International Journal of Hospitality and Tourism Systems
Special Issue on COVID-19, 2022
ISSN: 0974-6250 (Print)

Hospitality & Tourism Systems

Ethical and Sustainable Perceptions on Cloud Kitchen Business- A Study of Consumers and Stakeholders during the Covid-19 Pandemic.

Rudrani Chatterjee*, Animesh Singh, Vikas Singh*****

Abstract *Cloud kitchen has evolved as a popular means to meet the growing demand of home-delivered food during the pandemic. The purpose of this research is to gauge the perception of consumers as well as stakeholders about the ethical correctness of cloud kitchen models of business and whether the cloud kitchen model is sustainable or not.*

The manuscript is primary and quantitative in nature. The data was collected during the period of pandemic from the respondents living in Delhi and Kolkata. The research focuses on the Utility, Rights, Fairness and Care constructs of ethics to gauge the perception of respondents about cloud kitchen business including its sustainability and challenges. The analysis was done running ANOVA and binomial distribution.

The consumers as well as stakeholders and employees appear to be positively responding on the question of the cloud kitchen model being ethically correct on the 4 constructs and they seem to agree that Cloud Kitchens are sustainable.

Very little existing literature is available on the ethical and sustainability aspects of cloud kitchen model with Utility, Rights, Fairness and Care constructs. Thus, it is the first paper of its kind and is expected to add to the existing body of literature.

Keywords: *Cloud Kitchen, Ethics, Care, Sustainability, COVID-19*

INTRODUCTION

The constant use of electronic gadgets, software applications, websites and different new technologies have become indispensable in today's society which has resulted in the consumers enjoying benefits at just one click of the mouse (Choudhary, 2019). Cloud kitchen has emerged as one of the several benefits of technology for the regular users of internet. The cloud kitchens have gained the ground among the consumers in the pandemic lockdown when in-dine facilities were not available (Rubini, 2020). They are sometimes referred to as "Dark Kitchens" or "Ghost Kitchens" as their existence are not known. Depending largely on the food aggregator applications, these cloud kitchens help the food aggregators keep their promises of delivering the good quality food within the committed time. These kitchens help to meet the growing demand of online orders through food delivery apps or websites (Ahuja, 2020). The food delivery market in India is growing at a very fast rate every year where cloud kitchen has taken up the maximum share and its market size is expected to be about one billion US dollar by 2023. During the period of lockdown when most of the people were concerned about health and hygiene, cloud kitchens providing home cooked meals have grown to a large extent (FnB News, 2020).

There exists a growing subject matter on environmental concern and need of sustainability amongst the business entities. Sustainability is a popular and broadly used concept among people and organizations which is confined not only to environmental aspects, but also it emphasizes in social and economic aspects. Thus, a sustainable development is a blend of environmental concern into every activity of human lives which can save our planet in the long run, at the same time, is business wise viable too. In the contemporary scenario, ethical considerations in a business promote a better environment for the employees and consumers, and

* Research Scholar, SBS, Sharda University, Greater Noida, Uttar Pradesh, India.
** Ph.D., Associate Professor, SBS, Sharda University, Greater Noida, Uttar Pradesh, India.
*** Ph.D., Professor, Manav Rachna International Institute of Research and Studies, Faridabad, Uttar Pradesh, India.

sustainability amidst growing competition (Krishna et al., 2011). Sustainability has emerged as a framework upon which the businesses can build strategies for the purpose of decision making in various business domains. The concept of sustainability is important and applicable to private, government as well as non-government organizations (Kibert et al., 2018).

The purpose of this research work is to gauge the perception of consumers as well as stakeholders about the ethical correctness of cloud kitchen models of business during the pandemic of Covid-19. Also, the study aims to find their perception about whether the cloud kitchen model is sustainable or not and also analyse the challenges that are faced by cloud kitchen businesses during the pandemic. Studies have been done on the impact of online food delivery platform on sustainability and also some case studies have come up on cloud kitchen (Galati et al., 2020). However, from the review of existing research, it is found that there is little literature focusing on the ethical aspects of cloud kitchen which makes an impact on the rising issue of sustainability. Thus, the study focuses on the ethical dimensions and sustainability aspects in a cloud kitchen business model.

LITERATURE REVIEW AND THEORETICAL BACKGROUND

A literature review was done by the researchers to identify the existing body of knowledge in the area of sustainability and ethics of cloud kitchen platform. A sustainable customer buying habit involves the informed decision making regarding the amount of food to be consumed, quality of food to be consumed and repeated purchase behaviour that gives due importance to the environmental impact of the short term and long term consumption habits (Leonard B., 1981; McDonald et al., 2006). Also, the consumers are increasingly informed and appear to be favouring products that have originated and produced sustainably, and have features like water, energy, power conservation in the production, distribution process and eco-friendly and sustainable disposability (White et al., 2014).

Social factors are one of the most significant aspects which result in achieving change in sustainable consumer behaviour (Abrahamse et al., 2013). Social standards, or principles about what is socially correct for a specific situation, may affect sustainable buyer behaviour. Social standards forecast behaviours such as non-littering of the used products and packets (Cialdini et al., 1990). Also, reprocessing, preserving energy, opting for sustainably obtained food, selecting environment-friendly transport and selecting green hotels are some of the preferences shown by contemporary consumers. "The Theory of Planned Behaviour" suggests that, along with subjective norms, attitudes and perceived behavioural control influence the intentions, which is predicted by customer behaviour (Ajzen, 1991).

Sustainability focuses on three important aspects such as environmental, social and economic indicators. Food services are implementing these three indicators to enhance sustainability in the production of meals in food services (Maynard et al., 2020). The surplus of food as well as food wastage causes a great impact on environment, food sharing economy and economic sustainability (Huang et al., 2020). Ethics is an important cause that gives rise to sustainable environment, business, industry and the country at large. Sustainability, ethics and technology are strongly associated with each other. As technology creates a great impact on our lifestyle, it has wide range of ethical significance. Cloud kitchens have also emerged as a result of technology where ethical dilemmas and perceived risk prevails. Ethical issues not only consider utility or utilitarian values but also the moral values which remain implicit (Kibert et al., 2018). In a research study (Hara, 1998) it is seen that the framework of sustainability has been put forward based on the three important pillars of ethics such as Utilitarianism, Discursive ethics and Ethics of Care. The author integrated sustainability into economics for two reasons: first is because of addressing the issues of economics with an environment where the latter is inherently ethical in nature and secondly due to the reason that ethics talks about the norms that control the behavior of mankind. Ethical considerations for any business as well as society or the environment are typically based on four important pillars. Based on these four pillars, this study has been designed on ethical and sustainable perceptions of cloud kitchen business models.

Utilitarianism

Utilitarianism is the moral view that says that in any condition, the right sequence of action will deliver the individuals as well as the society with greatest advantages and gains while lessening the harmful consequences. It promotes the maximization of utility and distinguishes what is right or wrong. From the view of economics, it can be said that this concept of utilitarianism or maximizing utility of commodities for consumers can be understood by the prices they pay for it. The financial benefits come into play when there is a situation of transaction, purchase and use (Velasquez, 2014). According to the modern concept of utilitarianism, an act is morally justified if it provides greatest satisfaction of preferences. It gives rise to the rightness of action to do something that is for the cause of the environment and which will in return contribute to sustainability (Burkhardt, 1989). First two hypotheses based on utilitarianism aspect of Cloud Kitchen business are mentioned as under:

Ho1: There exists no significant variance from the mean value in the perception of consumers regarding the

utility aspects of cloud kitchen business.

Ho2: There exists no significant variance from the mean value in the perception of stakeholders regarding the utility aspects of cloud kitchen business.

Rights

According to Velasquez (2014), "A right is an individual's entitlement to something". With the help of a right, an individual has the power to choose certain activities and discard others. Moral rights focus on the interests of an individual. The concept of positive and negative rights has been focused by the author where it is narrated that "the negative right is a moral privilege of a person that others should not interfere in their personal matters" whereas "positive right is a moral expectation of a person that other should come for help for finding solution to a problem". According to the thesis of correlativity, "there exist no rights without responsibilities. Also, social rights exist when social means for compensatory justice exist. If a right is violated with indemnity, then it actually does not exist" (Abney 2004).

Thus, the following hypotheses are being framed based on the aspect of rights in a Cloud Kitchen business.

Ho3: There exists no significant variance from the mean value in the perception of consumers regarding the aspects of rights protection in a cloud kitchen business.

Ho4: There exists no significant variance from the mean value in the perception of stakeholders regarding the aspects of rights protection in a cloud kitchen business.

Justice and Fairness

Resolving disputes among individuals or organizations in business and non-discriminatory treatment is referred to as justice or fairness. It contradicts favoritism and ensures fair and proper treatment to all stakeholders associated in a venture or in an activity. Even if any personal or economic gain is associated with any activity, it is not tolerated in case of fairness principles of ethics (Rawls, 1971). Justice is based on moral rights because of the concept of distributing gains and burden uniformly among individuals engaged in a common activity (Velasquez 2014). Thus, the following hypotheses are proposed based on the fairness aspects of Cloud Kitchen business.

Ho5: There exists no significant variance from the mean value in the perception of consumers regarding the fairness aspects of cloud kitchen business.

Ho6: There exists no significant variance from the mean value in the perception of stakeholders regarding the fairness aspects of cloud kitchen business.

Care

The "ethics of care" highlights an existing treasured relationship which means that one should care for those who rely on or relate to us (Velasquez 2014). Special care should be shown to the ones who are closely connected with by attending to their requirements, desires, well-being and answering positively to them. Nicholson, (2017) tried to analyze how moral philosophies of "ethics of care", help to lighten up the ethical scope of relational leadership for sustainability.

The hypotheses that would analyze the aspects of care in a Cloud Kitchen business are stated as under:

Ho7: There exists no significant variance from the mean value in the perception of consumers regarding the aspects of care in a cloud kitchen business.

Ho8: There exists no significant variance from the mean value in the perception of stakeholders regarding the aspects of care in a cloud kitchen business.

Thus, the moral criticism of people should be based on making the most use of the benefit of our actions, honoring the moral rights of a person, guaranteeing a proper distribution of "benefits and burden", and caring for those who are dependent on us or related to us (Velasquez 2014).

Ethics and Sustainability

Ethics and sustainability go hand in hand however each has a different scope of study and they overlap each other when the domain of mutual interest exists (Leonardo 2018). In the area of ethical research authors focus on moral issues related to sales, products, distribution channel, consumers (Schlegelmilch, & Oberseder, 2010) whereas, the studies related to sustainability emphasizes on environmental management, social responsibility, eco-friendly usage of products (Leonidou & Leonidou, 2011). The overlapping domain of ethics and sustainability focuses on moral concerns related to green marketing, social media marketing, green advertising ethics, environmental ethics and so on (Leonidou, 2018).

This study is one such kind of work, which focuses on the perceptions of consumers and stakeholders on the ethical aspects of cloud kitchen business. It is said that business that aspires to become sustainable must act ethically which means that ethics and values are the core factors that lie under a sustainable business culture (Grayson, 2019). Thus, the two hypotheses based on sustainability aspects in a Cloud Kitchen business are as follows:

Ho9: There exists no significant variance from the mean value in the perception of consumers regarding the sustainability aspects of cloud kitchen business.

Ho10: There exists no significant variance from the mean value in the perception of stakeholders regarding the sustainability aspects of cloud kitchen business.

Challenges in Cloud Kitchen Business

Businesses that exit from the collaboration of takeaway giants or other food aggregators find it difficult to sustain in the competitive environment. Dependence on a third party for business and also due to the lack of visibility, Cloud Kitchens find it as a challenging effort to deal with customers and learn about their experiences (Sentence, 2020). In today's society of digitization, customer data privacy and security are the major concerns for the customers. Customers expect that the way how their data are accumulated, used and preserved must be safe and secure (Bolton et al., 2018). Customer interaction is also another challenge faced by virtual industries as Singh et al. (2017) emphasized that customer engagements and interactions are created by excellent services accompanied by several point of contact. Thus, the following hypotheses are based on this:

Ho11: There exists no significant variance from the mean value in the perception of consumers regarding the challenges faced by cloud kitchen business.

Ho12: There exists no significant variance from the mean value in the perception of stakeholders regarding the challenges faced by cloud kitchen business.

METHODOLOGY

The manuscript is primary and quantitative in nature. The data was collected during pandemic period of Covid-19 from respondents living in cities of Delhi and Kolkata, with the help of a structured questionnaire. The respondents included consumers as well as stakeholders of Cloud Kitchen business. Here, the stakeholders mean the retail owners, retail employees and delivery service personnel and providers.

The sample technique used was convenient sampling. The sample size was of 140 respondents, out of which 72 respondents were customers, and 68 were stakeholders. There were 42 consumers from Delhi and 30 consumers from Kolkata whereas, 58 stakeholders were from Delhi and the remaining were from Kolkata. Questions were asked to the consumers as well as both employees and stakeholders of cloud kitchen. Two separate questionnaires were designed to get responses from consumers as well as stakeholders of Cloud Kitchen business. The research focuses on the constructs of ethics as *Utility, Rights, Fairness, Care*, including the aspect of Sustainability and Challenges faced by Cloud Kitchen business, to gauge the perception of consumers and stakeholders during the pandemic. The questionnaire was designed based on the six parameters of Utility, Rights, Justice, Care, Sustainability and Challenges in a Cloud Kitchen business. The below table illustrates the factors that were considered while asking questions to the respondents based on the six parameters.

Table 1

Parameters	Perception of Consumers	Perception of stakeholders
Utility	Less use of resources	Less use of resources
	Cost effective	Less set up cost
	Accessibility	Less overhead cost
	Maintenance of food safety and hygiene	Market expansion opportunities
	More emergence during pandemic	Maintenance of food safety and hygiene
	Ease of reading digital menu card	More emergence during pandemic
	Storage of excess food	Less power consumption
	Taste, texture, colour, aroma of food	Less wastage of raw materials
	Eco-friendly packaging	Eco-friendly packaging
	Standard delivery time	Standard delivery time
	Variety of choices	Quick return on investment
Rights	Right to order anytime and from anywhere	Protection of consumers right while ordering food online
	Right to give feedback or complaint	
	Right to information regarding order tracking and other delivery details	

Table 1. (Continued)		
Parameters	**Perception of Consumers**	**Perception of stakeholders**
Fairness	Equal treatment of customers irrespective of gender, area of residence, standard of living	Working condition of employees
		Treatment of employees irrespective of caste, creed, religion and background
		Fair wages
Care	Online feedback	Care for employees
	Choices taken care by the company	Care for customers
		Provide platform for complaint handling
Sustainability	Less use of resources	Less use of resources
	Ease of reading digital menu card	Less set up cost
	Storage of excess food	Less overhead cost
	Eco-friendly and sustainable packaging	Less power consumption
	Overall eco-friendliness	Less wastage of raw materials
		Eco-friendly packaging
		Overall eco-friendliness
Challenges	Risk of personal information being disclosed due to dependence in technology	Risk of negative publicity and negative word of mouth due to dependence on technology
	Dependence on other food aggregator	Dependence on other food aggregator
	Less physical interaction between customers and service providers	Less physical interaction between customers and service providers
	Look and feel aspect missing	

Analysis

At the beginning we do a test of normality by taking into account all the variables and thereby following the Kolmogorov-Smirnov and Shapiro Wilk's test. It was observed that the significance value for both the tests are less than 0.05. The data was found to be non-normally distributed when the responses of perceptions were taken on a five-point scale from 1 to 5. The responses were coded from 1 to 5 as "Completely Disagree" to "Completely Agree". So, the data was recorded and transformed into a two-point scale where the responses marked between 1 to 3 were coded as "1" and the responses marked between 4 to 5 was coded as "2". The analysis was done running a Binomial Distribution and ANOVA with the help of SPSS. Test of proportion was done after recoding the data into a different variable and taking the median of each of the six attributes for consumers as well as stakeholders.

It was found in the Binomial test for consumers that the value of significance for each of the attributes is less than 0.05 except for Utility and Sustainability which has the value of significance as 0.055 and 0.063 respectively. Thus, null hypothesis Ho1 and Ho9 is accepted the all others reject hypothesis. It can be said that in case of the consumers there appears to be no significant variance of utility aspect and sustainability aspect from the mean value. On the other hand, there is significant variance from the mean in response of rights, fairness, care and challenges aspect from the mean value. In the perception of consumers there is a significant variance from the mean and the consumers are responding favorably to the rights, fairness, and care aspect. Also, the consumers response is significantly deviating from the mean and they are responding in agreement to the statement of challenges being faced by stakeholders running cloud kitchen during Covid-19 pandemic. The below table 2 illustrates the testing of hypothesis for responses of consumers:

Table 2

		Category	N	Observed Prop.	Test Prop.	Exact Sig. (1-tailed)	Test of Hypothesis
UtilityTransP	Group 1	2	36	0.5	0.6	.055[a]	**Accept Ho1**
	Group 2	1	36	0.5			
	Total		72	1			

Table 2. (Continued)

	Category	N	Observed Prop.	Test Prop.	Exact Sig. (1-tailed)	Exact Sig. (1-tailed)	Test of Hypothesis
RightsTransP	Group 1	2	52	0.7	0.6	0.021	Reject Ho3
	Group 2	1	20	0.3			
	Total		72	1			
FairnsTransP	Group 1	2	56	0.8	0.6	0.001	**Reject Ho5**
	Group 2	1	16	0.2			
	Total		72	1			
CareTransP	Group 1	2	52	0.7	0.6	0.021	**Reject Ho7**
	Group 2	1	20	0.3			
	Total		72	1			
SustainTransP	Group 1	2	50	0.7	0.6	0.063	**Accept Ho9**
	Group 2	1	22	0.3			
	Total		72	1			
ChallengTransP	Group 1	2	59	0.8	0.6	0	**Reject Ho11**
	Group 2	1	13	0.2			
	Total		72	1			

Similar test was done for the stakeholders and the following table 3 below illustrates the hypothesis testing for the responses of stakeholders. In case of stakeholders, it was observed that significance value for all the attributes is less than 0.05, which rejects our null hypotheses for stakeholders. This signifies that in the perception of stakeholders, there appears to be a significant variance from the mean and that they are responding favorably to the utilitarian, rights, fairness, and care aspect. The analysis also suggests that the stakeholders' response is significantly deviating from the mean and they strongly feel that there are significant challenges in running cloud kitchen model.

Table 3

		Category	N	Observed Prop.	Test Prop.	Exact Sig. (1-tailed)	Test of Hypothesis
UtilityTranP	Group 1	2	52	0.8	0.6	0.003	**Reject Ho2**
	Group 2	1	16	0.2			
	Total		68	1			
RightsTranP	Group 1	1	23	0.3	0.6	.000[a]	Reject Ho4
	Group 2	2	45	0.7			
	Total		68	1			
FairnessTransP	Group 1	1	25	0.4	0.6	.000[a]	**Reject Ho6**
	Group 2	2	43	0.6			
	Total		68	1			
CareTransP	Group 1	1	24	0.4	0.6	.000[a]	**Reject Ho8**
	Group 2	2	44	0.6			
	Total		68	1			
SustTransP	Group 1	2	48	0.7	0.6	0.047	**Reject Ho10**
	Group 2	1	20	0.3			
	Total		68	1			
ChallangeTransP	Group 1	2	53	0.8	0.6	0.001	**Reject H012**
	Group 2	1	15	0.2			
	Total		68	1			

The test of ANOVA was done by taking all the variables along with the demographic profile of the consumer respondents. When the educational qualification was taken for analysis along with all the variables it was found that responses for the factors of "Look and feel aspect" and "Choice of ordering food anytime" shows a significant variance having significance value less than 0.05. This is represented by Table 4 and Table 5.

Table 4: Descriptives

		N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
						Lower Bound	Upper Bound		
23. Look and feel aspect missing in Cloud Kitchen	Twelve Pass	12	3.4167	0.79296	0.22891	2.9128	3.9205	3	5
	Graduation	20	3.85	1.13671	0.25418	3.318	4.382	1	5
	Post Graduation	24	4.5	0.72232	0.14744	4.195	4.805	3	5
	Ph.D. and above	16	4.1875	0.91059	0.22765	3.7023	4.6727	2	5
	Total	72	4.0694	0.9689	0.11419	3.8418	4.2971	1	5
14. Choice of Anytime Food Order	Twelve Pass	12	4.1667	0.71774	0.20719	3.7106	4.6227	3	5
	Graduation	20	3.2	1.39925	0.31288	2.5451	3.8549	1	5
	Post Graduation	24	3.7917	1.10253	0.22505	3.3261	4.2572	1	5
	Ph.D. and above	16	4.3125	1.01448	0.25362	3.7719	4.8531	2	5
	Total	72	3.8056	1.18249	0.13936	3.5277	4.0834	1	5

Table 5: ANOVA

		Sum of Squares	Df	Mean Square	F	Sig.
23. Look and feel aspect missing in Cloud Kitchen	Between Groups	10.749	3	3.583	4.358	0.007
	Within Groups	55.904	68	0.822		
	Total	66.653	71			
14. Choice of Anytime Food Order	Between Groups	13.015	3	4.338	3.42	0.022
	Within Groups	86.263	68	1.269		
	Total	99.278	71			

From the analysis it appears that with the increase in educational qualification, people feel that the look and feel aspect of in-dining is missing in cloud kitchen model.

Similarly, the test of ANOVA was done by taking the gender of the consumers along with the other factors and it was observed that "Cost effectiveness" and "Risk of disclosure of personal information" in cloud kitchen shows a significant value of less than 0.05 which is shown in the below Table 6 and Table 7.

Table 6: Descriptives

		N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
						Lower Bound	Upper Bound		
4.Cost Effective for Consumers	Male	36	3.6111	1.07644	0.17941	3.2469	3.9753	1	5
	Females	35	3.4857	0.98134	0.16588	3.1486	3.8228	1	5
	Prefer Not to Say	1	1	.	.	.	.	1	1
	Total	72	3.5139	1.0614	0.12509	3.2645	3.7633	1	5
20. Risk of disclosure of personal information in cloud kitchen platform	Male	36	4.1667	1.02817	0.17136	3.8188	4.5146	2	5
	Females	35	3.8	0.93305	0.15771	3.4795	4.1205	1	5
	Prefer Not to Say	1	1	.	.	.	.	1	1
	Total	72	3.9444	1.04664	0.12335	3.6985	4.1904	1	5

Table 7: ANOVA

		Sum of Squares	Df	Mean Square	F	Sig.
4. Cost Effective for Consumers	Between Groups	6.688	2	3.344	3.148	0.049
	Within Groups	73.298	69	1.062		
	Total	79.986	71			
20. Risk of disclosure of personal information in cloud kitchen platform	Between Groups	11.178	2	5.589	5.79	0.005
	Within Groups	66.6	69	0.965		
	Total	77.778	71			

From the above table it is evident that men find the cloud kitchen as being cost effective as compared to women. It also appears that as compared to 2 of women, 69 men strongly feel that there is a risk of disclosure of personal information in cloud kitchen platform.

When the frequency of consumers' purchase was taken into consideration it was found from the ANOVA that those consumers who order food "Once in a month" agree the most about "Cloud kitchen having emerged more during pandemic period". This has been shown by the Table 8 and Table 9 respectively.

Table 8: Descriptives

		N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
						Lower Bound	Upper Bound		
7. More Cloud Kitchen in pandemic period	Everyday	3	3	1	0.57735	0.5159	5.4841	2	4
	2-3 days in a week	10	4	1.24722	0.39441	3.1078	4.8922	2	5
	Once a week	12	4.4167	0.79296	0.22891	3.9128	4.9205	3	5
	Once in 15 days	15	4.1333	0.83381	0.21529	3.6716	4.5951	3	5
	Once in a month	15	4.4667	0.83381	0.21529	4.0049	4.9284	3	5
	Once in 2-3 months	10	3.4	0.84327	0.26667	2.7968	4.0032	2	5
	Once in 6 Months	7	3.7143	1.1127	0.42056	2.6852	4.7434	2	5
	Total	72	4.0417	0.98492	0.11607	3.8102	4.2731	2	5

Table 9: ANOVA

		Sum of Squares	Df	Mean Square	F	Sig.
7. More Cloud Kitchen in pandemic period	Between Groups	12.663	6	2.111	2.44	0.034
	Within Groups	56.212	65	0.865		
	Total	68.875	71			

The research work has been refined by dividing the segment of stakeholders into employees and service provider of cloud kitchen. The test of ANOVA was done and the questions were asked to both employees and service providers. In table number 10 and 11, the code 1 is for the employees and code 2 for service providers. When the test of ANOVA was done on the employees and service providers of cloud kitchen, significant value of less than 0.05 was seen in factors "Less wastage", "Protection of consumers' rights", "Due care for employees", "Provide platform to handle customer complaint", "Too much dependent on e-platform" and "Feel of less personal touch" were considered. The analysis suggests that comparatively, the service providers feel that there is less wastage due to the cloud kitchen model. As compared to the employees, the service providers feel more positively that the customers' rights are protected due to the cloud kitchen model. As compared to the employees, the service providers feel more positively that the cloud kitchen and aggregator model provides equal treatment to employees and delivery persons. As compared to the employees, the service providers feel more positively that the cloud kitchen model takes due care of employees. As compared to the employees, the service providers feel more positively that the cloud kitchen model is a good platform that takes care of customer complaints and their prompt redressal. As compared to the employees, the service providers feel that the cloud kitchen model leads to too much dependence on e-platforms. As compared to the employees, the service providers feel that there is less personal touch in Cloud kitchen model.

The Table 10 and Table 11 represent the analysis of ANOVA.

Table 10: Descriptives

		N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
						Lower Bound	Upper Bound		
8. Less wastage	1	48	3.7292	1.19822	0.17295	3.3812	4.0771	1	5
	2	20	4.45	0.75915	0.16975	4.0947	4.8053	3	5
	Total	68	3.9412	1.1314	0.1372	3.6673	4.215	1	5
12. Cloud kitchen protect Customers rights	1	48	3.6667	.97486	.14071	3.3836	3.9497	2.00	5.00
	2	20	4.6000	.68056	.15218	4.2815	4.9185	3.00	5.00
	Total	68	3.9412	.99074	.12014	3.7014	4.1810	2.00	5.00
14. Equal treatment to employees/deliver y persons	1	48	3.6458	1.21146	0.17486	3.2941	3.9976	1	5
	2	20	4.4	1.14248	0.25547	3.8653	4.9347	1	5
	Total	68	3.8676	1.23269	0.14949	3.5693	4.166	1	5
16. Cloud model takes due care of employees	1	48	3.5	1.05185	0.15182	3.1946	3.8054	1	5
	2	20	4.2	1.00525	0.22478	3.7295	4.6705	2	5
	Total	68	3.7059	1.07978	0.13094	3.4445	3.9672	1	5
18. Cloud model provides platform for Cust Complaints	1	48	3.5625	1.04995	0.15155	3.2576	3.8674	1	5
	2	20	4.3	0.97872	0.21885	3.8419	4.7581	2	5
	Total	68	3.7794	1.07683	0.13059	3.5188	4.0401	1	5
20. Too much Dependence on ePlatforms	1	48	4.0417	0.92157	0.13302	3.7741	4.3093	2	5
	2	20	4.75	0.55012	0.12301	4.4925	5.0075	3	5
	Total	68	4.25	0.88731	0.1076	4.0352	4.4648	2	5
21. Less personal touch in Cloud model	1	48	4.0625	0.95441	0.13776	3.7854	4.3396	1	5
	2	20	4.85	0.36635	0.08192	4.6785	5.0215	4	5
	Total	68	4.2941	0.89874	0.10899	4.0766	4.5117	1	5

Table 11: ANOVA

		Sum of Squares	Df	Mean Square	F	Sig.
8. Less wastage	Between Groups	7.336	1	7.336	6.173	0.016
	Within Groups	78.429	66	1.188		
	Total	85.765	67			
12. Clouds protect Customers rights	Between Groups	12.298	1	12.298	15.181	0
	Within Groups	53.467	66	0.81		
	Total	65.765	67			
14. Equal treatment to employees/delivery persons	Between Groups	8.03	1	8.03	5.651	0.02
	Within Groups	93.779	66	1.421		
	Total	101.809	67			
16. Cloud model takes due care of employees	Between Groups	6.918	1	6.918	6.412	0.014
	Within Groups	71.2	66	1.079		
	Total	78.118	67			
18. Cloud model provides platform for Cust Complaints	Between Groups	7.679	1	7.679	7.239	0.009
	Within Groups	70.013	66	1.061		
	Total	77.691	67			
20. Too much Dependence on ePlatforms	Between Groups	7.083	1	7.083	10.237	0.002
	Within Groups	45.667	66	0.692		
	Total	52.75	67			
21. Less personal touch in Cloud model	Between Groups	8.755	1	8.755	12.738	0.001
	Within Groups	45.362	66	0.687		
	Total	54.118	67			

Findings and Discussions

The findings from the analysis of Binomial test of proposition signify that amongst the consumers there is no significant variance of utility aspect and sustainability aspect from the mean value. On the other hand, there is significant variance from the mean in response of rights, fairness, care, and challenges aspect from the mean value and the consumers are responding favorably to the rights, fairness, and care aspect of the cloud kitchen business. The consumers' response is significantly deviating from the mean and they are responding in agreement to the statement of challenges being faced by stakeholders running cloud kitchen during the pandemic of Covid-19.

Similarly, in case of stakeholders, a significant variance from the mean was observed and that they are responding favorably to the utilitarian, rights, fairness, and care aspect. The stakeholders' response appears to be significantly deviating from the mean and they strongly feel that there are significant challenges in running cloud kitchen during the situation of pandemic.

The findings from ANOVA test show that with the increase in educational qualification, people perceive that the "look and feel" aspect of in-dining is missed in the cloud kitchen model. It is evident that men find the cloud kitchen as being cost effective as compared to women. As compared to the employees, the service providers feel more positively about "less wastage", "consumers' rights protection", "fair treatment of employees / delivery persons", "ethics of care", "handling of customer complaints", "acceptance that there is too much of dependence on cloud kitchens", and "accepting that the personal touch is missing in the cloud kitchen model".

In the situation of Covid-19 pandemic, respondents perceive that there are certain demerits and challenges that are faced by cloud kitchen business. They agree that the cloud kitchen is too much dependent on e-platform and there is the feel of less personal touch.

CONCLUSION

To conclude, this study has made three key contributions. Firstly, this study was done during the pandemic of Covid-19, and is based on the perceptions of the consumers and the stakeholders on the ethical and sustainability model. Secondly, the study has touched the various aspects of

consumers and internal stakeholders based on perception on utility, rights, fairness, care, sustainability and challenges. Thirdly it reveals some important areas which focuses on the interest of consumers and stakeholders on the cloud kitchen model.

Implications of the Study:

As the research work has been done during the period of Covid-19 disease, a similar comparative study can be done in a post-covid scenario to study the perceptions of consumers and stakeholders after the pandemic period. Dependency of Cloud Kitchens on food aggregator in competitive environment could be a future research area. The employees and the service providers feel that there are great challenges in running a cloud kitchen platform. There is a case for future research in the area of making the value chain easier and less challenging.

It is seen that all the respondents appear to be agreeing that the cloud kitchen model leads to less wastage. Hence, this money may be used on marketing to build better brand and utility so that they can offer better value to customers.

The findings from the ANOVA suggest that the contemporary cloud kitchen model appear to be focusing too much on external stakeholders (service providers) as the responses of these service providers is positive. There is a case of focusing on the internal stakeholders (employees) as well.

REFERENCES:

Abney, K. (2004). Sustainability, morality and future rights. *Moebius, 2*(2), Article 7. Retrieved March 25, 2021, from http://digitalcommons.calpoly.edu/moebius/vol2/iss2/7

Abrahamse, W., & Steg, L. (2013). Social influence approaches to encourage resource conservation: A Meta-analysis. *Global Environmental Change, 23*(6), 1773–85.

Ahuja, A. (2020). Dark kitchens: A lowdown in the new phenomenon in food delivery. *NDTV Food.* Retrieved from https://food.ndtv.com/news/dark-kitchens-a-lowdown-on-the-new-phenomenon-in-food-delivery-2181341, [Accessed on: 28 March, 2021

Ajzen, I. (1991). The theory of planned behavior. *Organizational Behavior and Human Decision Process, 50*(2), 179-211.

Bolton, R., Kennedy, J., Gallan, A., Orsingher, K., Witell L., & Zaki M. (2018), "Customer experience challenges: Bringing together digital, physical and social realms. *Journal of Service Management.* doi:https://doi.org/10.1108/JOSM-04-2018-0113

Burkhardt J. (1989). The morality behind sustainability. *Journal of Agricultural Ethics, 2,* 113-128.

Cialdini, R. B., Reno, R. R., & Kallgren, C. A. (1990). A focus theory of normative conduct: Recycling the concept of norms to reduce littering in public places. *Journal of Personality and Social Psychology, 58*(6), 1015-1026.

Choudhary, N. (2019). Strategic analysis of cloud kitchen - A case study. *Strategic Analysis*, *9*(3).

Debnath, H. (2020). Impact of Covid19 induced economic restrictions on some selected sectors of the Indian Economy. *Journal of Management in Practice (Online Only)*, *5*(1).

Galati, M., Crescimanno, M., Vrontis, D., & Siggia, D. (2020). Contribution to the sustainability of the food-delivery sector, finding from the deliveroo Italy case study.

Sustainability, 12(7045). Retrieved March 30, 2021, from www.mdpi.com/journal/sustainability

FnB News. Retrieved March 30, 2021, from http://www.fnbnews.com/Top-News/indias-cloud-kitchen-market-size-to-be-about-us1-bn-by-2023-reports-60510

Grayson, D. (2019). Companies that want to be sustainable have to start with acting ethically. *Reuters Events.* Retrieved March 25, 2021, from https://www.reutersevents.com/sustainability/companies-want-be-sustainable-have-start-acting-ethically

Haque, S. S. (2021). The effects of Covid-19 pandemic and recovery strategies for the travel and tourism sector in Bangladesh. *Hospitality & Tourism Review, 2*(1), 1-13.

Hara S. (1998). Economics, ethics and sustainability: Redefining connections. *International Journal of Social Economics, 25*(1), 43-62.

Kibert C., Thiele, L., Peterson, A., & Monroe, M. (2018). *The ethics of sustainability.* Electronic Platform for Adult Learning in Europe.

Krishna, A., Dangayach, G., & Jain, R. (2011). Business ethics: A sustainability approach. *Procedia- Social and Behavioral Sciences,* Elsevier*, 25,* 281-286.

Leonard, B. (1981). Voluntary simplicity lifestyles and energy conservation. *Journal of Consumer Research, 8*(3), 243-52.

Leonidou, C. N., & Leonidou, L. C. (2011). Research into environmental marketing/management: A bibliographic analysis. *European Journal of Marketing, 45*(1/2), 68-103.

Lionidou C., Skarmeas D., Saridakis C., (2018). *Ethics, sustainability and culture: A review and directions for research*. Springer International Publishing. doi:https://doi.org/10.1007/978-3-319-61385-7_19

McDonald, S., Oates, C. J., Young, C. W., & Hwang, K. (2006). Toward sustainable consumption: Researching voluntary simplifiers. *Psychology & Marketing, 23*(6), 515-534.

Mariam, K., Singh, M. M., & Goyang, T. T. (2020, November). *Effect of COVID-19 pandemic on the hospi-*

tality sector in India with specific reference to Itanagar, Arunachal Pradesh. In 6th International Conference on Computers, Management and Mathematical Sciences (ICCM 2020): 72.

Maurya, A., Subramaniam, G., & Dixit, S. (2021, January). *Laying the table from the cloud during Lockdown: Impact of Covid crisis on Cloud Kitchens in India*. 2021 2nd International Conference on Computation, Automation and Knowledge Management (ICCAKM), 299-302 IEEE.

Nicholson, J., & Kuruez, E. (2017). *Relational leadership for sustainability: Building an ethical framework from the moral theory of "ethics of care".* Springer Online. Rawls, A Theory of Justice, p. 542, and Joel Feinberg, "Rawls and Intuitionism," pp. 114–116 in Norman Daniels, ed., *Reading Rawls* (New York: Basic Books, Inc., Publishers, n.d.), pp. 108–124; and T. M. Scanlon, "Rawls' Theory of Justice," pp.185–191, ibid.

Rubini M., (2020). The rise of cloud kitchen. Retrieved March 30, 2021, from https://medium.com/@mikerubini/the-rise-of-cloud-kitchens-df7aafac7c2d

Schlegelmilch, B. B., & Öberseder, M. (2010). Half a century of marketing ethics: Shifting perspectives and emerging trends. *Journal of Business Ethics, 93*(1), 1-19.

Sentance R., (2020), How cloud kitchens can overcome CX and marketing challenges in an increasingly virtual industry. Econsultancy, Retrieved April 8, 2021,from https://econsultancy.com/how-cloud-kitchens-can-overcome-customer-experience-marketing-challenges-in-increasingly-virtual-industry/

Singh, J., Brady, M., Arnold, T., & Brown, T. (2017). The emergent field of organizational frontlines. *Journal of Service Research, 20*(1), 3-11.

Sufi, T., & Ahmed, S. (2021). Surviving COVID-19 crisis by new business models: A case study of the Indian restaurant industry. In *Handbook of Research on Entrepreneurship, Innovation, Sustainability, and ICTs in the Post-COVID-19 Era* (pp. 301-316). IGI Global.

White, K., Simpson, B., & Argo, J. J. (2014). The motivating role of dissociative out-groups in encouraging positive consumer behaviors. *Journal of Marketing Research, 51*(4), 433-447.

Velasquez, M. (2014). *Business ethics concepts and cases* (Pearson International Edition, pp. 111-112).

Velasquez, M. (2014). *Business ethics concepts and cases* (Pearson International Edition p. 125).

Velasquez, M. (2014). *Business ethics concepts and cases* (Pearson International Edition, pp. 96-104).

Velasquez, M. (2014). *Business ethics concepts and cases* (Pearson International Edition, pp. 82-88).