

IMPACT OF LOCKDOWNS ON INDIAN E-COMMERCE BUSINESSES (IN SPECIAL REFERENCE TO LOCKDOWNS 1.0 TO 4.0 DURING COVID-19 PANDEMIC)

Dr. Sarika Agarwal*
Mukesh Agarwal**
Prof. K. K. Agarwal***

ABSTRACT

The world's economic activities have suffered a lot during the COVID-19 pandemic, and our country India is not untouched by this either. But during COVID-19 pandemic, the Government of India has put some lockdowns all over India, where during lockdowns, most business activities have slowed down. At the same time, it has seen less impact in some areas, in which agriculture and e-commerce are the main ones. In the present study, we have reviewed the effects of lockdowns (1.0 to 4.0, total 68 days) on e-commerce industries under certain aspects.

Keywords: COVID-19, Pandemic, Lockdown, 1.0, 4.0, 68 days, E-commerce, Economic Activities.

Introduction

When the year 2019 was in its final phase, an pandemic outbreak was starting on the whole world. Whose name was Corona virus i.e. COVID-19. The virus affected the social and economic status of the entire world very negatively. Due to this virus where economic activities were being negatively impacted all over the world, India was also not untouched by it. The Government of India announced a series of lockdowns in India in order to avoid the effects of the outbreak of Corona virus i.e. COVID-19. This lockdown started from 25 March till 30 June, which was named from Lockdown 1.0 to Lockdown 5.0 respectively.

In India, where all other economic activity was slowing down and negative impact on GDP growth rate, there were some areas where their impact was less/null i.e. agriculture and e-commerce industry. In the present study, we have reviewed the effects on e-commerce industries in following aspects in terms of lockdown 1.0 to 4.0 implemented in India during COVID-19 pandemic:

- **Based on Buying Modes:** Under this aspect, we have reviewed how the buyers' shopping habit was within the 68 days before the lockdown. That is, what percentage of them did online shopping and what percentage did offline shopping. Also, has there been any change in their shopping habits during the 68 days of lockdown.
- **Online Shopping Based on City Tier:** Under this aspect, we have studied whether, during the 68 days from Lockdown 1.0 to Lockdown 4.0, if there has been any change in the shopping habits of buyers, the effect of that change is has been seen differently in different tier cities. Or the overall effect has been the same in all tier cities. That is, if there is an increase in online shopping habit of buyers. So, has it been different from small cities to big cities, or has their increments been one way on all types of cities. For the study here, we have divided all the cities into 3 tiers, whose detailed list is given in **Annexure-1**.

* Postdoctoral Fellow (Under PDF of ICSSR), Department of Management Studies, School of Studies in Management & Commerce, Guru Ghasidas University (Central University of Chhattisgarh), Koni, Bilaspur, Chhattisgarh, India.

** Assistant Professor, Department of Commerce, School of Studies in Management & Commerce, Guru Ghasidas University (Central University of Chhattisgarh), Koni, Bilaspur, Chhattisgarh, India.

*** Professor, Government M.L.B College of Excellency, Gwalior, M.P., India.

- **Factor Affecting Buying Decisions:** Under this aspect, we have reviewed the facts that, positively influence a buyer's buying habit. We have observed that the following facts enable buyers to complete their purchases with greater confidence and convenience.
 - Safety at Store
 - Reviews
 - Virtual Trial Rooms
 - Social Distancing
 - Hygiene at Store
- **Mode of Payments:** Under this aspect, we have reviewed that, when the buyers made purchases during various lockdowns, which payment mode did they give more preference to pay for that purchase. For the study here, we have included the following payment modes:
 - Credit / Debit Cards
 - UPI
 - Online Wallets
 - Cash
- **Buyer's Spending Habits:** Under this aspect, we have tried to study what has affected the spending habits of buyers during various lockdowns. That is, within 68 days of these lockdowns:
 - Buyers spent more or
 - Spent as before or
 - They have cut their expenses.

Review of Literature

Prior to the study we have in-depth reviewed of many research papers journals, newspapers and of many blogs & videos available online. In this mainly includes the survey done by India Today Group, Dainik Bhaskar Group and Network 18 Group.

There have been several notable studies on the economical effects of the lockdown and the COVID-19 pandemic in 2020. Out of which studies conducted by P. Seetharaman, S. Verma and T. Papadopoulos are very effective. But the research study by P. Seetharaman (Title is Business models shifts: Impact of Covid-19 and printed in International Journal of Information Management) presents more critically remarkable details.

Research Gap

After reviewed of various studies, we found that the challenges, which had to faced after the COVID-19 pandemic by the e-commerce industry have been studied mainly in the various research work done by various scholars in the past. Or, they have only reviewed the facts that helped the e-commerce industries to meet the challenges posed by the COVID-19 pandemic.

But in our study, we have tried to test, what has changed in the buying habits and methods (in reference to e-commerce industries) of the buyers due to the lockdowns (1.0 to 4.0, which were done in a sequential manner at different stages during the COVID-19 pandemic by the Indian government).

Objective of Study

The present study has the following objectives:

- To study changes in buyer preferences in purchasing mode (online or offline) during lockdown 1.0 to lockdown 4.0 in India;
- To study the effect on city types (Tier 1 to Tier 3) from changes in buyer preferences in purchasing mode (online or offline) during lockdown 1.0 to lockdown 4.0 in India;
- To study the effect of various factors (i.e. Safety at Store, Reviews, Virtual Trial Rooms, Social Distancing & Hygiene at Store) on buyer buying habits in purchasing mode (online or offline) during lockdown 1.0 to lockdown 4.0 in India;
- To study the effect of mode of payments (i.e. Credit / Debit Cards, UPI, Online Wallets & Cash) on buyer buying habits in purchasing mode (online or offline) during lockdown 1.0 to lockdown 4.0 in India;
- To study the buyer's spending habits during lockdown 1.0 to lockdown 4.0 in India.

Limitation of Study

- This study is limited to only on sample size, responses and selected area of survey.
- This study ignores the effect of festival season and discounted sales.
- This study ignores the availabilities of specific products.
- This study is based on convenience sampling.
- This study has been done during the period of Covid-19, hence may be its effect in responses and data collection.

Research Methodology

This research nature is conceptual and exploratory based on primary data. The primary data was collected through questionnaire from those people, who do shop online during pandemic. For the present study, we have determined the sample size of three hundred responses. Which, we will be choosing on random basis. We are using chi-square test for significance testing. For data collection, we have defined some major cities of 5 states. We have taken about 40 samples from each city. Details of States, Cities and sample size are follows:

- **Chhattisgarh:** Bilaspur (40) and Raipur (40).
- **Madhya-Pradesh:** Bhopal (40) and Gwalior (40).
- **Uttar-Pradesh:** Banaras (40) and Prayagraj (40).
- **Rajasthan:** Jaipur (40) and Jodhpur (40).
- **Delhi:** NCR (40).

Finding & Suggestions

We had targeted 360 responses, but we got only 247 responses. This is as follows:

- **Chhattisgarh:** Bilaspur (36) and Raipur (28).
- **Madhya-Pradesh:** Bhopal (26) and Gwalior (32).
- **Uttar-Pradesh:** Banaras (29) and Prayagraj (18).
- **Rajasthan:** Jaipur (27) and Jodhpur (21).
- **Delhi:** NCR (30).

Responses

- **Based on Buying Modes**

	Pre Lockdown (16th January 2020 to 24th March 2020) 68 Days (% of Respondents)	During Lockdown 1.0 to 4.0 (25th March 2020 to 31st May 2020) 68 Days (% of Respondents)	% of Increase / Decrease
Online	34	61	79.41
Offline (i.e. Physical Stores)	66	39	(-40.91)

Hypothesis

H₀: Properties are independent, that is, preferences of buying mode, not affected during lockdown 1.0 to 4.0.

H₁: Properties are not independent, that is, preferences of buying mode, affected during lockdown 1.0 to 4.0.

Results

	Pre Lockdown (16th January 2020 to 24th March 2020) 68 Days (% of Respondents)	During Lockdown 1.0 to 4.0 (25th March 2020 to 31st May 2020) 68 Days (% of Respondents)
Online	34 (47.50) [3.84]	61 (47.50) [3.84]
Offline (i.e. Physical Stores)	66 (52.50) [3.47]	39 (52.50) [3.47]

The chi-square statistic is 14.6165.

The p-value is .000132.

Degrees of Freedom: 1.

The result is significant at $p < .05$.

Report

At a 5% significance level, for 1 degree of freedom, the tabular value of χ^2 is 3.84 and the test value of χ^2 is 14.6165, which is higher than its tabular value, so the H_0 hypothesis is absolutely false, that means, the preferences of buying mode significantly affected during lockdown 1.0 to 4.0.

• Online Shopping Based on City Tier

	Pre Lockdown (16 th January 2020 to 24 th March 2020) 68 Days (% of Respondents)	During Lockdown 1.0 to 4.0 (25 th March 2020 to 31 st May 2020) 68 Days (% of Respondents)	% of Increase
Tier – 1	44	63	43.18
Tier – 2	29	56	93.10
Tier – 3	36	59	63.89

*List of Cities as per Tier sees the Annexure – 01

Hypothesis

H₀: Properties are independent, that is, habits of online shopping based on city tier, not affected during lockdown 1.0 to 4.0.

H₁: Properties are not independent, that is, habits of online shopping based on city tier, affected during lockdown 1.0 to 4.0.

Results

	Pre Lockdown (16th January 2020 to 24th March 2020) 68 Days (% of Respondents)	During Lockdown 1.0 to 4.0 (25th March 2020 to 31st May 2020) 68 Days (% of Respondents)
Tier – 1	44 (40.64) [0.28]	63 (66.36) [0.17]
Tier – 2	29 (32.28) [0.33]	56 (52.72) [0.20]
Tier – 3	36 (36.08) [0.00]	59 (58.92) [0.00]

The chi-square statistic is 0.9869.

Degrees of Freedom: 2.

The p-value is .610511.

The result is not significant at $p < .05$.

Report

At a 5% significance level, for 2 degrees of freedom, the tabular value of χ^2 is 5.99 and the test value of χ^2 is 0.9869, which is lower than its tabular value, so the H_0 hypothesis is absolutely true, that means, habits of online shopping based on city tier, not significantly affected during lockdown 1.0 to 4.0.

• Factor Affecting Buying Decisions

	During Lockdown 1.0 to 4.0 (25 th March 2020 to 31 st May 2020) 68 Days (% of Respondents)
Safety at Store	68
Reviews	26
Virtual Trial Rooms	29
Social Distancing	68
Hygiene at Store	69

Hypothesis

H₀: Properties are independent, that is, buyers have equal focus on above buying decisions factors during shopping in the period of lockdown 1.0 to 4.0.

H₁: Properties are not independent, that is, buyers have significantly difference focus on above buying decisions factors during shopping in the period of lockdown 1.0 to 4.0.

The chi-square statistic is 38.577.

Degrees of Freedom: 4.

The p-value is $< .00001$.

The result is significant at $p < .05$.

Report

At a 5% significance level, for 4 degrees of freedom, the tabular value of χ^2 is 9.49 and the test value of χ^2 is 38.577, which is higher than its tabular value, so the H_0 hypothesis is absolutely false, that means, buyers have significantly difference focus on above buying decisions factors (i.e. Safety at Store, Reviews, Virtual Trial Rooms, Social Distancing & Hygiene at Store) during shopping in the period of lockdown 1.0 to 4.0.

- **Mode of Payments**

	During Lockdown 1.0 to 4.0 (25th March 2020 to 31st May 2020) 68 Days (% of Respondents)
Credit / Debit Cards	37
UPI	26
Online Wallets	22
Cash	15

Hypothesis

H₀: Properties are independent, that is, buyers have equally used the different mode of payments (Such as Credit/Debit Cards, UPI, Online Wallets & Cash) during shopping in the period of lockdown 1.0 to 4.0.

H₁: Properties are not independent, that is, buyers have not equally used the different mode of payments (Such as Credit/Debit Cards, UPI, Online Wallets & Cash) during shopping in the period of lockdown 1.0 to 4.0. (That's mean payment mode used as own preference and convenience).

The chi-square statistic is 10.16.

Degrees of Freedom: 3.

The p-value is .01725.

The result is significant at $p < .05$.

Report

At a 5% significance level, for 3 degrees of freedom, the tabular value of χ^2 is 7.82 and the test value of χ^2 is 10.16, which is higher than its tabular value, so the H_0 hypothesis is absolutely false, that means, buyers have not equally used the different mode of payments (Such as Credit/Debit Cards, UPI, Online Wallets & Cash) during shopping in the period of lockdown 1.0 to 4.0. (That's mean payment mode used as own preference and convenience).

- **Buyer's Spending Habits**

	During Lockdown 1.0 to 4.0 (25th March 2020 to 31st May 2020) 68 Days (% of Respondents)
Increased Spending	04
Same as Prior (Neutral)	18
Decreased Spending	78

Hypothesis

H₀: Properties are independent, that is, buyers spending habits are not affected during shopping in the period of lockdown 1.0 to 4.0.

H₁: Properties are not independent, that is, buyers spending habits are affected during shopping in the period of lockdown 1.0 to 4.0.

The chi-square statistic is .

Degrees of Freedom: 2.

The p-value is $< .00001$.

The result is significant at $p < .05$.

Report

At a 5% significance level, for 2 degrees of freedom, the tabular value of χ^2 is 5.99 and the test value of χ^2 is ., which is higher than its tabular value, so the H_0 hypothesis is absolutely false, that means, buyers spending habits are affected during shopping in the period of lockdown 1.0 to 4.0.

Conclusion**No Slowdown During Lockdown**

As a conclusion in all the above research studies, we found that, during the systematic lockdown 1.0 to 4.0 at various stages imposed by the Government of India, there have been fundamental changes in how buyers shop. Now more buyers find themselves more capable to shop in online mode instead of offline mode. That is, the trend of online shopping of buyers has increased in the 68 days during lockdown as compared to 68 days before lockdown. And the effect of this change in shopping mode was almost the same on all types of cities i.e. no significant difference was found in its effect on

different types of cities. Safety, social distancing and hygiene have been important in influencing the decision making factor of buyers. In the payment mode, buyers felt more convenient to pay with credit or debit card and UPI. Buyers' purchasing power (i.e. spending power and habit) was found to be decreased during Lokdown, yet the turnover on online platforms has increased.

References

- Online Survey and Reports of Dainik Bhaskar Group.
- Online Survey and Reports of Network 18 Group.
- Online Survey and Reports of Times of India Group.
- P. Seetharaman, (2020); "Business models shifts: Impact of Covid-19". Published in International Journal of Information Management, 54, 102173.
- S. Verma, & A. Gustafsson, (2020); "Investigating the emerging COVID-19 research trends in the field of business and management: A bibliometric analysis approach". Published in Journal of Business Research, 118, 253-261.
- T. Papadopoulos, K. N. Baltas & M. E. Balta, (2020). "The use of digital technologies by small and medium enterprises during COVID-19: Implications for theory and practice". Published in International Journal of Information Management, 102192.

Annexure – 01 (List of Cities as per Tier)

	Name of Cities
Tier – 1	Ahmedabad, Bengaluru, Chennai, Delhi, Hyderabad, Kolkata, Mumbai, and Pune, Jaipur, Coimbatore.
Tier – 2	Agra, Ajmer, Aligarh, Amravati, Amritsar, Asansol, Aurangabad, Bareilly, Belgaum, Bhavnagar, Bhiwandi, Bhopal, Bhubaneswar, Bikaner, Bilaspur, Bokaro Steel City, Chandigarh, Coimbatore, Cuttack, Dehradun, Dhanbad, Bhilai, Durgapur, Dindigul, Erode, Faridabad, Firozabad, Ghaziabad, Gorakhpur, Gulbarga, Guntur, Gwalior, Gurgaon, Guwahati, Hamirpur, Hubli–Dharwad, Indore, Jabalpur, Jaipur, Jalandhar, Jammu, Jamnagar, Jamshedpur, Jhansi, Jodhpur, Kakinada, Kannur, Kanpur, Karnal, Kochi, Kolhapur, Kollam, Kozhikode, Kurnool, Ludhiana, Lucknow, Madurai, Malappuram, Mathura, Mangalore, Meerut, Moradabad, Mysore, Nagpur, Nanded, Nashik, Nellore, Noida, Patna, Pondicherry, Purulia, Prayagraj, Raipur, Rajkot, Rajahmundry, Ranchi, Rourkela, Salem, Sangli, Shimla, Siliguri, Solapur, Srinagar, Surat, Thanjavur, Thiruvananthapuram, Thrissur, Tiruchirappalli, Tirunelveli, Ujjain, Bijapur, Vadodara, Varanasi, Vasai-Virar City, Vijayawada, Visakhapatnam, Vellore and Warangal.
Tier – 3	Rest all other cities.

