviews, Hence the consumers prefer to opt with online reviews rather than preferring a brand for ordering their food at cloud kitchen by means of a substantial value p = .000. This Pearson's correlation is significant at the level of 0.01.

Thus most of the restaurants have tie up with online food delivery apps, at this juncture restaurants will sell food in combo in addition of deserts like cake or pastries along with main dish.

This is not only applicable for restaurants, here the possibilities are high for such advancements inside the brands at cloud kitchen, as the correlation shows the consumer opt the food based on low price in contrast with brand with a value r = -.304** with a significant value p = .001. Thus cloud kitchen can be more effective with variety of choices than the restaurant outlets, it is also noticed that the consumers are opting food by online reviews. Hence cloud kitchen must have a strong data base with websites, online application and in social media.

B. Linear Regression

A linear regression is done in order to find the dependent variable relation with independent variable. The dependent variable is online application through web ads and the independent variables are consumers opting online food delivery with online reviews, how many applications they use for food delivery, consumers preferring low price, selecting an app for food delivery or preferring restaurant for ordering food. The linear regression with Anova test results are given below with their association.

Table 2.Anova Results with Linear regression for consumer preference.

Model		Sum of Squares	df	Mean Square	F	Sig.
				ANOVA[a]		
1	Regression	9.155	6	1.526	104.831	.000[b]
	Residual	1.645	113	.015		
	Total	10.800	119			
a. Dependent Variable: how you know about the food by online app by web adds						
b. Predictors: (Constant), You refer to online reviews before ordering food, How many applications you use for online food delivery, What makes you to order food from online low price, you know about food by restaurant brand, Are you prefer to go with Online Application while ordering food, do you like to order food from brand						

This results indicates that the consumer prefer to opt online application for ordering through online food delivery with various independent variables, as well as the Anova test shows a significant value p = .000[b] in Table 2, indicates that the contemporary online food delivery apps are supporting the restaurants outlets by providing door step food delivery to the consumers and the consumers are preferred to order the food by knowing the online reviews of previous consumers and in comparison of prices from different restaurants [8], thus cloud kitchen has a great opportunity in providing food of various kitchen in one roof which will be only for food delivery without dine in facility. The statistical F value = 104.831 is achieved by this regression analysis which is having a strong relationship significance with value p = .000. Thus this hypothesis specifies there is no difference among these three sets of independent variable thus this hypothesis is rejected under the 0.01 significance level.

Table 3. Regression Coefficients of Dependent Variable "Online App by Web Adds

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
				Coefficients[a]		
1	(Constant)	1.967	.282		6.979	.000
	Online Application while ordering food	.095	.040	.102	2.383	.019
	How many applications you use for online food delivery	-.001	.020	-.002	-.054	.957
	What makes you to order food from online low price	.226	.137	.069	1.657	.100
	Do you like to order food from brand	-.766	.062	-.706	-12.267	.000
	Food by restaurant brand	.005	.031	.006	.167	.868
	Refer to online reviews before ordering food	.245	.061	.204	3.998	.000
a. Dependent Variable: how you know about the food by online app by web adds						

The Cloud kitchen based on online food delivery the branding of restaurants are significant with online reviews the dependent variable "online app by web ads" is taken for the comparison of relationship between other variables, here the online applications while ordering food is positively associated with dependent variable by a value (b = .095, p = .019) is significant and its coefficient is clearly linked in Table 3, thus this demonstrates the online food delivery applications are used based on the web ads. This regression analysis also state that there is a negative association between restaurant brand along with online food apps through web adds, which defines consumer merely opt the food by seeing reviews of online food delivery the value (b = -.766, p = .000). There is a good connection between dependent variable with the variable "Refer to Online Reviews" with a value (b = .245, p = .000) attained, demonstrates a greater significance and positively association between these variables. Thus cloud kitchen gets greater significance in branding by web ads rather than focusing in to traditional marketing strategies. The food ordered by preferring restaurants brands also has its variance on comparison with online reviews [9], some consumers are preferring the food from the favorite restaurants with the value (b = .005, p = .868) indicates there no significant association between the dependent variable along with the value for the number of application used (b = -.001, p = .957). Thus this coefficients showing reasonable variation on the usage of apps for ordering foods with online reviews. Hence cloud kitchen must focus web ads and expand their operation throughout the city, in order to deliver the food in shortest duration of time as the consumers are also dedicated towards favorite restaurant brand, these cloud kitchen need to franchise with the familiar restaurants brands and fast food outlets and also equipped with infrastructural facilities for the restaurant partners, no doubt that there is a vast preferences are favorable to cloud kitchen in future than the dine in restaurants as the consumers are satisfied with the food delivery system in Chennai [10]. This regression analysis for dependent variable "online app by web ads" shows the significant value p = .000 with other coefficients.

C. Density Graph

The Market dynamics are in varied nature as the convenience and time saving is favorable to cloud kitchen they have an opportunity to startup multiple units by knowing the location of the city, this density Graph shows consumer preferences for ordering food based on their favorite restaurants with the web ads even though there is an association between this two variables.

Figure 1. Density Graph for the comparison of ordering food by restaurant brands

It is observed that only few have opted restaurants by online ads, whereas values are higher with the combination of variables for online reviews in association with online food delivery apps and web ads.

Figure 2 Density graph based on ordering food through web ads and online reviews

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In fig 1, the comparison between restaurant brand and online apps are showing significance and there is moderate association between these two variable as the graph shows elevation partly denotes that the online applications are providing business to branded restaurants. This indicates that Cloud kitchens are reliant on applications belongs to food delivery portals like Uber Eats, Swiggy and Zomanto for conveyance, customer reviews, and approach has major role in promoting, creating an Identity with branding, the online food delivery through these applications are one of the operational cost by these junctures. This results shows cloud kitchens are dependent on online food delivery system and it is difficult to create a loyal customer base as the food delivered through the online application. In fig 2. The graph demonstrates the usage of reviews before ordering food in with association with the online food delivery application and web ads, as we identify these both platforms are necessary to obtain the business and acts as a medium for branding restaurant. Thus with this results it is proved that the online reviews and web ads has a major role in getting business through online food delivery. In future cloud kitchen can involve branding using these online applications for branding, it is also observed that some of these online food delivery apps are involved in starting their own cloud kitchen.

IV. CONCLUSION

The Cloud kitchen must focus towards the right method of branding suits to situation with type of location and customers, this research shows that the Pearson's correlation shows a negative association between restaurant brand with online reviews with r $=-.645^{**}$ and strong correlation with Online App and Online reviews with a value $= .690^{**}$ also significant with 0.01 level, this includes Food delivery application like Uber Eats, Swiggy and Zomanto and the web ads consist of social media pages, SEO, Add words, Emails and so on for reviews, since there is a stronger correlation between web ads and online application is positively related with the value r $= .690^{**}$. Therefore branding a cloud kitchen could be more efficient with this methods and the consumers are through online food delivery applications, cloud kitchen need to have stronger relationship with this application or need have their own online food delivery application. Nevertheless the regression analysis results shows significant value p $= .000$ indicates the association between online reviews and Web ads, proves that this system of approach to the consumers will be effective.

LIMITATIONS OF THE STUDY

This research is mainly carried with the data's received from food consumers through online food delivery apps. As this research is conducted with a questioners circulated to a particular age group of people withtheir views and lifestyle in city, it may vary from age groups and people who lives in urban areas.

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CONFLICT OF INTEREST – Nil

ETHICAL CLEARANCE – Nil.

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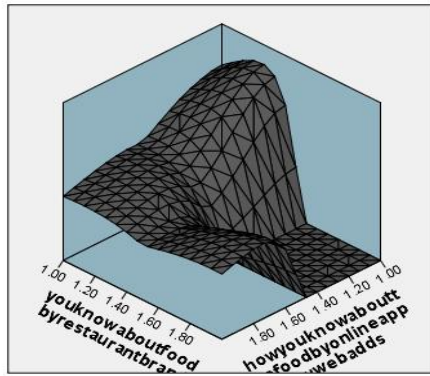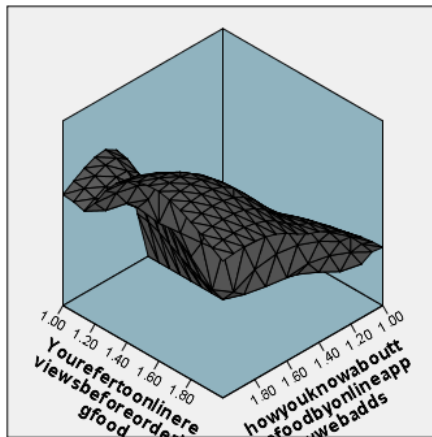
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